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THE SYNTAX OF PARTITIVES

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Any 2010

Als meus pares

Acknowledgements

Although writing a thesis is a solitary, hard task that sometimes takes too many years to accomplish, at the same time it is a very enjoyable and enriching experience, in part because of other people's kind contributions.

My first thanks go to Anna Bartra for her dedication all these years, especially at the last stage of this project, and for her suggestions and detailed comments, even on style, on my written work. Now I think twice before writing 'one wonders' when commenting on somebody else's work.

A special thanks to Professor Rebecca Posner, who was like a second supervisor for me as well as a friend during my years in Oxford, and who has been very supportive and encouraging ever since. I always try to be and to look 'sparkling' as she kept telling me!

Many thanks also go to Professor Richard Kayne, whose work has always been a source of inspiration as well as an important reference for me and who always kindly sent me interesting and suggestive comments on previous work of mine. Thanks too for his enriching three-month lectures in Venice back in 1995, which motivated me to try and fit Catalan in the general picture of Romance languages.

Luis Eguren deserves a special mention for encouraging me to work on partitives and kindly posting me a large bundle of papers from the 80s, otherwise difficult to find, for me to read.

I am also grateful to all members of the Centre de Lingüística Teòrica in my university and to other colleagues for patiently completing my questionnaires on Catalan and Spanish data and/or for their feedback on sections of my work, with special mention going to Cedric Boeckx, Josep M. Brucart, M. Teresa Espinal, M. Lluïsa Hernanz, Louise McNally, Carme Picallo, Gemma Rigau, Francesc Roca, Joana Rosselló, Jaume Solà and Xavier Villalba.

Many thanks as well to Laura Brugè for kindly helping me with the Italian data and to Derek Zinger for his judgements on the English data.

Special thanks to my close friends for all their good wishes, for being there and for making my life much happier: Núria Passada, Tanja Styrkas, Ornella Michieli, Puri Gómez, Spencer Groves, Aida Martín, Roser Jovani, Judith Willis. Thanks as well to all the lindy hop leaders for making me enjoy dancing so much: keep on swinging!

Last but not least, my warmest thanks to my parents, who have always given me their entire support, love and understanding and without whom this thesis would not exist.

[This research was partially funded by an *FI* grant from Generalitat de Catalunya to the author and by the project HUM 2006-13295-C02-02 (Ministerio de Ciencia y Tecnología).]

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Abstract

This dissertation is a study of the syntax of partitives. The main goal is to characterise this type of nominal and provide an analysis that accounts for its particular properties but at the same time reflects the similarities with other indefinite non-partitive nominals (i.e. quantitatives). The exhaustive comparison between partitives and quantitatives is very useful for determining the properties of the former, and it becomes clear from this comparison that these two types of nominals have more in common than it seems at first sight or has been considered in the literature.

In Chapter 1 the properties of partitives are described and discussed in light of previous analyses and data (mainly from Catalan but also from other languages, especially Romance and Germanic languages) and a line of explanation is suggested.

In Chapter 2 two constructions that have been considered as partitives in the literature are thoroughly studied, given that they look very similar, and it is solidly argued that they are in fact quantitatives. These are nominals in which the quantifier is followed by a noun as in *dos llibres d'aquells* ('two books of those') and indefinite nominals that express partition through the preposition *entre* ('among'), such as *una novel·la d'entre els llibres que em vas deixar* ('a novel among the books you lent me'). The conclusions in this chapter are very relevant for the analysis defended here: partitives have a single-noun structure and only the preposition *de* (and not *entre*) forms partitives.

In Chapter 3 a unitary analysis for partitives and quantitatives is presented and defended according to which quantifiers are lexical elements that select a noun (projected into a DP in partitives or NP in quantitatives) and that are generated in a low position in the nominal structure. The preposition *de* has the same status and role in partitives and in quantitatives (*una mica de pa* 'a bit of bread', *molts de dies* 'many days'): it is a functional category that licenses the noun. The quantifier moves to the left in parallel with other cases of inversion in nominals (i.e. qualitative predicate inversion as in *l'idiota d'en Joan* 'the idiot of Joan'). The advantage of this analysis is that the same basic structure accounts as well for predicational uses of quantifiers in the clausal domain—as predicates in copular sentences (*My students are many*) and as secondary predicates (*Els colons arribaven a milers* 'Colonists arrived by the thousand')—or even within nominals such as *we two* or *the three books*. The differences among all these constructions derive mainly from the lexical features quantifiers have and from the type of nominal projection they select (NP or DP).

Resum

Aquesta tesi és un estudi de la sintaxi dels partitius. L'objectiu principal és caracteritzar aquest tipus de nominals i aportar una anàlisi que n'expliqui les propietats específiques però que alhora reflecteixi les semblances amb altres nominals indefinits que no són partitius (i.e. quantitatius). La comparació exhaustiva entre partitius i quantitatius resulta de gran utilitat a l'hora de determinar les propietats dels primers, i se'n desprèn que aquests dos tipus de nominals tenen més en comú que no sembla a primer cop d'ull o del que s'ha considerat en la bibliografia.

En el primer capítol es fa una caracterització de les propietats dels partitius a partir de dades principalment del català (però també d'altres llengües, sobretot romàniques i germàniques), s'hi revisen anàlisis prèvies i ja es comencen a apuntar vies d'explicació.

En el segon capítol s'estudien a fons dues construccions que en la bibliografia s'han considerat partitives per tal com aparentment hi tenen una gran semblança i es demostra amb arguments sòlids que es tracta en realitat de nominals quantitatius. Són nominals en què el quantificador va seguit d'un nom com ara *dos llibres d'aquells* i nominals indefinits que expressen partició a través de la preposició *entre* com ara *una novel·la d'entre els llibres que em vas deixar*. Les conclusions d'aquest capítol són molt rellevants per a l'anàlisi que es defensa en aquesta tesi: els partitius tenen una estructura que conté un sol nom i només es formen amb la preposició *de* (i no pas *entre*).

En el tercer capítol es presenta i defensa una anàlisi unitària per a partitius i quantitatius segons la qual els quantificadors són elements lèxics que seleccionen un nom (projectat en un SD en partitius o en un SN en quantitatius) i que es generen en una posició baixa de l'estructura nominal. La preposició *de* fa la mateixa funció en partitius que en quantitatius (p. ex. *una mica de pa*, *molts de dies*): és una categoria funcional que legitima el nom d'aquests nominals. El quantificador es trasllada cap a l'esquerra paral·lelament a altres casos d'inversió dins de nominals (inversió de predicats qualitius com ara *l'idiota d'en Joan*). L'avantatge d'aquesta anàlisi és que la mateixa estructura bàsica permet explicar també els usos predicacionals dels quantificadors en l'àmbit de la frase—com a atribut (*Els meus estudiants són molts*) i com a predicat secundari (*Els colons arribaven a milers*)—i fins i tot dins de nominals com ara *nosaltres dos* o *els tres llibres*. Les diferències entre totes aquestes construccions es deriven principalment dels trets lèxics dels quantificadors i del tipus de projecció nominal que seleccionen (SN o SD).

INTRODUCTION

This dissertation is a study of partitive nominals in the framework of Generative Grammar, based mainly on Catalan data though data from other languages, primarily Romance and Germanic languages, are taken into account as well. Some examples of Catalan partitives are given in (1), where the English translations can also be taken as an illustration of this type of indefinite nominal:

- (1) a. tres dels meus amics
 ‘three of my friends’
- b. molts d’aquells llibres
 ‘many of those books’
- c. un tros d’aquest pastís
 ‘a piece of this cake’
- d. la meitat de la cervesa que vas comprar
 ‘half of the beer you bought’

Partitives are interesting from a structural as well as a semantic point of view. In contrast with non-partitive indefinite nominals, which I will refer to as *quantitatives* here forward, partitive nominals seem to have a much more complex structure and semantics. Whereas quantitatives usually have the simple form ‘Q + NP’ and denote amounts (*two children, many books, little wine, half a day*), partitives in many languages, at least in Romance and in the Germanic languages, have the form ‘Q + *of* + det + NP’ and denote a partition. That is to say, they are a subset of a larger set (*two of those children, many of my books*)—see also (1a,b)—or a part of a whole (*little of the wine, half of the day*)—see also (1c,d). As noted in the literature, partitives and quantitatives differ as well in their syntactic behaviour with respect to (a) the possibility of being preceded by a definite determiner or not (partitives reject it whereas quantitatives allow it), (b) their distribution in sentences in

connection with specificity (partitives are always specific whereas quantitatives can be specific and/or non-specific), (c) internal agreement (in partitives the quantifier does not agree with the noun whereas in quantitatives it does),¹ (d) the possibility of a single or double antecedent for relative clauses (partitives provide two possible antecedents whereas quantitatives provide only one), and (e) extraction phenomena (partitives reject extraction from inside the nominal phrase whereas quantitatives allow it), among other differences.

Partitives are a challenging construction, which poses several questions that need to be answered:

- (2) a. How is the partitive interpretation obtained? Is it semantically and syntactically determined or is it obtained pragmatically or from the discourse? If the former, is it determined by the preposition or by the relationship between the quantifier and the noun? Or could a different element present in the structure (for example, an empty noun, an operator or a particular functional projection) be responsible for the partitive interpretation?
- b. What is the status and role of the prepositional element, and why does it appear systematically in partitives? Is it the same prepositional element sometimes present in quantitatives, or is it a different one?
- c. Why is an external definite determiner systematically excluded in partitives but not in quantitatives?
- d. Why is an internal determiner required in partitives, and why does it have to be definite? How is it licensed?

A great variety of answers to the questions in (2) is found in the literature, where there exist almost as many accounts for partitives as authors, with wide differences in perspective according to their theoretical assumptions.

Moreover, too often in the literature the label *partitive* has been applied to different kinds of nominals that include not only what here will be considered as true partitives but also other nominals that are similar to partitives in certain respects, i.e. the presence of the preposition *de* and/or a sort of partition meaning, but which actually should be classified as

¹ With respect to external agreement, in the literature it is usually claimed that there are differences between partitives and quantitatives associated with a different structure, but in this dissertation (see Chapter 1, §1.6.2) it will be shown that the two types of nominals actually exhibit the same behaviour and that the different options of agreement with the verb available in both types of nominals do not depend on structural differences but on their source: one is syntactic and the other is semantic ('ad sensum' agreement).

quantitatives due to their syntactic behaviour. Examples of apparently related constructions often confused with partitives in the literature are the so-called ‘pseudopartitives’ (*three friends of mine, lots of books, a piece of cake*), the *among* construction (*three among my friends*) or even cases of simple noun modification such as *many books of my private library* (= ‘many of the books of my library’).

First of all, then, we need to identify what a partitive nominal is. Thus, in this dissertation a detailed description of the properties that characterise partitives and distinguish them from quantitatives is presented. The thorough comparison to other indefinite nominals, especially those that look similar such as the ones mentioned above, proves to be very useful in delimiting the partitive construction since an overall description of all constructions is discussed.

Once partitives are defined and identified, an analysis is needed that captures their particularities as well as those properties that they have in common with other indefinite nominals. At this point a question arises: do differences between partitives and non-partitives justify a different account for these two types of nominals, or is there any basis for a unitary analysis, which seems more desirable from a theoretical point of view? Despite their differences, in this dissertation I reach the conclusion that a similar basic structure can be defended for all types of indefinite nominals and therefore a greater amount of data will be covered.

The Romance languages, and especially Catalan, prove to be very valuable in providing relevant data for the analysis of partitives and indefinite nominals in general. For example, the existence of nominals such as *dos llibres d’aquells* (‘two books of those’) in Romance languages, which look exactly like partitives but with an overt noun following the quantifier, is crucial to determine some aspects of the partitive structure. It is generally assumed in the Romance literature that these examples are instances of the partitive construction, which supports the claim that partitives contain an empty noun following the quantifier ($Q [N]$ of det NP). However, a closer look at data clearly shows that these examples are not partitives but rather quantitatives, which yields exactly the opposite conclusion, that is to say, that partitives do not contain an implicit noun as I argue in this dissertation.

Catalan has some particular features that contribute in an important way to the analysis of partitives and quantitatives:

- (a) Catalan displays an almost complementary distribution of quantifiers between partitives and quantitatives, which clearly suggests that selectional restrictions that are imposed by the quantifier are involved.² This observation also allows us to characterise the class of quantifiers that can form a partitive in contrast with a quantitative nominal and sheds some light on how the partitive interpretation is obtained. On that basis, it is my claim that the type of quantifier together with the type of nominal projection selected by Q is responsible for ending up with a quantitative or a partitive nominal.
- (b) Catalan shows more overt instances of the preposition *de* in quantitatives than other languages, which strongly suggests that *de* is generated in the structure even when it is not overtly realised. In particular, the existence in Catalan of quantitatives such as *molts de llibres* (lit. many of books), where *de* is not expected given that the quantifier agrees with the noun, and the systematic presence of a preposition *de* preceding APs in elliptical nominals in Catalan (*dos de blaus* lit. two_m of blue_{m,pl} ‘two blue ones’) leads to the conclusion that a prepositional element is part of the structure of all indefinite nominals, both partitives and quantitatives, as a kind of licenser that is not always phonetically realised. Moreover, the distribution of *de* in relation to the type of quantifier and how rich its inflection is (gender and especially number morphology) also offers interesting information, important in determining what role *de* plays both in partitives and quantitatives.
- (c) The obligatory presence of *de* preceding the preposition *entre* (‘among’) in Catalan (and also Spanish) nominals such as *una novel·la d’entre els llibres que em vas deixar* (lit. a novel of among the books you lent me) clearly indicates that the *among* construction cannot be considered as a type of partitive construction in Catalan or in other languages though some authors have argued in favour of that; in other words, only *de* or its counterpart in other languages forms true partitives. *Entre* actually

² It is important to note that this observation on the distribution of quantifiers is mainly based on my intuitions as a native speaker given that the type of quantifiers used in indefinite nominals comparing partitives with quantitatives is an unexplored area of study. Some authors seem to assume that the same type of quantifiers appears in both constructions (quantitatives and partitives) in Catalan and even provide some examples of nominals reflecting that without much explanation (see Bonet and Solà 1986, Badia 1994). However, these authors give them just as a list, usually quite short, and crucially with no context (which would be hard to find); moreover, Badia (1994: 242) acknowledges that his examples of partitives are not all completely natural. Therefore, I disregarded them and take descriptive observations in this thesis as valid.

behaves like a locative preposition such as *sobre* ('on, above') or *darrere* ('behind'), etc. in that it must be preceded by *de* to be licensed inside a nominal (i.e. *el llibre *(de) sobre la taula* lit. the book of on the table), where it functions as a N modifier. If no *de* is present, the *entre* PP can only be the predicate of an external small clause (e.g. *Hi ha una novel·la entre els llibres que em vas deixar* 'There's a novel among the books you lent me').

In recent years studying microsyntax has proved to be very useful given the fine degree of description and analysis that has been reached, which compensates for the limitation that the restriction on a small area of study may imply. As claimed by Kayne (2003: §5.1), linguists can go deeper into the syntax of their own language and learn more about the human language faculty from it than they ever could by studying other languages given the great accessibility to data a native-syntactician has and the descriptive accuracy they can achieve. Thus, though this dissertation focuses mainly on one language and on one type of indefinite nominal, the results obtained are relevant for the analysis of other languages and provide a better understanding of the properties of the partitive construction in general as well as contribute to the analysis of indefinite nominals.

Therefore, apart from the questions listed in (2), other questions which are more theoretical and related to the structure of indefinite nominals in general need to be addressed:

- (3) a. What is the status of quantifiers: are they lexical or functional?
- b. What is the relationship between quantifiers and nouns: are QPs noun modifiers or do Qs take noun phrases as complements? In other words, how is this relationship syntactically established: under head-complement or under Spec-head? Or is there another possibility?
- c. Is Q generated in a high position in the tree above the noun or is the relationship between the quantifier and the noun established in a low position in the nominal structure?

In the literature many different answers have been given to the questions presented in (3) as well as to those in (2) above according to the development of the theory of the time and depending on the properties or set of nominals authors focused on, and too often studies deal with only one particular property or are devoted to a subgroup of indefinite nominals.

In this dissertation I aim to describe all the properties that characterise partitives in comparison to quantitives and provide an analysis that deals with all of them. I also provide a critical overview of the main proposals of analyses of partitives.

In this study strong arguments are presented in favour of the following claims (from which my answers to questions in (2) and (3) will be derived):

- (4)
- a. Quantifiers are lexical categories.
 - b. There is a lexical selection relationship between quantifiers and the N. In fact, QPs select noun phrases (either NPs in quantitives or DPs in partitives). The type of quantifier and the projection of the N it selects (NP or DP) is responsible for the partitive or quantitative meaning.
 - c. The prepositional element present in partitives and some quantitives is a functional element that appears merely for licensing conditions, so it has no lexical content, and it does not project into a prepositional phrase inside the partitive construction.

On the basis of (4), I propose that the quantitative element both in partitives and in quantitives is generated in a low position in the tree, inside a functional projection FP that provides a position for the QP and the nominal selected by the QP (which is projected into an NP in quantitives and into a DP in partitives), as represented in (5b) below. The QP subsequently raises to a higher position in the structure, providing the right sequence of words that we find in the examples—see (5a). So in (5), *tres* selects the NP *novel·les* in the quantitative construction and the DP *les novel·les* in the partitive construction, and the QP movement upwards past the NP/DP yields the surface sequence: *tres novel·les* and *tres de les novel·les*, respectively.

- (5)
- a. *tres (de les) novel·les*
three (of the) novels
 - b. $[_{DP} \uparrow (de) [_{FP} [_{NP/DP} (les) novel·les] F^0 [_{QP} tres]]]$
-

This structure and movement is inspired by Kayne's DP analysis proposed in 1994 and by the more recent 'predicate inversion' analysis by Den Dikken (1998, 2006). The main idea is that the DP or NP is selected by a maximal lexical projection (in our case a QP) in the lowest

functional projection of the nominal (FP). The DP or NP is generated as the specifier of FP and the QP is generated as the complement of F^0 .

Although this is a typical clausal configuration, and predication is the usual relationship between two maximal categories as in all the cases studied by Kayne and Den Dikken, here it will be claimed that this is not the only possibility. The lowest functional projection FP accommodates two maximal projections which are semantically related (one selects the other). It is the nature of the lexical constituents that come into relation in FP and the type of semantic relation they have that qualifies the configuration: it can be predication, as in the “predicate inversion” examples, or even with no predicate inversion, or it can also be quantificational, as is the case in partitives (and quantitatives).

In partitives and quantitatives, I argue that three more functional projections are merged above FP: KP (Case Phrase), NumP (Number Phrase) and the top DP (Determiner Phrase). A KP is needed to provide the low DP/NP with a Case feature, and, as is proposed in the predicate inversion analysis, the QP must raise to Spec KP and F^0 must raise to K^0 for the latter to become active as a Case assigner (notice that *de* is a realisation of this Case assigner, which must always be overt in front of a DP). Like any nominal, a NumP is required and the closest element to get a value for the number feature is the raised QP. Following Longobardi (1994), I consider that all arguments are DPs, so a DP top functional projection is added to which the QP only raises in the case of its having a specific feature. The complete nominal structure and movements are represented in (6) below:

$$(6) \quad [_{DP} \text{QP}_i \text{D}^0 [_{NumP} \text{t}_i \text{Num}^0 [_{KP} \text{t}_i \text{F}_j^0 + \text{K}^0 (=de) [_{FP} \text{NP/DP} \text{t}_j \text{t}_i]]]]$$

If, as claimed here, partitives and quantitatives share the structure and apparently the derivation, what then are the differences between these two types of indefinite nominals? It is important to note at this point that the general lines of the Minimalist Program by Noam Chomsky are assumed in this dissertation and especially the notion of feature valuation as the main trigger for syntactic operations. So here it is argued that what distinguishes these two types of nominals is the features of the lexical material (QP, and NP or DP) and the different types of agreement relations that take place within FP. A distinction between two types of agreement operations, Agree and Concord, will be claimed within the nominals studied and the notion of feature sharing will be defended (see Frampton and Gutmann 2000).

I claim that in partitives the QP has its own number feature when starting the derivation; this accounts for the lack of number agreement between Q and N in this type of nominal (there is only gender Concord) and the fact that the QP determines the number of the whole nominal. I also claim that the QP inherits the [+Spec] feature from the embedded DP and with it values the top DP, which explains why all partitives are specific; QP raising to Spec DP precludes the insertion of a lexical determiner in D^0 (under the assumption that DP cannot be doubly filled: either Spec DP or D^0 can contain lexical material), which is why partitives cannot be preceded by a definite article.

In contrast, in quantitatives the QP has no number feature of its own but gets both the number and the gender by Concord with NP within FP, which explains the agreement between Q and N in this type of nominal. There is no embedded DP from which the QP can inherit a [+Spec] feature, so the specific or non-specific character of the nominal depends on the value of the corresponding QP feature and the position in which the QP ends up in the structure: in Spec DP in specific nominals, but lower in Spec NumP in non-specific nominals.

Interestingly, quantifiers can be predicates as well in certain contexts, and here it is claimed that the same basic structure serves as the starting point of the derivation, although as expected the functional projections above FP vary, especially when the resulting structure is a sentence instead of a nominal. Another crucial difference with respect to partitives and quantitatives is that the predicative QP usually stays in situ. Predicative QPs can predicate of a DP giving rise to a copular sentence—see *molts / trenta / un munt* in (7a)—or a secondary predicate—see *a milers / en gran nombre* in (7b)—or just a nominal if the subject is a pronoun—see *dos* in (7c). Predicative QPs can predicate of a NP as well, in which case they give rise to nominals where the QP stays in situ—see (8a), which is parallel to (7b)—or moves past the NP—see (8b).

- (7) a. *Els meus estudiants són {molts / trenta / un munt}*.
 ‘My students are {many / thirty / a lot}.’
- b. *Els colons arribaven {a milers / en gran nombre}*.
 the colonists arrived in thousands in great number
 ‘Colonists arrived {by the thousand / in large numbers}.’
- c. *Nosaltres dos hem de marxar*.
 we two have of leave
 ‘We two must be off.’

- (8) a. Arribaven [*colons* {**a milers** / **en gran nombre**}].
 arrived colonists in thousands in great number
 ‘There arrived colonists {by the thousand / in large numbers}.’
- b. [Els **tres llibres**] són meus.
 ‘The three books are mine.’

Importantly, in this dissertation QPs preceded by a determiner, as is *three* in *the three books*, are not considered as adjectives contrary to what is often assumed in the literature: the differences with respect to *three* in *three books* are derived from their lack of the [$\pm$ Spec] feature—they are predicative QPs, as seen in (8b). Thus, there is no need to postulate a different category membership (A vs. Q).

Finally, this study looks at the so-called ‘hidden partitives’, which can be of two types: (a) indefinite, which look like ordinary quantitatives but have a partitive interpretation as they are related to an antecedent: see *un cotxe* in (9a), and (b) definite, which look like definite nominals containing a Q following D but are interpreted as indefinite and have a partitive meaning: see *les dos* in (9b).³ The conclusion reached in this dissertation is that the former are not partitives but rather quantitatives and that the latter are the only case of true ‘hidden partitives’, in which the definite article is not a true article but it is claimed to be an overt realisation of the [+Spec] feature located in D⁰.

- (9) a. Nosaltres tenim dos cotxes. [**Un cotxe**] el faig servir jo, l’altre el meu marit.
 we have_{1pl} two cars one car it use_{1sg} I the-other the my husband
 ‘We have got two cars. One car is used by me, the other by my husband.’
- b. Después ayr rebí quatre lletres de vostra senyoria, [**les dos**] de·II·de abril, ý altra de·VI·ý·altra de·XX·, que...

(*Epistolari d’Hipòlita Roís de Liori i d’Estefania de Requesens* [1525-1549])

‘The day before yesterday, I received four letters from your ladyship, two of them (lit. the two) from April 2, another from the 6th and another one from the 20th, that ...’

³ Examples like (9b) were common in Old Romance and coexisted with partitives with no preceding definite article (which is the only possibility in Contemporary Romance).

To summarise, according to my analysis, then, the differences between partitives and quantitatives derive mainly from the lexical properties of the quantifier involved and from the nature of the nominal phrase selected by the quantifier: a determiner phrase (DP) in partitives vs. a noun phrase (NP) in quantitatives.

This dissertation has the following structure. In Chapter 1 the properties of the partitive construction are described and discussed in light of the data and previous analyses, and a line of explanation is suggested. This characterisation of partitives is completed in Chapter 2, where two similar constructions that are often considered as partitives in the literature are described and compared to true partitives in order to delimit our construction, and strong evidence that shows they are false partitives is provided. These apparent partitives are indefinite nominals with an adnominal modifier introduced by *de* such as *dos llibres d'aquells* ('two books of those') and the *among* construction, both of which provide important evidence for the analysis of partitives: true partitives contain a single noun in the structure and the only prepositional element in them is *de* (or its counterpart *of*, *di*, etc.) but not *entre* (or *among*, *fra*, etc.). In Chapter 3 the analysis outlined in this introduction is described and justified, and attempts to account for all the properties characterising partitives that become clear from the discussion in Chapter 1 and Chapter 2. Reference to previous analyses is made throughout the thesis whenever relevant for argumentation.

CHAPTER 1. Characterisation of partitives

1.0 Introduction

In this chapter the properties of partitives will be described. A comparison with non-partitive nominals, or the so-called *quantitatives*, will often be useful in characterising our construction.

1.0.1 Properties of the partitive construction

I will take Milner's (1978: 62) description of partitives in French as a starting point, which is given in (1):¹

- (1) a. *une structure bipartite, les deux parties étant articulées par de*
b. *la première partie est un élément de Quantité non précédé de l'article défini*
c. *la seconde partie est un nom comportant un déterminant propre*
d. *ce déterminant est toujours de type défini*
e. *une interprétation sémantique propre: l'élément de Quantité quantifie un sous-ensemble d'un ensemble dénoté par le nom ou groupe nominal de la seconde partie.*

A nominal must have all the syntactic properties (1a–d) and the semantic property (1e) in order to be a partitive.² Some examples of partitives are given in (2):

¹ Below is an English translation of (1):

- (i) a. a two-part structure joined by *of*
b. the first part is an element of quantity not preceded by the definite article
c. the second part is a noun with a proper determiner
d. this determiner is always definite
e. a particular semantic interpretation: the element of quantity quantifies a subset of a set denoted by the noun or nominal phrase in the second part

² Milner himself notes that this description is too restrictive as it does not include examples with quantifier expressions like *la plupart* ('most'), with a definite determiner, which ought to be considered partitives: i.e. *La plupart des candidats ont été reçus*. The same would apply to English *the majority*, Cat. *la majoria*, Sp. *la mayoría*, etc. Note, though, some differences concerning the presence of an internal definite determiner: in English *majority* is not followed by a definite determiner (i.e. *the majority of people*) whereas in French it is obligatory—as pointed out by Milner (1978: 68, fn.1): *la plupart des livres* / **la plupart de livres* 'most books'—

- | | |
|---|--|
| (2) a. tres d'aquells cotxes
three of-those cars
b. molts dels meus amics
many of-the my friends
'many of my friends' | c. un tros d'aquest pastís
a piece of-this cake
d. part del vi que vas comprar
part of-the wine that bought _{2sg}
'part of the wine you bought' |
|---|--|

These well-formed partitive nominals provide an illustration of all the properties listed in (1). Notice, however, that nominals in (2c,d) have a partitive interpretation different from that stated in (1e): they denote a part of a whole. So two different partitive interpretations can be distinguished: that in which a subset of a set is denoted as stated in (1e), which is found in partitives containing a plural countable noun—such as *cotxe* 'car' or *amic* 'friend' in (2a,b)—and that in which a part of a whole is denoted, which is found in partitives that contain either a singular countable noun—such as *pastís* 'cake' in (2c)—or a mass noun—such as *vi* 'wine' in (2d).³ It must be noted that the absence of this latter reading in (1e) is not incidental: in the literature on partitives the examples with mass nouns or singular countable nouns are in many cases just not considered or they are explicitly not assumed to be partitives, primarily on the basis that they are less restricted and allow indefinite internal determiners.⁴

The lack of one or more of the properties stated in the partitive characterisation in (1) either yields ungrammaticality—see (3–6) below—or results in a well-formed nominal which is not a partitive—as will be illustrated later in §1.0.3.

As stated in (1a), the prepositional element *de* (or the corresponding *of*, *di*, etc. in other languages) is obligatory in partitives.⁵ If *de* is deleted in (2), the nominals become ungrammatical, as shown in (3):

and in Catalan and Spanish it is optional (Cat. *La majoria de (les) noies*, Sp. *La mayoría de (las) chicas*, 'most girls'). I leave these cases aside for the moment, but see §1.5.3 below.

³ As can be expected, the part of a whole reading is also possible with plural countable nouns:

(i) *part dels meus amics*
 part of-the my friends
 'part of my friends'

See §1.1 and §1.2 for further details on the two types of partitive interpretation and the properties associated with each.

⁴ See Abbot (1996) for a discussion on this matter and the arguments for considering as partitives both *group partitives* and *mass partitives*, in her terminology, i.e. partitives that denote a subset of a set and partitives that denote a part of a whole, respectively.

⁵ As an alternative but equivalent way of marking partitivity, in some languages (i.e. German, Icelandic, Faroese) partitives can be construed with no preposition but with a special marking on the internal DP instead (for example, a morphological Case marker or a definiteness marker), as will be shown in §1.3 below.

- (3) a. *tres aquells cotxes
three those cars
b. *molts els meus amics
many the my friends
c. *un tros aquest pastís
a piece this cake
d. *part el vi que vas comprar
part the wine that bought_{2sg}

As stated in (1b), partitives reject being preceded by a definite article⁶ as illustrated in (4a). In fact, the same applies to any definite determiner, which includes demonstratives and possessives as in (4b,c):⁷

- (4) a. *els tres d'aquells cotxes
the three of-those cars
b. *aquells molts dels meus amics
those many of-the my friends
c. *els meus dos dels llibres que he llegit aquest estiu⁸
the my two of-the books that have_{1sg} read this summer
'my two of the books that I read this summer'

As stated in (1c), the noun must be preceded by a determiner, and, as specified in (1d), this determiner has to be definite. So the result is ungrammatical if the preposition is followed by a bare noun phrase as shown in (5)⁹ or by an indefinite noun phrase as in (6) below:¹⁰

⁶ It must be noted that this property has some counterexamples, at least in English (see §1.5 below).

⁷ Apparently, partitives that denote subparts of a whole admit being preceded by a definite determiner:

(i) *Dóna'm aquell tros del pastís de xocolata que queda.*
give-me that piece of-the cake of chocolate that is-left
'Give me that piece that's been left of the chocolate cake.'

However, in examples like (i) the first noun of the nominal—here *tros* 'piece'—does not act as a quantifier but is rather interpreted as an object (it denotes an entity); therefore, the nominal is not a partitive. See §1.5 for the arguments and further examples.

⁸ As in Catalan possessives are always preceded by the definite article, the ungrammaticality of (4c) could actually be subsumed to that of (4a). The English gloss of (4c) or the Spanish equivalent **mis dos de los libros que leí este verano* are in fact a better illustration that a possessive may not precede partitives.

⁹ Note that in some cases the lack of an internal determiner does not yield ungrammaticality, but then the resulting nominals are not partitives: see, for example, (8b,c) and (12c) below.

¹⁰ As noted above, partitives that denote subparts of a whole admit internal indefinite determiners:

(i) *un tros d'algun pastís*
a piece of-some cake

So property (1d) does not seem to apply to this type of partitive, at least as it is stated. This property will need some revision later as even partitives that denote subsets admit internal indefinite determiners (see §1.4 below).

- | | |
|--|---|
| (5) a. *tres de cotxes
three of cars
b. *alguns d'amics
some of-friends
c. *part de vi
part of wine | (6) a. *tres d'alguns cotxes
three of-some cars
b. *molts de cinquanta amics
many of fifty friends |
|--|---|

Properties (1c) and (1d) are known since Jackendoff (1977: 113) as the *Partitive Constraint*, which he states as follows:

(7) *Partitive Constraint*

In an *of*-N''' construction interpreted as a partitive, the N''' must have a demonstrative or genitive specifier.¹¹

So, as Jackendoff points out, (7) “rules out **many of all men*, **many of some men*, and **few of many men* as well as **many of men*, since they all lack demonstrative or genitive specifiers; but it permits *many of the men*, *few of the many men*, and *many of his friends*”.

1.0.2 Properties of the quantitative construction

In contrast with the description in (1) for partitives, the properties that characterise the quantitative construction are in general complementary to those of partitives, as is illustrated below in (8–11). However, notice that properties (1a) and (1b) are also found in quantitatives as some quantifiers require the presence of a prepositional element as *una pila* (‘a lot’) in (8c) or reject being preceded by a definite determiner as *alguns* (‘some’) in (9c).

In contrast with (1a), *de* is in principle not required in quantitatives, although there is considerable variation concerning the distribution of *de* in this type of nominal, both within a language and across languages. In Catalan, cardinal numbers reject an overt preposition *de* in quantitatives, whereas with certain quantifiers such as *molt* it is optional, and quantifier expressions containing a noun such as *pila* require its presence.¹² Observe (8):

¹¹ Note that in his terminology under “demonstrative and genitive specifier” the definite article and possessives are also included: for Jackendoff (1977) the definite article *the* functions semantically as a demonstrative; by “genitive specifier” he refers both to genitive 's as well as possessive adjectives *my*, *your*, etc.

¹² See §1.3 and also Chapter 3, §3.3.2, for further details on the distribution of *de* in Catalan and other languages.

- (8) a. tres (*de) cotxes
 three of cars
 b. molts (d')amics
 many of-friends
 c. una pila *(de) problemes
 a lot of problems

In contrast with (1b), quantitatives usually allow quantifiers to be preceded by a definite determiner, with the exception of *alguns* among others, as shown in (9):¹³

- (9) a. (els) tres cotxes
 the three cars
 b. (aquells) molts amics d'infantesa
 those many friends of-childhood
 ‘(those) many childhood friends’
 c. (*els) alguns problemes
 the some problems

In contrast with (1c,d), in quantitatives the noun cannot be preceded by any determiner, definite or otherwise, as illustrated in (10) and (11) respectively:

- | | |
|--|--|
| <p>(10) a. *tres els cotxes
 three the cars
 b. *molts els meus amics
 many the my friends</p> | <p>(11) a. *tres alguns cotxes
 three some cars
 b. *molts cinquanta amics
 many fifty friends</p> |
|--|--|

The well-formed nominals in (12) are the quantitative counterparts of (2). They have no partitive interpretation but rather denote a number of individuals as in (12a,b) or amounts of stuff as in (12c,d).

¹³ The ungrammaticality in (9c) is most likely due to a semantic incompatibility between a universal quantifier and an existential one.

- | | |
|---|--|
| (12) a. tres cotxes
three cars
b. molts amics
many friends | c. un tros de pastís
a piece of cake
d. molt vi
much wine |
|---|--|

1.0.3 Quantitatives that appear to be partitives

Although partitives and quantitatives have different syntactic and semantic properties, which usually allow them to be easily distinguished, there are some cases in which identifying a nominal as a partitive or as a quantitative can be a rather difficult task. Indeed, there are some quantitatives that look very similar to partitives, and although the properties listed in (1) prove to be sufficient to identify a partitive, it is clear that more criteria need to be taken into account in the characterisation and identification of partitives. The following are nominals that have properties (1a–d), i.e. they look exactly like partitives. However, they lack property (1e) as they have no partitive interpretation, and therefore cannot be considered partitives, as in fact they are not. The French examples in (13) are from Milner (1978: 63) whilst the Dutch example in (14) is from Vos (1999: ix):

- (13) a. il a dépensé deux mille de nos francs
 he has spent two thousand of our francs
 b. il a dépensé deux mille des francs d'alors¹⁴
 he has spent two thousand of those francs of-then

- (14) een paar van die_w grappige voorbeelden¹⁵
 a couple of those funny examples
 ‘a couple of these funny examples’

¹⁴ Similar examples in Catalan and Spanish would be:
 (i) Cat. a. En Joan s'ha gastat dues mil de les antigues pessetes.
 Sp. b. Juan se ha gastado dos mil de las antiguas pesetas.
 ‘John has spent two thousand of the old pesetas.’

¹⁵ A similar example in Catalan would be (i):

(i) un parell d'exemples dels divertits
 a couple of-examples of-the funny
 ‘a couple of examples of the funny type’

I will argue here that nominals like (i), where the quantifier is followed by an overt noun, are not partitives but quantitatives. In fact, (i) has no partitive interpretation but rather refers to two examples of a certain type (those that are funny), similar to the quantitative *un parell d'exemples divertits* (‘a couple of funny examples’). See Chapter 2, §2.1, for the arguments.

The examples in (13) are very particular and restricted to a few cases, that only apply to units of measure which can vary in time or space (e.g. currency). However, they are interesting because besides making it clear that a partitive interpretation is not plausible in these cases, they behave like quantitatives and not like partitives with respect to relativisation and extraction, as Milner (1978: 64, fn. 1) shows:

- (15) a. *Nos francs dont deux mille suffisent à peine à payer un poste de TV.
 our francs of-which two thousand are-enough hardly to pay a set of TV
 ‘Our francs two thousand of which are not enough to pay for a TV set.’
- b. *De nos francs, deux mille suffiront.
 of our francs two thousand will-be-enough
- c. *C’est de nos francs que deux mille sont nécessaires.
 it-is of our francs that two thousand are necessary
- d. *Nos francs avec deux mille desquels il lui faut vivre.
 our francs with two thousand of-which it him is-needed live
 ‘Our francs two thousand of which he has to live with.’

We will see later in §1.7 and §1.8 that partitives allow the P+DP to be relativised or extracted more easily than quantitatives, and there is usually a grammaticality contrast. So the ungrammaticality of (15) indicates that the examples under discussion follow a quantitative instead of a partitive pattern although extraction data are not as clear as usually presented, and there can be variation within and across languages. Specifically Catalan allows P+NP to be extracted in quantitatives very easily. For example, the corresponding Catalan examples for (15b,c) are well-formed, but that is not the case of (15a,d), which are ungrammatical in Catalan as well.

As for the Dutch example in (14), the difference with partitives lies on the weak character of *die* (represented by the small *w*). Vos (1999) calls examples like (14) *weak indirect partitive construction* (weak IPC) in order to distinguish them from ordinary partitives, which she calls *strong indirect partitive construction* (strong IPC), illustrated in (16) (where the small *s* stands for ‘strong’):

- (16) een paar van die_s grappige voorbeelden
 a couple of those funny examples
 ‘a couple of these funny examples’

According to Vos, in weak IPCs *die* is not interpreted as a strong demonstrative—a determiner-like element as in strong IPCs—but rather more like an adjectival element meaning ‘such’. (14) can be compared to a nominal phrase like *vier (van) zulke grappige voorbeelden* ‘four of such funny examples’.

The so-called weak IPCs are not only semantically similar to quantitatives as they have no partitive interpretation but share with them both their behaviour with respect to verbal agreement (see 17a) and also visibility of the noun for semantic features of the verb (see 17b–d). Moreover, unlike partitives (or strong IPCs in Vos terminology), weak IPCs reject a cardinal or quantificational adjective between *die_w* and the following noun (see 17e).

- (17) a. Een paar van die_w toeristen {*is / zijn} net aangekomen
 a couple of those tourists is / are just arrived
 ‘A couple of these tourists just arrived.’
 b. Jan heeft een glas van dat_w bier gedronken
 Jan has a glass of that beer drunk
 ‘Jan has drunk a glass of this beer.’
 c. Ik heb een doos van die_w postzegels verzameld
 I have a box of those stamps collected
 ‘I have collected a box of these stamps.’
 d. Een bus van die_w toeristen heeft elkaar gefotografeerd
 a bus of those tourists has each other photographed
 ‘A bus of these tourists has photographed each other.’
 e. *Een van die_w drie toeristen is gevallen.
 one of those three tourists is fallen
 ‘One of these three tourists has fallen.’

(Vos 1999: xi)

According to Vos, partitives and quantitatives in Dutch behave differently with respect to verbal agreement when the quantifier and the noun have different number.¹⁶ She points out that in partitives agreement with the verb is determined by the number of the quantifier, whereas in quantitatives it is determined by the noun. Just like quantitatives, the nominal in (17a) admits only a plural verbal form. The rest of examples in (17) are self explanatory.

More controversial are the English examples in (18) and (19) because English differs from many other languages in that it allows quantifiers such as *all* and *both* to appear in nominals with the form of the partitive construction as illustrated by the *a* and *b* examples.

- (18) a. all of the children
b. all of us
c. we all

- (19) a. both of the children
b. both of us
c. we both

However, it is clear that (18a,b) and (19a,b) do not have a partitive interpretation as no subset of a set is denoted. As all the members of the set of children or of us are referred to in (18a,b) and (19a,b), these are actually examples of what has been called *improper partitivity* (as opposed to *proper partitivity*).

In my view, this distinction between proper partitivity and improper partitivity is unnecessary. On one hand, improper partitives are not a general phenomenon. They are restricted to English as far as I have observed, and if they are called improper, it is because they are not really partitives and therefore should not be considered as such.¹⁷ On the other hand, the main reason for considering them as partitives is the presence of the preposition *of*, but notice that *of* is optional in the *a* examples, when the Q quantifies over a DP containing a noun: *all the children* and *both the children* are grammatical as well and have the same quantitative meaning. As Reed (1996: 165) notes, “there is general agreement in the literature that such expressions are interpreted identically, e.g. *both the boys* is equivalent to *both of the boys* (Hogg 1977; Westerstahl 1984)”.

¹⁶ The behaviour of partitives and quantitatives with respect to agreement will be studied in §1.6. As data will show, external agreement of these nominals is more complex than suggested here.

¹⁷ However, see Barker (1998: 704), according to whom proper partitivity applies even when universal quantification is involved (i.e. with *all*, *both*, *each*): “as long as these determiners quantify over atomic individuals (Roberts 1987), there is no conflict with the requirement that the partitive *of* phrase has only proper subparts in its extension”. So, for this author the examples in (18) and (19) are proper partitives.

In contrast, *of* is obligatory in the *b* examples, where the pronoun follows the quantifier, although there is an alternative without the preposition which shows the reverse order (see the *c* examples). What is relevant is that *all of us* and *both of us* are equivalent to *we all* and *we both* respectively and that they do not have a proper partitive interpretation. The presence of the preposition is simply related to licensing conditions imposed by the pronoun in such a configuration because of Case reasons. See §1.3 below and also Chapter 3, §3.3.2, for further details.

Returning to the *all (of) DP* examples in *a*, the fact that *of* is optional suggests that its presence may be simply due to a parallelism with the pronoun examples. An analogy account is defended in Brisson (1998: 21), as Matthewson (2001: 162) states, “Brisson in fact claims that the *of* in *all*- and *both*- phrases is there, optionally, merely by analogy with other partitive constructions”.

I leave the question open as to what the structure of examples (18-19) is but conclude that they are not partitive nominals given that they do not have a partitive meaning (see §1.1).

In summary, we have seen some examples that look very much like partitives but which are actually instances of the quantitative construction. The non-partitive interpretation was the crucial point, but in the discussion it also became clear that the properties of the different elements that appear in the construction and how the construction behaves syntactically with respect to extraction or relativisation and agreement are relevant in order to describe and identify partitives. Attention must be paid as well to the type of quantifier they accept (partitives are more restricted than quantitatives as to the type of quantifier admitted) or to internal agreement between Q and the noun (partitives show no number agreement in contrast with quantitatives: e.g. *one of those cars* vs. *one car*), among other aspects.

1.0.4 Concluding remarks

Thus far I have mentioned and briefly described most properties partitives have. In the following sections all of these properties will be studied in more detail and an initial attempt to explain them will be presented.

Notice that in the characterisation in (1) properties appeared as purely independent descriptive items. My aim is not only to ascertain how they are related to one another so that some of the properties can be derived from others but also to find general linguistic properties from which they can follow in order to obtain more explanatory adequacy. Several questions arise at this point—recall (2) in the Introduction, repeated here for convenience as (20):

- (20) a. How is the partitive interpretation obtained? Is it semantically and syntactically determined or is it obtained merely pragmatically or from the discourse? If the former, is it determined by the preposition or by the relationship between the quantifier and the noun? Or could a different element present in the structure (for example, an empty noun, an operator or a particular functional projection) be responsible for the partitive interpretation?
- b. What is the status and role of the prepositional element, and why does it appear systematically in partitives? Is it the same prepositional element sometimes present in quantitatives, or is it a different one?
- c. Why is an external definite determiner systematically excluded in partitives but not in quantitatives?
- d. Why is an internal determiner required in partitives, and why does it have to be definite? How is it licensed?

With respect to (20a), we find many possible answers in the literature, so a review of the literature as well as looking at data will help in trying to find the correct answer. The type of quantitative element and the presence of an internal definite determiner combined with the phenomena of extraction, relativisation and pronominalisation by *ne* as well as a look at languages with morphological Case marking will be useful in answering (20b). The systematic specific reading in partitives will provide a clue for a plausible answer to (20c). Selectional properties of the quantifier seem to be the answer to (20d).

Next I will go deeper into the different properties the partitive construction has and their motivation. Partitives will be compared to quantitatives when useful for the discussion.

1.1 The partitive meaning

We have seen that partitives have a characteristic interpretation that implies an idea of partition, which can be of two types: they can denote a subset of a set or a part of a whole. In this section I would like to explore how this meaning is obtained. As this is a syntactic study, my aim will be to determine what is syntactically relevant for obtaining the partitive reading in partitives.

1.1.1 A pragmatic or discourse view

Some authors have claimed that the partitive interpretation is determined through the discourse or pragmatically. Consider the following examples (where example (21b) corresponds to (9a) in the Introduction):

- (21) a. Ils ont attrapé dix lions mardi; mercredi ils en ont tué [cinq].
 they have_{3pl} caught ten lions Tuesday Wednesday they NE have_{3pl} killed five
 ‘They caught ten lions on Tuesday; on Wednesday they killed five (of them).’
 (Milner 1978: 52)
- b. Nosaltres tenim dos cotxes. [Un cotxe] el faig servir jo, l’altre el meu marit.
 we have_{1pl} two cars one car it use_{1sg} I the-other the my husband
 ‘We have got two cars. One car is used by me, the other by my husband.’
- c. That book could belong to one of three people. (Ladusaw 1982: 240)
- d. Only one of many applicants passed the test.
 (Reed 1989: 421, quoted by Abbott 1996: 30)
- e. Any one of several options are open to us at this point. (Abbott 1996: 30)

As observed by Milner (1978: 52), a sentence like (21a) has two interpretations. In one the five lions killed on Wednesday belong to the group of ten lions caught on Tuesday (partitive reading) and, in the other, those five lions are different from the ten lions caught the day before (non-partitive reading).

Cardinaletti and Giusti (2006: §3.3.4) express this difference in terms of D(iscourse)-linking or non-D(iscourse)-linking of a *partitive PP* respectively, which they claim to be always selected in an indefinite nominal. Briefly, these authors defend the idea that indefinite nominals are QPs, where Q selects two arguments: a NP and a PP—which they call *partitive PP*. Sometimes one, or even both, of these arguments is covert. The difference between a partitive and a quantitative nominal would be captured through the notion of D-linking, taken from Pesetsky (1987).¹⁸ So partitives and quantitatives in Cardinaletti and Giusti’s analysis have exactly the same structure, with the only difference

¹⁸ Pesetsky (1987: 107) uses this notion of discourse-linking to explain the difference between a *which*-phrase and *who* or *what*: “When a speaker asks a question like *Which book did you read?*, the range of felicitous answers is limited by a set of books both speaker and hearer have in mind...No such requirement is imposed on *wh*- phrases like *who*, *what* or *how many*. These phrases may be non-D-linked”. And in note 9 he adds, “Of course, the set of books need not actually have been verbally specified in an utterance, as long as both speaker and hearer make the same assumptions about the context”.

being that the partitive PP is D-linked in partitives whereas it is not in quantitatives (besides that this PP is always covert in quantitatives).

In a sentence like (21b), where *un cotxe* ('one car') has a partitive interpretation given the previous context (equivalent to *un dels dos cotxes* 'one of the two cars'), Cardinaletti and Giusti would assume that this indefinite nominal *un cotxe* contains a covert partitive PP which is D-linked to *dos cotxes*.

So, in (21a,b) the nominals [*cinq*] and [*un cotxe*] get their partitive interpretation from the context. From this we could conclude that the context determines whether a nominal is partitive or quantitative and that those would be cases of the so-called *hidden partitives*, where part of the structure is covert, as Cardinaletti and Giusti (2006) claim. However, on the basis of syntactic evidence, I will show that partitives cannot be assigned exactly the same structure as quantitatives and that for the interpretation of *un cotxe* in (21b) there is no need to postulate a covert *partitive PP*. That is to say, that these are not instances of the partitive construction with part of the structure covert. Indeed, in such cases the partitive interpretation is actually obtained from the context, either the real one or the discursive one, but this does not mean that the same is true in the partitive construction nor that the nominals in (21a,b) are partitives. See Chapter 3, §3.5.1, for further discussion on examples of this type.

The notion of partition is not exclusive to the partitive construction, as was suggested in the Introduction, but it can also be expressed by other constructions such as those involving the preposition *entre* 'among' (see 22a,b) or in some cases by simple noun modification (see 22c,d) or even discursively as has just been seen in (21a,b) above:

- (22) a. *tres d'entre els meus amics*
 'three among my friends'
- b. *molts entre els llibres que vaig llegir l'estiu passat*
 'many among the books I read last summer'
- c. *tres nens de la classe* ($\cong$ *tres dels nens de la classe*)
 'three children in the class' ($\cong$ three of the children in the class group)
- d. *molts llibres de la meva biblioteca privada* ($\cong$ *molts dels llibres de la meva biblioteca*)
 'many books of my private library' ($\cong$ many of the books of my library)

Although the *among* examples look much like partitives (apparently the only difference is the preposition used: *entre/among* or *de/of*), a closer look at their behaviour shows that they do not pattern alike in several respects, and I will conclude that they cannot receive the same analysis.¹⁹ As for examples (22c,d), they have the form of quantitatives and the notion is more that of identifying the type of element by giving the information that they belong to a group of individuals, expressed here by a collective noun (group class, private library), than formally expressing any partition.²⁰

In contrast with the examples in (21a,b), partitives always have a partitive interpretation, whether they are uttered without previous discourse to which they can refer or with no knowledge of the situation. The partitive interpretation in partitives derives from the construction itself, and in that sense I consider it as a semantic matter, not a pure discourse or pragmatic one.²¹

Let us turn now to examples (21c–e), which are exceptions to the Partitive Constraint: the embedded DP is not definite, contrary to what is required by the constraint, but despite that, they are well-formed partitives. They have been taken as an argument in favour of a pragmatic account of partitives, according to which there are no formal or semantic restrictions on partitives: any kind of nominal can be a partitive provided it can refer to a contextualised set of elements (see Abbott 1996 for this view). From this, one could again conclude that the partitive meaning derives merely from the context, but a pure pragmatic view would fail to explain cases of non-pessupositional embedded DPs such as those that are modified by a relative clause with a subjunctive verb: *Cap dels estudiants*

¹⁹ As noted in the Introduction, it will be argued that the *among* examples are not partitives but instances of quantitatives with a N modifier headed by *entre* (i.e. 22a)—observe that *entre* is preceded by *de* yielding *d'entre*—or small clauses with an *entre* PP as a predicate (i.e. 22b). See Chapter 2, §2.2, for further details on the *among* construction. It is the lexical meaning of the preposition *entre* that is responsible for the partitive interpretation. See Cardinaletti and Giusti (1991, 2006) for a different proposal according to which the *among* PPs are optional partitive PPs.

²⁰ But see Milner (1978: 123–125), who considers similar examples as partitives. This author takes as partitives even examples like *des passages de cette œuvre* ('passages of this work'), where partition clearly derives from lexical properties of the nouns involved (i.e. *passage* refers to a short section of a book).

²¹ However, see Gutiérrez (2008), who suggests that nominals like those in (21a,b) are partitives with an empty embedded determiner. For this author, if a nominal has a partitive interpretation, Q necessarily selects a DP, which can be completely null or which can contain a null D. The structure she proposes for partitives is below:

(i) [_{QP} Q [_{KP} de [_{DP} D NP]]

where *de* is a Case marker that is not overtly realised if the embedded DP as a whole or the embedded D alone are non-overt. When the embedded D or DP is null, the empty category needs an antecedent and that explains why these partitives are discursively linked, though the basis of the partitive interpretation is attributed to the high position of Q and the selection of a DP, that is to say, it has a syntactic source, not discursive or pragmatic.

See Chapter 3, §3.5.1, for a revision of Gutiérrez's analysis and further discussion on these apparently hidden partitives.

que suspenguin el treball no podrà presentar-se a l'examen ('None of those students who fail_{subj} the essay will be allowed to do the exam'). See other examples of partitives independent of the context of use (taken from Ladusaw 1982) in §1.4, in which the Partitive Constraint is studied in detail.

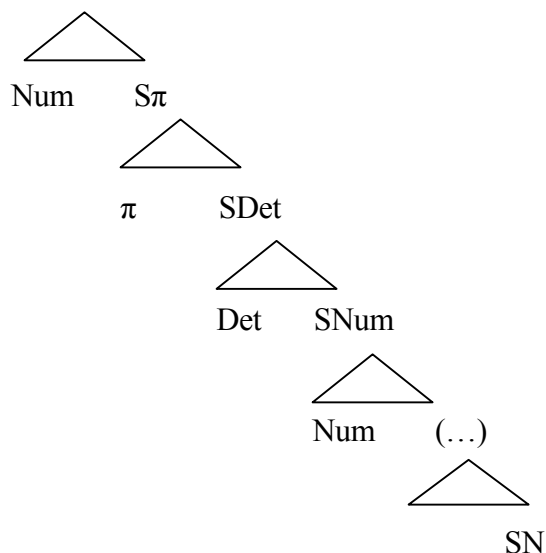
1.1.2 A syntactic and semantic view

If we assume that it is neither the discourse nor pragmatics that provide the partitive interpretation in partitives but the construction itself, then the question is what exactly determines that interpretation. In the literature different possibilities to account for this are found and will be briefly described below.

1.1.2.1 Partitive interpretation derived from a particular functional projection

A few authors have tried to derive the partitive interpretation from structural properties by associating positions in the tree to semantic notions and introducing silent operators. Lorenzo (1995), for example, proposes the existence of a new functional projection π in the structure of partitives, what is responsible for introducing the partitive meaning, something like 'out of'. The structure he proposes is the following one where $S(intagma)$ stands for $P(hrase)$:

(23) a. SNum



(Lorenzo 1995: 218, ex. 9)

b. [_{SNum} muchos [_{Sπ} de [_{SDet} estos [_{SNum} [_{Num^o} libr_{-i} + -os] [_{SN} t_i]]]]]
 many of these book+s

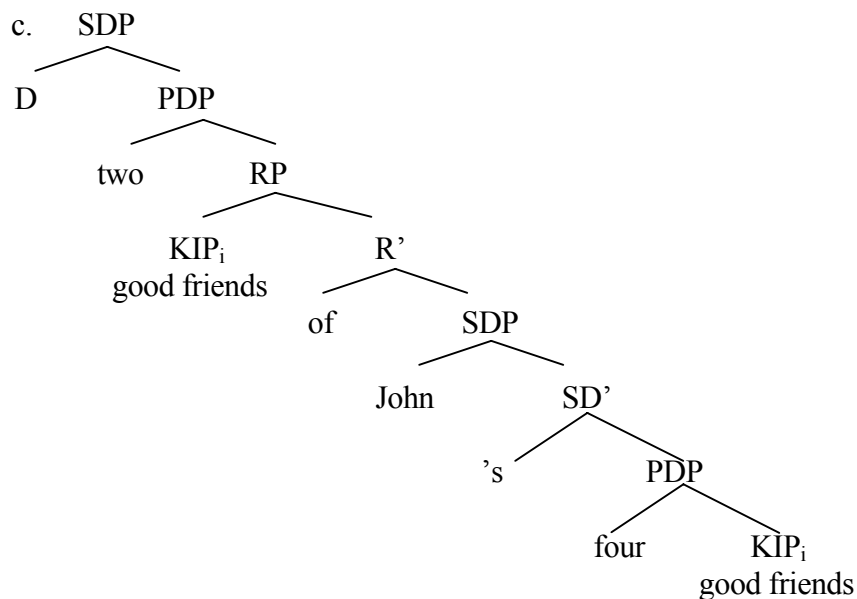
Lorenzo claims that π , which stands for ‘partitive’, is a functional category selected by Number and that selects DPs. Contrary to other functional categories, πP needs an overt preposition *de* for the selected DP to become visible, as shown in (23b).

In a similar line, Zamparelli (1998) associates different structural positions in the DP to different types of determiners and modifiers in order to derive the semantics of the nominal from the different layers in the DP. See the DP structure he adopts in (24a), illustrated with an example in (24b).²² To deal with partitives, he introduces a syntactic projection called the *R(esidue) P(hrase)* in the structure, whose head is realised as *of/de*—see (24c).

- (24) a. [_{SDP} *Determiners* [_{PDP} *Numerals* [_{KIP} *Restrictive modifiers* ... [_{NP} *Noun (Complement)*]]]]

- b. [_{SDP} *those* [_{PDP} *four* [_{KIP} *big* [_{NP} *boys*]]]]]

(Zamparelli 1998: 269, ex. 45a,b)



(Zamparelli 1998: 273, ex. 55)

A copy of the bare noun and the embedded definite DP can be accommodated in the specifier and complement position of RP, where they are interpreted by the following rule:

$$RP = Re' ([Spec, RP], [Complement, RP])$$

²² See Zamparelli (1996: §1.2) for a justification of this structure, where SDP stands for *Strong Determiner Phrase*, PDP stands for *Predicative Determiner Phrase* and KIP stands for *Kind Determiner Phrase*. The latter projection contains the NP proper, with the noun, and some attributive adjectives.

The residue operator Re' is responsible for proper partitivity, that is to say, it ensures that partitives denote proper subparts. At LF the two copies of KIP are necessary for interpretation, but in syntax one can be non-overt as is actually the case.²³

Even if these accounts are plausible from a semantic point of view, in this dissertation I take the view according to which syntax cannot include semantic notions but is blind to them, and semantics is derived from the combination of the meaning of lexical items and their position in the structure as well as thematic and selectional relationships. So any analysis of the kind just described would add unnecessary complexity to the computational system and will not be considered nor explored here.

1.1.2.2 Partitive interpretation attributed to preposition *de/of*: the partitive PP

More commonly, the partitive meaning is attributed to the prepositional element, analysed as a lexical item which projects into a PP (often called *partitive PP*).²⁴ This preposition is claimed to have a meaning similar to ‘out of/from’.

Authors that propose a partitive PP often claim the existence of an empty N following the quantifier in order to reflect the idea that partitives denote two sets and the preposition introduces the bigger set.²⁵ The structure could be represented as in (25a), where *e* is lexically identical to *homes* (‘men’):

- (25) a. tres [_N *e*] [_{PP} d’aquells [_N homes] d’allà]
 three of-those men over-there
- b. tres homes d’aquells homes d’allà
 three men of-those men over-there

²³ This author considers possessive examples such as *two good friends of John’s* to have the same source as partitives, with the only difference being that the overt N is the upper one in Spec RP, so this particular projection is not restricted to partitives alone.

²⁴ See Milner (1978), Belletti (1979), Bonet and Solà (1986), Abney (1987), Eguren (1989), Hernanz and Brucart (1987), Delsing (1988, 1993), Mallén (1992), Ramos (1992), Cardinaletti and Giusti (1992, 2006), Sleeman (1996), Doetjes (1997), Barker (1998), Ionin, Matushansky and Ruys (2006), Brucart and Rigau (2008), Bosque and Picallo (2009), among others. In general, these authors propose different structures for partitives but have in common the analysis of *de* as a lexical preposition that projects into a PP. Barker (1998) does not specify what the syntactic structure of a partitive nominal is but assigns a denotation to the preposition that is responsible for the partitive interpretation of the nominal:

$[[of_{PART}]] = \lambda x \lambda y Py [P(y) \wedge y < x]$.

²⁵ Although that is not always the case. Among the authors in the previous list, no empty N is proposed by Belletti (1979), Eguren (1989), Battye (1990), Mallén (1992) or Bosque and Picallo (2009).

A special case worth mentioning here is Chierchia (1997), who claims an empty N that is not identical to the overt N in the embedded DP but is a relational N which means ‘part’: it is this empty noun that is responsible for the partitive interpretation (for this author the preposition has no meaning).

- c. tres homes d'aquells e d'allà
three men of-those over-there

According to this view, the partitive nominal in (25a) refers to two sets of men: the set of three men and the set of those men, the first being a subset of the second. The existence of examples where there is an overt noun following the quantifier is taken as supporting that claim: (25a) would be equivalent to the redundant and odd (25b) or the example with an empty noun in the embedded noun phrase (25c).

In contrast, here it will be claimed that there is no need to postulate any empty N to account for the interpretation of partitives: the DP denotes the bigger set of elements and the Q alone is enough to introduce the restriction by quantifying over a specific set. It is the whole nominal which denotes a subset of the bigger set. In (25a) the DP *aquells homes* refers to a set of men and the Q *tres* quantifies over them, which has the reading by which a set of three men is denoted that is a subset of those men. I consider examples such as (25b) not possible; they are quite odd and unnatural. However, in the case they may be more or less accepted, they are not partitives, as is likewise not the case in (25c). The reader is referred to Chapter 2, §2.1, where both semantic and syntactic arguments are provided against considering nominals like (25c) as partitives.

Moreover, in most analyses that assume an empty N no attention is paid to partitives that denote parts of wholes, and one wonders how these types of partitives would be accounted for since the equivalent examples of (25b,c) are not possible. See (26b,c) and (27b,c):

- (26) a. un tros d'aquest pastís de xocolata
a piece of-this cake of chocolate
'a piece of this chocolate cake'
b. *un tros de pastís d'aquest pastís de xocolata
a piece of cake of-this cake of chocolate
c. *un tros de pastís d'aquest de xocolata
a piece of cake of-this of chocolate
- (27) a. part del vi que vas comprar
part-of-the wine that bought_{2sg}
'part of the wine you bought'

- b. *part de vi del vi que vas comprar
 part of wine of-the wine that bought_{2sg}
- c. *part de vi del que vas comprar
 part of wine of-the that bought_{2sg}

A possibility would be to treat partitives that denote parts of wholes in a different way so that no empty N was postulated in them. This is the option Ionin, Matushansky and Ruys (2006) among others take: they claim that whereas partitives with cardinals contain an empty N, partitives containing fractions and measure Ns do not.²⁶ That explanation correctly accounts for the ungrammaticality of examples in (26) and (27), but this distinction with respect to partitives denoting subsets of sets does not seem to receive empirical support: as said before, the evidence presented in Chapter 2 (§2.1) shows that examples like those in (25c), with an overt noun following the quantifier, are not true partitives. The natural conclusion is that all types of partitives have the same structure, in which there is no empty noun, as will be argued throughout this dissertation.

Moreover, an analysis based on an empty N would have serious difficulties in accounting even for some partitives that denote subsets of a set: those that contain a personal pronoun as in (28).

- (28) a. tres de nosaltres ‘three of us’
 b. cap d’ells ‘none of them’

In (28) it would be very hard to get any plausible interpretation for an empty noun following the quantifier, which I take as a strong argument against the assumption of an empty noun

²⁶ Ionin, Matushansky and Ruys (2006) propose two structures for partitives, which differ in that cardinals take as a complement an NP headed by a null or deleted noun as shown in (ia), whilst fractions and measure nouns combine directly with the *of*-PP—see (ib):

- (i) a. [NP [N two] [NP [N ~~Ø~~/apple] [PP of [DP these [NP eight apples]]]]]
 b. [NP [N half] [PP of [DP these [NP eight apples]]]]

These authors attribute the presence of the empty N in (ia) to the atomicity requirement of cardinals—notice that the empty N ~~apple~~ is singular in (ia)—and consider examples such as (ii) as support for the structure they attribute to cardinals (as an evidence that the empty NP can be overt):

- (ii) a. Two of these apples are quite good.
 b. Two apples of these are quite good.

Fractions and measure nouns lack the atomicity requirement, so there is no need for an empty N in the structure, and according to these authors, there is independent evidence that they cannot take a nominal as their complement (possibly for Case reasons): the ungrammaticality of **a third (an) apple* excludes the possibility of a null noun.

inside partitives.²⁷ However, according to Zamparelli (1998: 273), “Partitives with pronouns are also not a problem, as long as we analyse *two of them* as *two ~~F(N)~~ of the(m) ~~Ns~~* (cf. *two linguists of us linguists*), with *the* realised as its intransitive tween *them* (cf. Sommerstein 1972, Abney 1987)”. On one hand, it seems difficult to apply this analysis to languages where the third person and the article have a completely different form, as Italian (*loro* vs. *i*: *due di loro* vs. *due dei studenti*) or French (*eux* vs. *les*: *deux d’eux* vs. *deux des étudiants*), as the pronoun cannot be obtained by just deleting the noun and slightly modifying the article as suggested for English. That is to say, in those languages the article and the pronoun cannot be considered as mere allomorphs. Moreover, even in languages where the articles and the third person pronouns look very similar as in Catalan, this derivation through deletion seems unpalatable given that in this language the pronoun is restricted to animates: *dos dels llibres/estudiants* ‘two of the books/students’ vs. *dos d’ells* ‘two of them’ (the pronoun *ells* can only refer to *estudiants* ‘students’, not to *llibres* ‘books’). On the other hand, it is not clear how this procedure as suggested by Zamparelli would not overgenerate **two linguists of them* or **two linguists of us*.

Leaving the question aside whether partitives contain an empty noun or not, the explanation that the preposition is responsible for the partitive meaning is a plausible one. However, this implies a different treatment of the preposition in partitives and quantitatives, and I would like to pursue the idea that there is not such a difference: that the preposition is a licenser in both types of nominals and that the interpretation of partitives does not depend on the prepositional element. Let us see then how the interpretation could be obtained differently in the next paragraph.

1.1.2.3 Partitive interpretation determined by selectional properties of the quantifier

An alternative analysis of the prepositional element *de/of* in partitives is to consider it as a functional category, only present because of licensing requirements and so semantically vacuous. This seems to be more according to the behaviour of *de/of*, which is usually a weak preposition with no lexical content that normally appears in nominals for grammatical (i.e.

²⁷ Cardinaletti and Giusti (2006) provide examples containing personal pronouns where they assume an empty noun as in other partitives—see (i), that corresponds to their example (115). However, these authors do not specify what exactly the interpretation of the empty noun, indicated by [e], would be in these cases:

- (i) a. Una [e] delle ragazze pensa che ...
 one of-the girls thinks that
- b. Uno [e] di noi pensa che ...
 one of us thinks that
- c. Molti [e] di noi pensano che ...
 many of us think_{3pl} that

Case) reasons. Indeed, *de/of* is a functional element that licenses N complements or N modifiers of different kinds: *la destrucció *(de) la ciutat* ‘the destruction of the city’, *dos amics *(d’)en Joan* ‘two friends of John’s’, *el mànec *(d)el paraigua* ‘the handle of the umbrella’, etc.

Following this line of reasoning, Vos (1999: 242) claims that the prepositional element in partitives does not contribute to the meaning but that it is actually the relationship between the quantifier (or quantitative expression) and the N that determines the interpretation. She studies only the cases where the quantitative expression contains a noun (such as *paar* ‘pair’, *groep* ‘group’, *glas* ‘glass’, *doos* ‘box’, etc.) and therefore nominals which contain two Ns: N1 and N2. According to her it is the relation between N1 and N2 that determines whether they are in a subset-set relation, a possessive relation, a part-whole relation or some other relation.

Similarly De Hoop (1998: 4), following Ladusaw (1982), considers that the function of the preposition in partitives is just “to make expressions that are not directly accessible to the higher determiner (which basically means, expressions other than bare nouns) accessible”.²⁸ For De Hoop, Q selects the type of noun phrase:²⁹ some Qs select entities as their argument, other Qs select sets of entities. These noun phrases are made available to the quantifier by the preposition *of*.

In line with Vos and De Hoop, here I will claim that *de/of* does not contribute to the partitive meaning but appears for grammatical reasons, which will be dealt with later in §1.3, and that what matters is the relation between Q and the noun projection. So, like De Hoop, I propose that Q selects the noun as its argument, which projects into a DP in partitives: entities and sets of entities are syntactically realised as DPs.³⁰

Indeed, the presence of an internal DP is what seems crucial for the partitive interpretation to obtain. Observe the following examples of partitives in (29) and compare them to the corresponding quantitatives in (30) (the examples are in English, but the same would be true of Catalan or other languages):

²⁸ There are some differences between Ladusaw’s proposal and De Hoop’s on the type of expressions that *of* makes accessible to the quantifier that I will not go into as they are not relevant here.

²⁹ Here the term “noun phrase” is used in a broad sense, actually corresponding to DP.

³⁰ Gutiérrez (2008) makes a similar proposal: Q selects a DP in partitives, and the preposition is not a true preposition but a Case marker, although at some point she also states that the preposition in partitives has a semantic content related to partitivity (Gutiérrez 2008: 204), so in her proposal it is not clear what exactly the status of the prepositional element in partitives is.

(29) *partitives*

- a. three of my friends
- b. many of those books
- c. a group of those tourists
- d. a piece of this cake
- e. a glass of the red wine

(30) *quantitatives*

- a. three friends of mine
- b. many books
- c. a group of tourists
- d. a piece of cake
- e. a glass of red wine

The examples in (29) imply either the existence of a bigger set—of friends, books or tourists in (29a,b,c)—or the existence of a whole—a cake or wine in (29d,e)—that are contextualised through the definite determiner (the possessive, the demonstrative or the definite article). In contrast, examples in (30) lack this implication, and they only denote amounts of things. In (30a) it may be that I only have three friends or I can also have more, but what matters here is that we are referring to a set of three items, which are friends of mine. The same applies to (30b,c). In (30d,e), the quantifiers involved—*piece* and *glass*—somehow seem to contain some idea of partition in their meaning, but despite that, the interpretation is not partitive either. (30d,e) are similar to *some cake* and *some wine* respectively: they only denote amounts.

(31) and (32) illustrate the contrast between partitives and quantitatives just stated: only partitives imply the existence of a bigger set, which can license a coreferent nominal; the ungrammaticality of (31b) and (32b) is due to the lack of such an implication in quantitatives.

(31) a. *Three of my friends_i* argued with the rest *e_i*. [=the rest of my friends]

b. **Three friends_i of mine* argued with the rest *e_i*.

(32) a. *A piece of this cake_i* is sweeter than the rest *e_i*. [=the rest of cake]

b. **A piece of cake_i* is sweeter than the rest *e_i*.

Interestingly, even when the quantifier denotes a fraction and therefore seems to be intrinsically partitive, the relationship between Q and N is only partitive if N projects into a DP, as illustrated by the following examples:³¹

³¹ See Milner (1978: 126) for similar examples in French.

- (33) a. la meitat del sucre
 the half of-the sugar
 b. un terç de la farina
 one third of the flour

- (34) a. la meitat de sucre
 the half of sugar
 b. un terç de farina
 one third of flour

The examples in (33) have a partitive interpretation: part of the sugar or the flour is denoted, not the whole amount. In contrast, the examples in (34) denote amounts of sugar or flour that correspond to a proportion of a whole consisting of the sum of different substances (for example, in a recipe), e.g. the drink is made of sugar and juice in the same proportion, one half of each as in (34a), or the cake is made of a mixture of flour, sugar and yogurt in the same proportion, a third of each as in (34b). There is still another possible non-partitive meaning in (34a), which can be illustrated by an example like the following: *Jo hi posaria la meitat de sucre, si no quedaria massa dolç* ('I would put the half of sugar; otherwise, it will be too sweet.'). In this case we refer to an amount of sugar that is smaller than the one prescribed, in particular it corresponds to half of it. Actually, (34) does imply a notion of partition due to the type of quantifier—if the quantifier is a fraction, it must be a subpart of something. However, given that no DP is selected in the nominal (as is the case in 34), that notion can only be external to the nominal: it is the discourse or the context which provides the information of what the whole is that the quantifier denotes a subpart of. This fact clearly reinforces the intended difference between partitives and quantitatives with respect to partitivity.³²

This 'non-partitive interpretation' of fractional quantifiers is obtained with mass nouns but not with singular countable nouns such as *copa* ('glass'), as shown by the ungrammatical example in (35b).³³ However, in Catalan the noun *meitat* has an adjectival counterpart, *mig*

³² But see Milner (1978: 125-128), who considers for French that examples with fractions like (33) and (34) both have a partitive structure containing the fraction, the composition of the fraction and the whole. According to this author, the only difference is which part of their structure is not lexically realised: i.e. in (33b) the composition of the fraction would be non-overt, whereas in (34b) the whole would be not explicit. However, under his analysis it is unclear why examples with both the composition of the fraction and the whole overt are ungrammatical—see (ia)—or are not interpreted as expected and quite odd—see (ib):

(i) a. *un terç de farina de la farina 'one third of flour of the flour'
 b. ?un terç de farina del pastís 'one third of flour of the cake'

(ia) would be the underlying sequence of (33b): if the whole is the flour, the composition of the fraction must be flour as well, but the result when both elements are overt is ungrammatical. (ib) would be a possible underlying sequence of (34b), where flour corresponds to one third of a cake (in a recipe), but it does not have that interpretation and sounds odd. Interestingly, *del pastís* could only be interpreted as a modifier of *farina* (as indicating that the type of flour used is the one meant to be for the cake or some such thing).

³³ Plural countable nouns behave like mass nouns in this respect:

(i) a. la meitat de maduixes b. la meitat d'estudiants
 the half of strawberries the half of-students

(fem. *mitja*), which can, actually must, appear with bare countable nouns and has a quantitative interpretation.³⁴

- (35) a. *la meitat de la copa*
 the half of the glass
 b. **la meitat de copa*
 the half of glass
 c. *mitja copa*
 half glass

From all of this I conclude that what seems to be relevant to get a partitive interpretation is the presence of the definite internal determiner, as it is responsible for contextualising the set or whole that the quantifier quantifies over.³⁵ Thus, the partitive interpretation appears when a quantitative expression quantifies over a contextualised set or whole, introduced by a definite determiner in the partitive construction. The type of quantifier is relevant in determining what

Both (ia) and (ib) can have the two non-partitive meanings stated above for the examples in (34a). We can imagine again a recipe context for (ia), for example of a milkshake, in which one reading would be that the milkshake is made half of strawberries and half of milk and the other reading would be that fewer strawberries, exactly half of the prescribed amount, are used. For (ib), we can distinguish the two readings by contextualising the nominal in a sentence:

- (ii) a. *En aquesta comissió hi ha la meitat d'estudiants i la meitat de professors*
 in this committee there has the half of-students and the half of lecturers
 ‘Half of this committee are students and half are lecturers.’
 b. *Aquest curs s’han matriculat la meitat d’estudiants que l’any passat.*
 this academic-year SE-have registered the half of-students than the-year past
 ‘This academic year only half as many students as last year have registered.’

³⁴ Although in a sentence like that in (i) both *meitat* and *mig* can have a partitive interpretation, only *meitat* forms a partitive nominal: in the case of *mig*, which forms a quantitative nominal, the partitive interpretation is only accessible through the context.

- (i) a. *M’he begut la meitat de la copa d’un glop.*
 CL-have_{1sg} drunk the half of the glass of-a drink
 ‘I drank half of the glass in one go.’
 b. *M’he begut mitja copa d’un glop.*
 CL-have_{1sg} drunk half glass of-a drink
 ‘I drank half of the glass in one go.’

Indeed, (ia) and (ib) are equivalent in a situation where the whole glass is filled for example with wine and only half of it is drunk (here *copa* refers not to an object (a container) but to its contents, i.e. wine). But in a situation where only half of the glass is filled and that whole amount is drunk, the only appropriate sentence would be (ib), given that *mitja copa* is a quantitative nominal. In generic contexts, as expected, *mig* but not *meitat* is licensed, as illustrated in (ii), where the well-formed *mitja copa de vi* denotes an amount of wine:

- (ii) a. **En Joan beu la meitat de la copa de vi cada dia.*
 John drinks the half of the glass of wine every day.
 b. *En Joan beu mitja copa de vi cada dia.*
 John drinks half glass of wine every day.

³⁵ This is basically true but will need some revision later when dealing with the Partitive Constraint in §1.4.

kind of elements are quantified over and therefore the type of partitive interpretation: a subset of a set or a part of a whole (I will deal more with this latter in §1.2).

This hypothesis has the advantage of being more natural, simpler and more economical than others as it does not imply the proposal of any extra specific functional projection where the partitive meaning is encoded nor any extra nominal projection containing an empty noun but is based simply on the lexical items involved in the partitive construction and their relationship—Qs and DPs. This is more in the line of the Minimalist programme, which I take as a desirable goal to pursue.

1.2 Types of quantifiers

In the previous section we saw that the type of quantifier seems to determine the type of partitive relation, that is to say, the part-whole or subset-set relation. De Hoop (1998) distinguishes between two types of partitive nominals: *entity partitives*—which are headed by quantifiers that select entities—and *set partitives*—which are headed by quantifiers that select sets of entities. As she notes, in English, quantifiers such as *half* or *much* are of the former class as shown in (36), whereas quantifiers such as *one* and *many* are of the second—see examples in (37). Some determiners, e.g. English *some*, *all* and *most*, are ambiguous in the sense that they can take arguments of both types.

(36) *entity partitives*

- a. half of the population
- b. half of a cookie
- c. much of the water
- d. *one of the population
- e. *one of a cookie
- f. *one of the water

(37) *set partitives*

- a. one of the linguists
- b. many of the cats
- c. *much of the linguists
- d. *much of the cats

(De Hoop 1997: 156ff)

The ungrammatical examples in (36) and (37) are naturally explained as they do not satisfy the selectional properties of the quantifiers. In (36d–f) *one* belongs to the type of quantifier that select a set of entities but *the population*, *a cookie* and *the water* are entities, and conversely in (37c,d) *much* selects an entity and *the linguists* and *the cats* are sets of entities.

The distinction between entity partitives and set partitives is also useful as it can account for the fact that a universal quantifier is allowed in some partitives, as shown by the following Dutch examples:³⁶

- (38) a. de helf van alle katten
the half of all cats
b. *een van alle katten
one of all cats (De Hoop 1997: 160, ex. 10a,b)

Ladusaw (1982) observes that the embedded DP in partitives must have a group reading. This explains the contrast between *one of the two books* vs. **one of both books*.³⁷ De Hoop (1997: 3–4) argues that in the collective reading, *alle* forms an entity-denoting nominal, and that is why it is admitted in partitives like (38a), although it is not a definite determiner. However, it is excluded in (38b), for *one* is a quantifier that selects a set of entities, and not a single entity, which is what *alle katten* denotes.

De Hoop notes that whether quantifiers belong to one class or the other or both seems to be a lexical, language specific matter. For example, in Dutch, as opposed to English, *enkele* ('some') selects only sets of entities, whereas *veel* ('many/much') takes either entities or sets of entities, and she provides the following examples:

- | | |
|--|--|
| <p>(39) a. *Enkele water is verdwenen.
some water has disappeared
b. Enkele katten spinnen.
some cats purr</p> | <p>(40) a. Veel water is verdwenen.
much water has disappeared
b. Veel katten spinnen
many cats purr
(De Hoop 1997: 160, ex. 27, 28)</p> |
|--|--|

Sentences in (39) and (40) illustrate De Hoop's claim even if the indefinite nominals they contain are not partitives.

Catalan and other Romance languages pattern like Dutch in the selectional properties of quantifiers corresponding to *enkele* and *viel*: Catalan *algun* ('some') and *molt*

³⁶ See §1.4 for a reformulation of the Partitive Constraint including non-definite determiners.

³⁷ This is actually only true of set partitives, as we will see later in this paragraph. See also §1.4 for further details. However, this does not affect De Hoop's basis for argumentation: the main idea is that *alle katten*, independently of its interpretation (which can be both collective or distributive), forms an entity and that is why it is accepted in (38a) but not in (38b).

(‘many/much’), French *quelque* (‘some’) and *beaucoup* (‘many/much’), Italian *alcun* (‘some’) and *molto* (‘many/much’), Spanish *algún* (‘some’) and *mucho* (‘many/much’).

From examples (39) and (40) one could think that these selectional restrictions might be reduced to the mass/countable noun opposition and that the distinction between entities and sets of entities is not necessary. This is certainly true for quantitatives, where the quantifier selects no (sets of) entities, but not for partitives, where a DP containing a singular countable noun behaves as an entity whereas a DP containing a plural countable noun can behave as a set of entities or—if taken as a whole—as an entity (recall example 38a).

Observe the Catalan examples of entity partitives in (41) and set partitives in (42):

- | | |
|--|--|
| <p>(41) a. *<i>alguna</i> d’aquesta aigua
 some_{sg} of-this water</p> <p>b. ?<i>molta</i> d’aquesta aigua
 much of-this water</p> <p>c. *<i>algun</i> d’aquest pastís
 some_{sg} of-this cake</p> <p>d. ?<i>molt</i> d’aquest pastís
 much of-this cake</p> | <p>(42) a. <i>alguns</i> d’aquests gats
 some_{pl} of-these cats</p> <p>b. <i>molts</i> d’aquests gats
 many of-these cats</p> <p>c. <i>alguns</i> d’aquests pastissos
 some_{pl} of-these cakes</p> <p>d. <i>molts</i> d’aquests pastissos
 many of-these cakes</p> |
|--|--|

Whereas *algun* (‘some’) specialises for sets of entities, *molt* (‘much/many’) can in principle select both entities and sets of entities, although in Catalan this quantifier often sounds unnatural with entities as indicated by the question mark that precedes examples (41b,d) whereas it is perfect in set partitives as seen in (42b,d). Later in this section I will discuss the role of *molt* in set partitives and entity partitives and will find a reason for this contrast, but for the moment I leave this particular issue aside.

So far we have seen that the distribution of quantifiers that appear in the partitive construction can be explained in terms of selection: quantifiers select an argument which can be of two types, an entity and a set of entities. This results in the two types of partitives we have seen: *entity partitives* and *set partitives*.³⁸

³⁸ I find these terms more appropriate than those used by Abbot (1996)—*mass partitives* and *group partitives* (see fn. 4), which can be misleading as they seem to correspond to the distinction between mass nouns and countable nouns, contrary to fact.

These selectional properties of partitive quantifiers might also account for the fact that null quantifiers as well as the indefinite article are not allowed in partitives in contrast with quantitatives:³⁹

- (43) a. *de l'aigua partitives
 of the-water
 b. *d'aquelles pel·lícules antigues
 of-those films old
 c. *uns d'aquests llibres⁴⁰
 a_{pl} of-these books

- (44) a. aigua quantitatives
 water
 b. pel·lícules antigues
 films old
 'old films'
 c. uns llibres
 a_{pl} books
 'some books'

The reason for the ungrammaticality of (43) would be that the selectional requirements imposed by the quantifier are not satisfied: a null quantifier and the indefinite article do not select entities nor sets of entities.⁴¹ However, although descriptively adequate, this account does not appear very explanatory: why is it that precisely these elements cannot enter a partitive nominal whilst they are fine in a quantitative nominal?

³⁹ In Old Catalan (43a,b) were possible like in Old Romance in general. French and Italian still have the so-called *partitive article*, and Dutch has a similar phenomenon (nominals preceded by *van-die*), but the original partitive meaning has been lost and now these nominals are equivalent to bare nouns (there is no reference to a contextualised entity or sets of entities). I will not deal with the partitive article in this thesis, which I leave for future research.

⁴⁰ I have chosen the plural form in the Catalan example because the singular form is identical to the numeral *one*, which is allowed in partitives. In English, the same applies to the indefinite article, which has only the singular form: **a of the books* (vs. *a book*).

⁴¹ An alternative to a null quantifier account would be to consider that there is no quantifier at all, in which case we would be dealing with a bare noun phrase, not a DP, so a nominal constituent with less functional projections, and that could be the reason why the preposition does not appear. However, here it is assumed that all arguments are DPs (Longobardi 1994, among others).

Actually, it must be noted that there is variation across languages in the restrictions on quantifiers that enter the partitive construction, which is a strong argument in favour of a selectional approach: English seems to allow for all kinds of quantifiers except for the two cases just stated and the weak version of *some* (i.e. **sm of the boys* vs. *some of the boys*), whereas at the other extreme is Catalan, which contains many restrictions. Not much attention has been paid in the literature to the types of quantifiers used in partitives in contrast with quantitatives. The general assumption seems to be that the same quantifiers are used in both constructions. However, Catalan offers interesting data that question this view as in this language there is a more or less clear cut between quantifiers that can appear in partitives and quantifiers that can appear in quantitatives in terms of specific vs. non-specific reading: partitives seem to have a preference for quantifiers that can have a specific (strong) interpretation—that is to say, not intrinsic quantifiers—but tend to reject those that can only have the non-specific (weak) reading—intrinsic quantifiers. However, other factors which upset the picture seem to intervene, as we will see straight away. It must also be noted that there is variation in judgements among Catalan speakers with respect to some quantifiers, but despite that, some relevant generalisations are obtained.

Next the quantifiers that appear in both types of partitives will be studied: §1.2.1 is devoted to set partitives and §1.2.2 deals with entity partitives. Interesting conclusions will be reached concerning the properties of the quantifier that enters a partitive construction in comparison to quantifiers in quantitatives.

1.2.1 Set partitives

Let us start with set partitives. In Catalan, quantifiers that can have both readings, specific and non-specific, are cardinal numerals and vague quantifiers such as *molt* ‘much, many’, *bastant* ‘quite (a lot)’ and *força* ‘quite (a lot)’.⁴² These quantifiers are admitted in the partitive construction, where they automatically get a specific reading, as illustrated in (45a–c):

⁴² According to Brucart (2008: §7.2.2), apart from *molt*, *bastant* and *força*, other ‘quantity’ quantifiers such as *massa* ‘too much/many’, *prou* ‘enough’ and *poc* ‘little, few’ can also have the two readings. I disagree with this statement based on my intuitions as a native speaker and also the following data, which show that *massa*, *prou* and *poc* can only have the non-specific reading as they become ungrammatical in contexts where the specific reading is forced: in the subject of the predicate *ser-hi* (‘to be there’) as in (i) and in a left-dislocated nominal recovered inside the sentence by a definite clitic, here *els* (‘them’) as in (ii). Compare the *a* examples, which are grammatical with *quatre*, *molts*, *bastants* and *força*, and the *b* examples, all ungrammatical with *massa*, *prou* and *pocs*:

(i) a. {Quatre/Molts/Bastants /Força} estudiants hi eren.
four many quite-a-lot (quite-)a-lot students there were
‘{Four/Many/Quite} a lot of students were there.’

- (45) a. quatre dels articles
four of-the articles
b. molts dels articles
many of-the articles
c. bastants dels articles
quite-a-lot of-the articles
d. *força dels articles
(quite-)a-lot of-the articles

Note the unexpected ungrammaticality of (45d), which contrasts with the well-formedness of (45b,c). This difference cannot be derived from semantic reasons (as *força* has the meaning of *bastant* or *molt*, depending on the context, which are both fine in partitives), but probably has to do with the fact that *força* is invariable, that is to say, uninflected for gender or number. This is suggested by (46b), where the colloquial form *forces*, with plural number inflection, certainly improves the result. Notice that the quantifiers *molt* and *bastant* inflect for number, as shown by the plural overt ending *-s* of *molts* and *bastants* in (45b,c).

- (46) a. *Força dels meus articles han aparegut en revistes internacionals.
(quite-)a-lot of-the my articles have appeared in journals international
'(Quite) a lot of my articles have appeared in international journals.'
b. ?Forces dels meus articles han aparegut en revistes internacionals.
(quite-)a-lot_{pl} of-the my articles have appeared in journals international

-
- b. { *Massa / *Prou / *Pocs } estudiants hi eren.
too many enough few students there were
'{Too many/Enough/Few} students were there.'
(ii) a. { Quatre/Molts/Bastants/Força } llibres, els he portat a la biblioteca.
four many several many/several books them have_{1sg} brought to the library
'{Four/Many/Several} books, I have brought them to the library.'
b. { *Massa / *Prou / *Pocs } llibres, els he portat a la biblioteca.
too many enough few books them have_{1sg} brought to the library
'{Too many/Enough/Few} books, I have brought them to the library.'

Not surprisingly, *massa*, *prou* and *poc* get ungrammatical results in the partitive construction in Catalan:

- (iii) a. *massa dels articles
too many of-the articles
b. *prou dels articles
enough of-the articles
c. *pocs dels articles
few of-the articles

If this is correct, one could wonder then why cardinals are fine in partitives if they do not show any overt inflection. First of all, it must be noticed that Catalan has inflected forms for *one* (masculine *un*, feminine *una*), *two* (masculine *dos*, feminine *dues*) and *hundred* (masculine and feminine singular *cent*, masculine plural *cents*, feminine plural *centes*):

- (47) a. dos-cents un mil cinc-cents trenta-un {euros / *pessetes}
 two_m-hundred_{m,pl} one_m thousand five-hundred_{m,pl} thirty one_m euros_{m,pl} pesetas_{f,pl}
 b. dues-centes una mil cinc-centes trenta-una {pessetes / *euros}
 two_f-hundred_{f,pl} one_f thousand five-hundred_{f,pl} thirty-one_f pesetas_{f,pl} euros_{m,pl}

The cardinal number in (47a) agrees in masculine with *euros* but yields an ungrammatical result when combined with a feminine noun such as *pessetes*, whilst in (47b) it agrees in feminine with *pessetes* but produces ungrammaticality with the masculine noun *euros*.

Moreover, even if most cardinals do not show overt inflection, they can only combine with plural nouns, which I take as evidence that they are marked for plural: they are all [+plural] (with the exception of *un*, *una*, which combine with singular nouns and are marked [−plural]). In the case of *força*, the quantifier can combine both with plural and with singular nouns: i. e. *força llibres/aigua* ‘(quite) a lot of books/water’. I consider this fact as an indication that *força* is not marked for number, so it would be precisely the non-specification of the number feature what would prevent *força* from appearing in partitives in Catalan.⁴³

⁴³ With noun ellipsis, a similar contrast between *molts/bastants* and *força* is found: when *força* is combined with a plural noun but the noun is non-overt or the clitic *en* appears instead, the sentence sounds odd in spoken Catalan (it seems that *força* alone is not enough to refer to a plurality). Again, the colloquial plural form *forces* improves the result:

- (i) a. De diccionaris, en tinc {molts / bastants / ?*força / ?forces}
 of dictionaries, NE have_{1sg} many_{pl} quite-a-lot_{pl} quite-a-lot_{inv} quite-a-lot_{pl}
 ‘Dictionaries, I have (quite) a lot.’
 b. {Molts / Bastants / *Força / ?Forces} van arribar tard.
 many_{pl} quite-a-lot_{pl} quite-a-lot_{inv} quite-a-lot_{pl} came late
 ‘(Quite) a lot came late.’

This phenomenon is described in traditional Catalan grammars: “Els mots *prou*, *massa* i *força*, emprats com a numerals, tendeixen a reemplaçar-se per *prou*s, *masses* i *forces* sobretot quan s’usen no adjuntats al nom al qual es refereixen”. (Fabra 1956: 33). (‘The words *prou* (‘enough’), *massa* (‘too many’) and *força* (‘(quite) a lot’) used as numerals tend to be replaced with *prou*s, *masses* and *forces*, especially when they are not used next to the noun they refer to’).

However, prescriptive grammars of Catalan do not admit the inflected form *forces* as correct and consider the invariable *força* as the only one legitimate in the written language (and the preferred one in the spoken language). They contain examples like (ia) with *força* as well-formed but none of the (ib) type, where I think this invariable quantifier would be harder to admit even in standard written Catalan (perhaps, in this case, grammarians would rule it out in favour of the inflected forms *molts* or *bastants*, which would be stated as the preferred ones in subjects with noun ellipsis).

This preference of set partitives for inflected quantifiers is not just a formal requirement but seems to be related to the type of semantic relation between the quantifier that enter this construction and the noun, as we will see in a while.

For the moment, we have observed that quantifiers that can be specific are all allowed in partitives, provided they are marked for number. We can turn now our attention to those quantifiers that cannot be specific and see how they behave. The following list of quantifiers in Catalan seem to specify for the non-specific reading:

- indefinite quantifiers such as *algun* ‘some’, *uns quants* ‘a few’, *qualsevol* ‘any’, *cada* ‘each’, *cap* ‘none’, *gaire* ‘(not) much/many’
- nominal expressions used as quantifiers with the meaning ‘a lot, a big amount or number’ such as *un munt*, *una pila*, *una colla*, *una munió*, *una multitud*, etc.
- nouns derived from cardinals meaning an approximate amount such as *una desena* ‘about ten’, *una vintena* ‘about twenty’, *un centenar* ‘about a hundred’, *milers* ‘thousands’, etc.
- adjectives used as quantifiers such as *diversos* ‘several’, *diferents* lit. different (=‘several’), *nombrosos* ‘numerous’; expressions such as *un bon/gran nombre* ‘a good number’, *una bona/gran quantitat* ‘a good quantity’ or *un (bon) grapat* lit. a (good) handful (=‘many’)
- quantifiers such as *massa* ‘too much’, *prou* ‘enough’ and *poc* ‘few’ (recall fn. 42).

We would expect all of these quantifiers to be rejected in partitives from what I said as a first approximation about the distribution of quantifiers in partitives in Catalan, but that is not the case. Some of them are commonly admitted in partitives (*algun*, *qualsevol*, *cap*, *cada*,⁴⁴ also in

⁴⁴ *Cada* is allowed in the partitive construction only if followed by *un*, *una* or if it appears in the fused form *cadascun*, *cadascuna*:

- | | |
|---|--|
| (i) a. <i>cada</i> *(un) dels articles
each one _m of-the articles | (ii) a. <i>cadascun</i> dels articles
each-one _m of-the articles |
| b. <i>cada</i> *(una) de les noies
each one _f of the girls | b. <i>cadascuna</i> de les noies
each-one _f of the girls |

Compare partitives in (i) and (ii) to the following quantitative examples:

- | | |
|------------------------------------|-----------------------------------|
| (iii) a. <i>cada</i> *(un) article | (iv) a. * <i>cadascun</i> article |
| b. <i>cada</i> *(una) noia | b. * <i>cadascuna</i> noia |

The presence of *un/una* in partitives has been taken in the literature as evidence for an empty noun following the quantifier, but a plausible alternative would be to consider *un/una* as a kind of overt inflection, as partitives seem to require (in this case, as they are singular forms, the inflection can only be in gender): the gender would be overtly expressed through *un/una* given that *cada* is an invariable form and cannot be inflected for gender. The existence of the forms *cadascun* and *cadascuna* points to this line of reasoning, which is the one I adopt (see Chapter 3, §3.1.1.III).

general *uns quants*), others are completely rejected (*diferents*, *nombrosos*, also in general *diversos*), and with respect to the rest speakers have different degrees of admittance. My own judgments as a native Catalan speaker are quite restricted and only accept the commonly admitted *algun*, *qualsevol*, *cada* and *cap*, and, to a certain extent, *uns quants*.

A closer look at data shows why, despite not being specific, some of these quantifiers are suitable for the partitive construction in Catalan and others are not (or are less accepted). Given the variation in judgements among Catalan speakers, my claim must be taken not in absolute terms but as a tendency. However, the generalisation obtained is interesting enough and sheds some light on the way partitives work in Catalan.

Let us start with adjectives used as quantifiers. It is not surprising that adjectives such as *diversos*, *diferents* and *nombrosos* are not possible in partitives. Although these adjectives pattern with quantifiers in that they can license nominals in subject position contrary to other adjectives as illustrated in (48), they have a more restricted distribution than ordinary quantifiers: they cannot appear with N ellipsis or *ne* cliticisation nor can they precede *altres* ('other')—see respectively (49), (50), (51).

- (48) a. {Diversos/Diferents/Nombrosos} alumnes han aconseguit una beca.
 several different numerous students have_{3pl} obtained a scholarship
 b. {*Simpàtics/*Bons} alumnes han aconseguit una beca
 nice good students have_{3pl} obtained a scholarship
 c. {Tres /Alguns/Molts} alumnes han aconseguit una beca
 three some many students have_{3pl} obtained a scholarship
- (49) a. {^{??}Diversos/*Diferents/*Nombrosos} han aconseguit una beca.
 several different numerous have_{3pl} obtained a scholarship
 b. {*Simpàtics/*Bons} han aconseguit una beca.
 nice good have_{3pl} obtained a scholarship
 c. {Tres /Alguns/Molts} han aconseguit una beca.
 three some many have_{3pl} obtained a scholarship

- (50) a. De professors, n'he conegut {^{??}diversos/*diferents/*nombrosos}.⁴⁵
 of lecturers NE-have_{1sg} met several different numerous
 b. De professors, n'he conegut {*simpàtics/*bons}.
 of lecturers NE-have_{1sg} met nice good
 c. De professors, n'he conegut {tres / alguns/molts}.
 of lecturers NE-have_{1sg} met three some many
- (51) a. {*Diversos/*Diferents/*Nombrosos} altres alumnes han aconseguit una beca.
 several different numerous other students have_{3pl} obtained a scholarship
 b. {*Simpàtics/*Bons} altres alumnes han aconseguit una beca.
 nice good other students have_{3pl} obtained a scholarship
 c. {Alguns/Molts} altres alumnes han aconseguit una beca.
 some many other students have_{3pl} obtained a scholarship

So, *divers*, *diferent* and *nombros* seem to originate from qualitative adjectives and promote to quantifiers, but without acquiring all properties quantifiers have: they seem to need the presence of an adjacent noun to be able to 'act' as a quantifier.⁴⁶ All that would explain why they are excluded in the partitive construction.

More interesting is the difference between indefinite quantifiers on the one hand (*algun* 'some', *uns quants* 'a few', *qualsevol* 'any', *cada* 'each', *cap* 'none', *gaires* '(not) many') and the remaining forms that can only have a non-specific reading on the other (nouns

⁴⁵ The sentences in (50a,b) become grammatical if *de* is inserted, which in Catalan is required in front of all adjectives when the N is elliptical or there is *ne* cliticisation. However, in that case *divers*, *diferent* and *nombros* behave as qualitative adjectives just like *simpàtic* and *bo*:

- (i) a. De professors, n'he conegut {de diversos / de diferents /*de nombrosos}.
 of lecturers NE-have_{1sg} met of different of different of large
 'Lecturers, I have met {different/*large} ones.'
 b. De professors, n'he conegut {de simpàtics / de bons}.
 of lecturers NE-have_{1sg} met of nice of good
 'Lecturers, I have met {nice/good} ones.'

The adjective *nombros* remains ungrammatical in (i) because it can only be predicated of a noun referring to a collection, for example *grup* ('group') or *públic* ('audience'):

- (ii) a. De grups, n'hi havia de nombrosos.
 of groups NE-there were of large
 'Groups, there were large ones.'
 b. El públic era molt nombros.
 the audience was very large

⁴⁶ The adjective *divers* seems to be closer to a quantifier than *diferent* and *nombros*, and for some speakers it can also form partitives:

- (i) [?]Diversos dels meus articles han aparegut publicats en revistes internacionals.
 several of-the my articles have_{3pl} appeared published in journals international
 'Several of my articles have been published in international journals.'

derived from cardinals such as *una desena* ‘about ten’ and quantificational expressions such as *un munt* (‘a lot’) or *un bon/gran nombre* ‘a big number’, etc.). The first group of quantifiers denotes individuals whereas the second group denotes amounts of elements, not seen as the sum of individuals but as a whole. The non-specific reading is thus obtained differently in the two groups: because the individuals denoted are not specific in the first case and because an imprecise quantity of elements is denoted in the second case, often characterised by being a quite high or a quite low amount.

Observe the following contrasts, which show that partitives accept quantifiers of the first group (*a* examples), but not of the second (*b* examples):⁴⁷

- | | |
|---|--|
| <p>(52) a. deu dels conferenciants
 ten of-the speakers</p> <p>b. ?*una desena dels conferenciants
 a ten of-the speakers
 ‘about ten of the speakers’</p> | <p>(53) a. molts dels polítics
 many of-the politicians</p> <p>b. *una pila dels polítics
 a pile of-the politicians</p> |
|---|--|
-
- (54) a. algunes de les pel·lícules
 some of the films
- b. *un grup de les pel·lícules
 a group of the films

The conclusion is that set partitives in Catalan definitely prefer quantifiers that denote elements individually. The questions that immediately arise are why that should be the case and how this is related to the preference for specific quantifiers.

⁴⁷ Some Catalan speakers accept the *b* examples, but this does not seem to invalidate the distinction between the two types of quantifiers. Probably these speakers are more flexible and allow those quantifiers in partitives because they can use them referentially or for them, nouns like *desena* denote an amount of exactly ten elements, which makes it closer to the cardinal *ten*, as is suggested by the examples in (i): when the quantifier does not admit any other interpretation than the approximate and non-specific one, the examples are rejected with no exception, even by those speakers that accept (52b, 53b, 54b).

(i) a. ??/*dotzenes dels articles publicats
 dozens of-the articles published
 ‘dozens of the published articles’

b. ?/*uns deu dels meus articles
 a_{pl} ten of-the my articles
 ‘about ten of my articles’

c. *piles i piles dels polítics
 piles and piles of-the politicians

At this point it is worth making some remarks related to the members of the first group—the quantifiers that are admitted in partitives. With respect to *algun*, examples like (55) and (56) that force a specific reading show that there is a difference between the properties of the singular forms on the one hand and the plural forms on the other: whereas *algun* and *alguna* are always non-specific, which is why examples in (55) are ungrammatical, *alguns* and *algunes* can have not only a non-specific but also a specific interpretation as shown by the well-formedness of (56).⁴⁸

- (55) a. **Algun estudiant hi era.*
 some student there was
 ‘Some student was there.’
- b. **Alguna revista, l’he llençat.*
 some journal it-have_{1sg} thrown-away
 ‘Some journal, I have thrown it away.’
- (56) a. *Alguns estudiants hi eren.*
 some students there were
 ‘Some students were there.’
- b. *Algunes revistes, les he llençat.*
 some journals them have_{1sg} thrown-away
 ‘Some journals, I have thrown them away.’

This contrast is probably due to the fact that the singular forms *algun*, *alguna* can denote not only a singular element but also more than one, contrary to the plural forms, which always denote a plurality. As Brucart and Rigau (2008: §8.2.3) point out, a sentence such as (57a) can be true in a situation where more than one student has come because this sentence includes no restriction on the number of individuals that correspond to the subject. The same is true of (57b), where *alguna revista* can mean one magazine or more than one (cf. *una revista*, which means exactly one magazine).⁴⁹

⁴⁸ This contradicts Brucart (2008: §7.2.2.2b), who claims that nominals that contain the indefinite existential quantifier *algun* get a non-specific interpretation due to the fact that this kind of quantifiers does not denote a concrete individual (the way it is stated, I understand his claim to apply to all inflected forms of *algun*). I agree with this author only with respect to the singular forms.

⁴⁹ See also Sánchez López (1999: §16.2.2.) for similar observations in Spanish: *alguno* denotes a cardinality that can be paraphrased as ‘at least one’ whereas *algunos* denotes a cardinality that can be paraphrased as ‘at least two’.

- (57) a. Ha vingut algun estudiant.
 has come some student
 ‘Some student(s) came.’ (Brucart and Rigau 2008: §8.2.3, ex. 28b)
- b. Em pots donar alguna revista?
 me can_{2sg} give some magazine
 ‘Can you give me some magazine(s)?’

Hence, it is expected that no concrete individual can be referred to by *algun* or *alguna* given that the quantifier is not restricted to singular number. However, we must consider that the zero ending of the singular is there since *algun* and *alguna* agree in singular with the noun in the quantitative construction: compare *algun llibre* (some_{sg} book_{sg}) with **algun llibres* (some_{sg} books_{pl}). Therefore, although semantically they can denote one or more than one element, morphologically *algun* and *alguna* are marked for singular and syntactically they function as singular forms.

In the partitive construction, all forms of *algun* get grammatical results:

- (58) a. algun dels meus veïns
 some_{sg} of-the my neighbours
 ‘one or several of my neighbours’
- b. alguns dels meus veïns
 some_{pl} of-the my neighbours
 ‘several of my neighbours’

The plural forms are fine as they can have a specific reading, but what about the singular forms, which cannot be specific? The singular forms *algun* and *alguna* must get the same explanation as *qualsevol* and *cap*, which only have a non-specific interpretation. Observe the sentences in (59):

- (59) a. Qualsevol jutge l’hauria declarat innocent.
 any judge him-would_{3sg}-have declared innocent
 ‘Any judge would have found him not guilty.’

- b. *Qualsevol dels jutges l'hauria declarat innocent*
 anyone of-the judges him-would_{3sg}-have declared innocent
 'Any one of the judges would have found him not guilty.'

The subject in (59a) can refer to any of all existing judges in the world; actually the sentence is understood as a generic statement and can be paraphrased as 'if you were a judge, you would find him not guilty'. However, the subject in (59b) restricts its referential possibilities to a contextualised set of judges, and the speaker has real individuals in mind to whom (59b) can refer. If the set contained for example three judges named Mr Brown, Miss Smith and Ms Baker, then (59b) could be paraphrased as 'either Mr Brown, Miss Smith or Ms Baker would have found him not guilty'. This higher concreteness is what allows non-specific quantifiers such as *qualsevol* to appear in the partitive construction.

A similar contrast is obtained with *cap*, as illustrated in (60):

- (60) a. **Cap capellà no hi és.*
 no priest not there is
 'No priest is there.'
- b. *Cap dels dos capellans no hi és encara.*
 none of-the two priests no there is yet
 'Neither of the two priests is there yet.'

(60a) is ungrammatical as expected because this is a predicate that requires a specific subject and *Cap capellà* is not specific; it would instead be licensed in the existential *haver-hi* construction: *No hi ha cap capellà* 'There is no priest'.⁵⁰ In contrast, (60b) is well-formed. Again, the contextualised set of priests which the quantifier quantifies over provides the conditions for the partitive construction to be licensed, even if the quantifier on its own can only get a non-specific interpretation. For example, in the situation where we expect the attendance of two priests, Mr Bryan and Mr Jones, (60b) could be paraphrased as 'neither Mr Bryan nor Mr Jones has arrived'.

Similarly, then, *algun dia* ('some day') is referentially more vague than *algun dels dies que passarem a París* ('some of the days we will spend in Paris'), where the DP inside the

⁵⁰ See Rigau (1988).

partitive reduces the referential possibilities by contextualising a set of elements from which the quantifier extracts a subset.

Thus, it is the presence of the DP inside the partitive construction that, by restricting the referential possibilities of quantifiers, allows indefinite quantifiers like those just described to enter this construction. This strategy of increasing referentiality is only possible with quantifiers that can be understood as denoting individuals, not with the ones that only denote amounts, where the contextualised set would only have the effect of relating the amount to a concrete set of elements. This is why in set partitives the quantifier extracts individuals from a definite set.

We are still left with the quantified expression *uns quants* ‘a few’: it has the property of being plural and referring to individuals, but at the same time the idea of quantity is clearly involved, so it seems that *uns quants* is between the two types of quantifiers described. Observe the following contrast between *uns quants* and *alguns* or *uns*:

- (61) a. *Fa uns quants dies que no plou.*
 b. *??Fa alguns dies que no plou.*
 c. **Fa uns dies que no plou.*
 makes some days that not rains
 ‘It has not rained for some days’

In (61), the temporal expression ‘*fa* + time’ requires an indefinite nominal that denotes an amount of time and only *uns quants* is allowed and perfectly felicitous (*alguns* and *uns* cannot denote amounts).⁵¹ However, in other sentences *uns quants* can be understood as specific:

⁵¹ *Alguns* is not as degraded as *uns*, which in Catalan has a pure indefinite meaning, but it does not work very well in time measure contexts. Other perhaps clearer examples would be:

- (i) a. *Torna d’aquí a {uns quants dies / ?*alguns dies / *uns dies}.*
 come-back in a few days some days a_{pl} days
 ‘Come back in a few days.’
 b. *Al cap d’ {unes quantes hores / ?*algunes hores / *unes hores} ja havien trobat la nena perduda.*
 after a few hours some hours a_{pl} hours already had_{3pl} found the girl lost
 ‘They had found the lost girl after a few hours.’
 c. *He tardat {uns quants segons / *alguns segons / *uns segons} a respondre.*
 have_{1sg} taken a few seconds some seconds a_{pl} seconds to reply
 ‘It took me a few seconds to reply.’

However, it must be noted that probably due to Spanish influence some Catalan speakers admit *uns* in sentences like (i) and that *uns* used as a quantifier is often found in the journalistic language.

- (62) a. Uns quants alumnes són al passadís.
 ‘A few students are in the corridor.’
 b. ?Uns quants llibres, els regalaré a la Laura.
 a few books, them will_{1sg}-give to the Laura
 ‘A few books, I will give them to Laura.’

The examples in (62) force a specific interpretation of the quantifier, and *uns quants* is quite well accepted, with a reading similar to that of *alguns*.

It would be this possibility of being interpreted as specific that would license *uns quants* in the partitive construction, although with some restrictions. Examples of partitives with *uns quants* can be found in Catalan texts as is illustrated in (63):

- (63) a. Uns quants dels problemes ortogràfics actuals
 some of-the problems spelling current
 ‘Some of the current spelling problems’
 b. Heus ací uns quants dels darrers termes relacionats amb la biologia que han estat
 aprovat pel Consell.
 ‘Here are some of the latest terms related to biology that have been approved by the
 Council.’

(63a) is part of the title of a book on Catalan writing⁵² and (63b) is a fragment of an official publication by the Institut d’Estudis Catalans.⁵³

In conclusion, by studying the quantifiers that can form set partitives in Catalan the following conclusions were reached: two types of quantifiers are admitted in set partitives, those that can be interpreted as specific and those that in principle are not specific but acquire some degree of referentiality—become more specific—thanks to the presence of the internal DP, which reduces the referential possibilities to the definite set of elements that it introduces. This latter group consists of quantifiers that denote individuals as opposed to quantifiers that denote amounts, which are excluded from Catalan partitives. In fact, all quantifiers that enter the partitive construction quantify individuals, which makes sense as in set partitives the quantifier extracts individuals from a set. The requirement of overt inflection on the quantifier

⁵² The complete title of the book by Abelard Saragossà is: *Criteris de la normativa. L’ortografia contemporània. Uns quants dels problemes ortogràfics actuals* (València: Ed. Saó and Diputació de Tarragona, 1997).

follows naturally from this: if the quantifier denotes individuals, it must be either inflected for singular if only one element is denoted or for plural if more than one element is denoted.

Going back to the first explanation in terms of selectional properties of the quantifiers, I can now claim that quantifiers that select sets of entities in Catalan are those that denote individuals.

However, we are still left with how to account for the exclusion of the null quantifier and the indefinite article from partitives, as it does not follow from the explanation given so far. In the case of the null quantifier, a new factor must be introduced, that of stress: in partitives the quantifier must be a phonologically strong item. English data provides evidence in this direction as the only quantifiers not admitted in partitives are the null quantifier, the indefinite article and the weak version of *some*.⁵⁴ They both are weak forms, so this new restriction must be added to the quantifier in partitives, which is actually valid for both set partitives and entity partitives. So as stated in Barker (1998: 705), the fact that standard partitives typically occur embedded under strong determiners or numerals and never with the simple indefinite article is either because of a morpho-phonological requirement on the standard partitive that the determiner position contain a stressable non-clitic element, as suggested by Perlmutter (1970) and Perlmutter and Orešnik (1973: 451), or because the standard partitive can only occur with determiners which are independently capable of acting as free noun phrases, as suggested by Hoeksema (1984).

In Catalan the only phonologically weak quantifier that can be considered here is the null quantifier, which is so weak as to be non-overt, and that restriction would only apply to this element. An alternative explanation would be to claim that when no quantifier is pronounced, there is no lexical item, and, therefore, probably not even a quantifier projection, so the restriction in Catalan could be modified by stating that partitives require the presence of a (lexical) quantifier—contrary to bare nominals, which would allow the lack of a quantifier or a determiner and would have a reduced structure. I am inclined toward the former account under the assumption that all arguments are DPs (recall footnote 41).

In the case of the indefinite article, given that this is a phonologically strong item in Catalan, a different explanation must be provided. A possible account of its exclusion from

⁵³ IEC. *Què cal saber?*, num. 153, October 2002. Section: “Termes nous aprovats pel Termcat”.

⁵⁴ Observe (i), where *sm* stands for the weak version of *some* (cf. *some of the books*, with strong *some*):

- (i) a. *of my books
- b. *a of my books
- c. *sm of my books

partitives could be to claim that the indefinite article is not a quantifier and that partitives can only be formed by real quantifiers, but despite being descriptively adequate, this is not very explanatory. The clue seems to be a semantic property that characterises the indefinite article and that makes it incompatible with the partitive construction, that is to say, the requirement of discourse novelty on the discourse referent contributed by the determiner (Heim 1982). This is formalised as the *no linking* constraint by Gutiérrez-Rexach (2001) within the framework of Discourse Representation Theory: according to this author, the Spanish indefinite article *unos* contributes a discourse referent that is subject to a no linking constraint, which means that the nominal containing an indefinite article is interpreted as discourse novel or not dependent on a discourse referent already present in the discourse. Existentials satisfying the no linking constraint lack a partitive reading, and that is why *unos* (and the same would apply to Catalan *uns*) is not licensed in partitive nominals given that linkability to a non-empty presupposed set is part of the meaning of this type of nominal.⁵⁵ As claimed by Gutiérrez-Rexach, then, a typical effect of the constraint is that *unos* lacks a D(iscourse)-linked (Pesetsky 1987) or partitive (Enç 1991) interpretation. Gutiérrez states that this is also the case of Romance bare plurals in general, so the same semantic explanation could be used to account for the impossibility of partitives with no overt quantifier.

This is the case for Catalan data, but as we already said, Catalan partitives are quite restricted, so one wonders what the case would be for other languages. I will not go into much deep detail in this dissertation (I leave this issue for future research), but as a first approximation I would like to suggest that set partitives can differ across languages in the type of relation the quantifier has with the internal DP: the quantifier can extract only individuals from the set of elements like in Catalan, or it can extract not only individuals but also quantities (or subsets of individuals seen as a whole), for example, in English, where all classes of quantifiers are admitted. Most likely the lack of overt inflection in English

⁵⁵ Interestingly, as noted by Gutiérrez-Rexach (2001) for Spanish, and the same would apply to Catalan, the indefinite article is possible in what he calls *kind partitives*, nominals that look like partitives but where crucially there is no linkability to a non-empty presupposed set:

- (i) a. Estos son unos de los mejores jugadores de la historia.
these are a_{pl} of the best players of the history
'These are some of the best players in history.'
- b. He leído unos de los mejores libros de lingüística.
have_{1sg} read a_{pl} of the best books of linguistics
'I have read some of the best linguistics books.'

(Gutiérrez-Rexach 2001:127, ex. 29)

In (i), *unos* is not linked to a presupposed discourse referent but "contributes a discourse referent instantiating the kind of the best players in history or the best linguistics books respectively", as claimed by Gutiérrez-Rexach.

Given the lack of partitive interpretation I conclude that this type of nominal is not a true partitive, so the statement that the indefinite article is excluded from partitives holds despite Gutiérrez-Rexach's claims.

quantifiers favours this situation. What is interesting about Catalan data is that it seems to show the basic semantics of set partitives: they only denote individuals that belong to a bigger set. In any case, differences among languages would be derived from selectional properties of quantifiers.

1.2.2 Entity partitives

Let us now turn to entity partitives. In Catalan this kind of partitive is well-formed with quantifiers that denote portions or subparts whereas quantifiers that denote amounts sound rather unnatural.⁵⁶ This is illustrated in (64) and (65):

- | | |
|--|--|
| <p>(64) a. la meitat d'aquest pastís
the half of-this cake</p> <p>b. un tros d'aquest pastís
a piece of-this cake</p> <p>c. ?*molt d'aquest pastís
much of-this cake</p> | <p>(65) a. la meitat de l'aigua
the half of the-water</p> <p>b. una part de l'aigua
a part of the-water</p> <p>c. ??molta de l'aigua
much of the-water</p> |
|--|--|

Again, the quantifier in partitives does not denote an imprecise amount but in this case a portion or subpart of the whole: this would be the basic semantics of an entity partitive, at least in Catalan. As in set partitives, entity partitives 'look for' concreteness: the quantifier extracts portions of something, not unconcrete amounts; if an amount of something must be expressed, the quantitative construction is the one to be used. Recall that quantifiers that denote individuals are impossible in entity partitives (i.e. **cap del pastís*, **alguna de l'aigua*), a restriction that was expressed earlier in selectional terms. Now we can add the information of

⁵⁶ Some examples can be found in the journalistic language, but they are quite rare:

- (i) a. Quan arriba el temps de la calor, *molta de la gent que treballa de cara al públic* es torna més antipàtica.
when arrives the time of the heat much of the people that works of face to-the public turn more unpleasant.
(*Avui Diumenge*, 20/8/00, p. 49)
'When the hot season arrives, many of the people who work dealing with the public turn more unpleasant.'
- b. *Molta de l'aigua que ha caigut ...*
much of the-water that has fallen
(TV3 Telenotícies vespre, 7/4/2002)
'Much of the rain that has fallen ...'

Also, see Bonet and Solà (1986: 58), who provide *molta d'aquella sorra* ('much of that sand') as an example of entity partitive. However, they do not contextualise that nominal in a sentence, and I find it hard to get a context where it could work well and sound natural. The alternative *bona part d'aquella sorra* (lit. good part of that sand) would be much preferred instead. Recall also fn. 2 in the Introduction.

the type of semantic relation between the quantifier and the internal DP: in entity partitives the quantifier extracts a subpart of the whole, and only quantifiers that have the property of denoting parts or portions can select an entity.

Like in set partitives, specificity seems to be the clue to understanding the distribution of quantifiers in entity partitives in Catalan: only quantifiers that can be specific are allowed, which are precisely those that denote parts or portions but not amounts.

Interestingly, the quantifier *molt* has a different behaviour with respect to specificity depending on its number: it can be specific in the plural, when denoting individuals, but not in the singular, when denoting an amount of something. This contrast is illustrated in (66) vs. (67): the sentences force a specific interpretation of the nominal in italics, which gives a grammatical result with a plural countable noun, such as *diccionaris* ‘dictionaries’ in (66), but not with a singular noun, such as the mass noun *pintura* ‘paint’ in (67).

(66) a. *Molts diccionaris*, els trobaràs a la biblioteca.

many dictionaries them will_{2sg}-find in the library

‘Many dictionaries, you’ll find them in the library.’

b. *Molts diccionaris* no hi són encara.

many dictionaries not there are yet

‘Many dictionaries are not there yet.’

(67) a. **Molta pintura*, la trobaràs en aquesta botiga.

much paint it will_{2sg}-find in this shop

‘Much paint, you will find it in this shop.’

b. **Molta pintura* hi és.

much paint there is

‘Much paint is there.’

When *molt* is combined with a singular N the only reading available is the non-specific one:

(68) a. En aquesta botiga, hi trobaràs *molta pintura*.

in this shop there will_{2sg}-find much paint

‘In this shop you will find lots of paint.’

b. Hi ha *molta pintura*.

there has much paint

‘There is much paint.’

The specificity requirement on quantifiers in entity partitives, which is fulfilled by ‘fraction’ quantifiers but not by quantity quantifiers such as *molt*, *bastant*, etc., is also supported by data involving the telic clitic (TCL). This is a morphologically reflexive pronoun that combines with predicates like *menjar* (‘eat’) and *beure* (‘drink’) and imposes restrictions on the referentiality of the object. Compare (69) and (70):

- (69) a. He menjat {pastís / molt pastís / el pastís / aquest pastís}.
 have_{1sg} eaten cake much cake the cake this cake
 b. He begut {cervesa / molta cervesa / la cervesa / aquesta cervesa}.
 have_{1sg} drunk beer much beer the beer this beer
- (70) a. M’he menjat {*pastís / *molt pastís / el pastís / aquest pastís}.
 TCL-have_{1sg} eaten cake much cake the cake this cake
 b. M’he begut {*cervesa / *molta cervesa / la cervesa / aquesta cervesa}.
 TCL-have_{1sg} drunk beer much beer the beer this beer

In (69) any kind of nominal is allowed in the object position, but the event denoted by the sentence can be one of two types depending on the kind of nominal: the event is atelic with bare NPs and quantified Ns whilst it is telic with definite nominals (DPs). In contrast, the presence of the clitic in (70) forces a telic interpretation, and, therefore, only definite objects are allowed,⁵⁷ for the object cannot be a property but has to be an entity to be able to combine with the telic clitic.⁵⁸

If we look at examples with entity partitives, we can observe that they pattern with definite objects as they are grammatical with a telic clitic:

⁵⁷ It must be noted that with a plural countable noun the presence of the quantifier *molt* would give a grammatical result as it would with a cardinal (i.e. *tres*, *deu*) or other quantifiers:

(i) a. M’he menjat {*pastissos / molts pastissos / tres pastissos / els pastissos / aquests pastissos}.
 TCL-have_{1sg} eaten cakes many cakes three cakes the cakes these cakes
 b. M’he begut {*cerveses / moltes cerveses / deu cerveses / les cerveses / aquestes cerveses}.
 TCL-have_{1sg} drunk beers many beers ten beers the beers these beers

(Note that, as in English, *cerveses* in the plural denotes glasses, bottles or cans of beer.)

Rosselló (2008: §13.4.3.2) claims that a predicate like *beure* is atelic with a bare NP, it denotes an activity, whereas it is enough if the nominal is quantified or determined for the telic clitic to be licensed. She gives several examples of both singular and plural nouns but none of a quantified singular noun. As shown by (70), her claim is true for plural nouns but not for singular nouns: a quantified singular noun cannot occur with a telic clitic but rather is compatible with atelic events. In a further personal communication she agreed with the data in (70) and confirmed that her claim in Rosselló (2008) applies only to plural nouns.

⁵⁸ I thank Gretel De Cuyper for this observation (p.c.).

- (71) a. M'he menjat {la meitat del pastís / un tros del pastís}.
 TCL-have_{1sg} eaten the half of-the cake a piece of-the cake
 b. M'he begut {un terç de la cervesa / una part de la cervesa}.
 TCL-have_{1sg} drunk one third of the beer a part of the beer

(71) shows that not only entities but parts of entities can combine with the telic clitic. It is not surprising then that quantifiers such as *molt*, *bastant*, etc. are rejected in entity partitives, as they denote amounts and cannot denote an entity but a property.

To sum up, like set partitives, Catalan entity partitives only admit quantifiers that can get a specific interpretation, which are those that denote portions or fractions. Quantifiers, such as *molt*, that could get a specific reading in the plural form and, therefore, were licensed in set partitives are in contrast not allowed, or at least not as well accepted, in entity partitives because in the singular they denote amounts and cannot be specific. As before, this applies to Catalan, but it is too restricted for other languages, where more quantifiers are admitted in entity partitives, so I claim that entity partitives can differ across languages in the type of relation the quantifier has with the internal DP: the quantifier can extract only subparts from the whole like in Catalan, or it can extract not only subparts but also amounts, for example in English, where all classes of quantifiers are admitted. I leave this open for further study.

So Catalan entity partitives contain quantifiers that denote parts of an entity. It is worth noting here that entities can be formed not only by mass nouns or singular countable nouns as shown in the examples thus far: collective nouns such as *públic*, *professorat* or *gent* as in (72) and plural countable nouns such as *assistents*, *professors* or *persones* as in (73) can be entities as well.

- | | |
|---|--|
| <p>(72) a. la meitat del públic
 the half of-the audience
 'half of the audience'</p> <p>b. una part del professorat
 a part of-the teaching-staff
 'part of the teaching staff'</p> <p>c. la major part de la gent
 the greatest part of the people
 'most people'</p> | <p>(73) a. la meitat dels assistents
 the half of-the participants
 'half of the participants'</p> <p>b. una part dels professors
 a part of-the lecturers
 'part of the lecturers'</p> <p>c. la major part de les persones
 the greatest part of the persons
 'most people'</p> |
|---|--|

With collective nouns, individual quantifiers such as *algun*, *cap*, etc. are excluded, for these nouns behave syntactically as mass nouns and so denote entities and not sets of entities as in (74), and amount quantifiers are also rejected, as expected in entity partitives—see (75):

- | | |
|---|---|
| <p>(74) a. *<i>algun</i> del públic⁵⁹
 some_{sg} of-the audience</p> <p> b. *<i>cap</i> del professorat
 none of-the teaching-staff</p> <p> c. *<i>qualsevol</i> de la gent
 any of the people</p> | <p>(75) a. *<i>molt</i> del públic
 much of-the audience</p> <p> b. *<i>bastant</i> del professorat
 quite a lot of-the teaching-staff</p> <p> c. ??<i>molta</i> de la gent
 much of the people</p> |
|---|---|

In the case of plural countable nouns, all classes of quantifiers are possible, but depending on the type of quantifier we will end up with an entity partitive or a set partitive. This supports the claim that it is the quantifier that selects the internal DP in partitives and that determines the type of partitive construction. So DPs like *els assistents*, *els professors* and *les persones* can be both entities and sets of entities: they are entities when quantifiers such as *la meitat*, *una part* or *la major part* select them and form entity partitives as in (73) whereas they are sets of entities when quantifiers such as *algun*, *cap* or *qualsevol* select them and form set partitives, as illustrated in (76):

- (76) a. *algun* dels assistents
 some of-the participants
- b. *cap* dels professors
 none of-the lecturers
- c. *qualsevol* de les persones
 any of the people

⁵⁹ Note that *algú del públic* ‘someone in the audience’ is possible, but this is not a partitive nominal, where pronouns like *algú* are not allowed, but probably an instance of the *among* construction, which, as we will see later (see Chapter 2, §2.2), also seems to admit the preposition *de*: the idea is that *algú del públic* is equivalent to *algú d’entre el públic* ‘someone among the audience’. However, it could also be considered simply a nominal with a N complement that expresses possession: someone that belongs to the audience. I leave this issue open.

One interesting remark concerning entity partitives with plural countable nouns is that they can have two readings depending on the way the quantifier quantifies over the internal DP: the fraction or subpart can be extracted from the plurality of elements as a whole, the collective reading, or from each element, the distributive reading.⁶⁰ Observe (77):

- (77) a. Només m'he llegit *la meitat de les novel·les*.
 only CL-have_{1sg} read the half of the novels
 'I have only read half the novels.'
 b. I have eight novels and I only read four of them (I didn't read all the novels).
 c. I have eight novels and I only read half of each one (I read all novels but not completely).

(77a) can have the collective reading, which could be paraphrased as in (77b), and also the distributive reading, which could be paraphrased as in (77c).

This is not surprising given that singular nouns can be an entity and the plurality can be understood as a sum of entities, not as an entity as a whole. This behaviour is not exclusive to entity partitives. In set partitives we find cases of ambiguity between a collective reading and a distributive reading as well when the quantifier allows those two readings:

- (78) a. Dos dels professors han anat a París.
 two of-the lecturers have gone to Paris
 b. Molts dels estudiants van escriure una carta al director.
 many of-the students wrote a letter to-the director

Both (78a) and (78b) can have two interpretations: a collective reading, where the two lecturers go together to Paris or many students write one letter all together (one event), and a distributive reading, where the lecturers go to Paris on their own or each student writes a letter to the director (more than one event, as many as individuals that the subject denotes).

⁶⁰ This is against Ladusaw's (1982) claim that the embedded DP has to have a group reading. Brucart (1997: 164) states that in a sentence such as *He leído el 70% de las novelas presentadas al concurso* ('I read 70% of the novels submitted to the competition') "la única interpretación factible parece ser la que concibe la coda partitiva como un grupo" (the only feasible interpretation seems to be that which considers the 'coda' [=what follows the preposition 'de'] as a group). Pragmatically this appears to be the more natural reading, but the reading where only 70% of each novel has been read is also possible.

To sum up this entire section, we have seen that the quantifiers that appear in the partitive construction are of two types, which correspond to the two interpretations the construction can have: (i) quantifiers that select sets of entities, which appear in the so-called set partitives, and (ii) quantifiers that select entities, which appear in the so-called entity partitives. The data studied showed that Catalan is a language where a lot of restrictions apply to the quantifiers that appear in partitives in comparison to those that appear in quantitatives, and the following generalisations were obtained: quantifiers in set partitives must have the property of denoting individuals, not collections or imprecise amounts of them—see (79) vs. (80)—and quantifiers in entity partitives must have the property of denoting fractions or portions, not amounts—see (81) vs. (82).

- | | |
|---|--|
| <p>(79) a. molts dels problemes
 ‘many of the problems’</p> <p> b. deu dels nois
 ‘ten of the boys’</p> | <p>(80) a. *una pila dels problemes
 ‘a pile of the problems’</p> <p> b. *una desena dels nois
 ‘about ten of the boys’</p> |
| <p>(81) a. la meitat del sucre
 ‘half of the sugar’</p> <p> b. un tros del pastís
 ‘a piece of the cake’</p> | <p>(82) a. ?*molt del sucre
 ‘much of the sugar’</p> <p> b. ?*molt del pastís
 ‘much of the cake’</p> |

All quantifiers licensed in partitives share the property of being specific, or are close to being specific, which is the basic notion required. The requirement that quantifiers in set partitives have overt inflection or at least are marked for number follows from the fact that the quantifiers denote individuals and is also related to referentiality.

1.3 Presence of a prepositional element (*de*, *of*, *di*, etc.)

In this section I will deal in more detail with the status and role of the prepositional element present in partitives: *de*, *of*, *di*, etc. In §1.1, I assumed that this element does not contribute to the meaning of the nominal and claimed that it is a functional category, but I did not go into depth as to its properties and function. Now I will suggest that the preposition in partitives works as a Case marker licensing the internal DP on the basis of

several arguments which are given below.⁶¹ The comparison to the prepositional element in quantitatives will be useful for the argumentation as well. My assumption will be that the preposition in partitives and quantitatives, the so-called pseudopartitives, is the same type of element and has got the same function: it is a functional category present for licensing reasons related to Case.

However, before going into the arguments, it is worth noticing that there is another very common view in the literature, according to which only the prepositional element in quantitatives can be considered as a kind of licenser or Case marker, as it is in nominals such as *the destruction of the city*. In contrast, in partitives *of* would be a real preposition, a lexical category which projects into a PP (recall §1.1.2.2).

Not so common is the claim by Mallén (1992: 364) that the prepositional element is a lexical preposition both in partitives and pseudopartitives. The evidence he provides is that, like other prepositions, it can select for different categories: not just a DP as in *una barbaridad de gente* ('a lot of people') but also an AP, which does not require Case, as in *una barbaridad de valiente* ('very courageous') (ex. from his end note 15). However, adjectives are nominal categories, and it could easily be claimed that they as well as nouns need to be marked for Case (see Kayne 2002 for such a suggestion). Moreover, *de* is ungrammatical in front of a PP, which really rejects being marked for Case, and I take that as a strong evidence that *de* is a Case marker: *una barbaridad (*de) por encima de su precio* ('very much over his price'). In contrast, a real preposition *de* can be combined with other prepositions, e.g. *¡Quítate **de en** medio!* (lit. get-out from in middle 'Get out of the way!') or *¿Eres **de por** aquí?* (lit. are from by here 'Are you from round here?') as would be expected given the behaviour of other prepositions such as *por* in *¡Siempre estás **por en** medio!* (lit. always are by in middle 'You keep getting in the way!').

First I will present and briefly revise arguments for considering *de* in partitives a lexical preposition (see §1.3.1), and next I will provide arguments in favour of considering it a functional category, specifically, a Case marker as is defended here (see §1.3.2).

⁶¹ However, see Jackendoff (1977: 80), who is against identifying prepositions and Case markers. Despite that, this author also suggests that the prepositional element in partitives and pseudopartitives acts as a kind of licenser and does not project into a PP: for him "*of* is a transformationally inserted grammatical formative" (Jackendoff 1977: 108, fn. 3).

1.3.1 *De/of* in partitives: a lexical preposition?

The systematic presence of a preposition in partitives versus the variation in its realisation in quantitatives across languages has often been taken as an indication that partitives contain a lexical preposition that projects into a PP in contrast with quantitatives, where the prepositional element would be analysed as a Case marker or a kind of functional category realised only for licensing conditions. In English, for example, the following contrasts can be observed:

- | | | |
|---------|--------------------------------------|--------------|
| (83) a. | a dozen of the books | partitive |
| b. | a dozen books | quantitative |
| (84) a. | two million of the foreigners | partitive |
| b. | two million foreigners | quantitative |

In partitives a preposition *of* appears obligatorily although it is not necessary in quantitatives containing cardinal expressions such as *a dozen* or *two million*. However, *of* is required in quantitatives when nouns like *dozen* or *million* are used bare and in the plural, more like ordinary nouns:⁶²

- | | | |
|---------|-------------------------------|--------------|
| (86) a. | dozens of books | quantitative |
| b. | millions of foreigners | quantitative |

In Catalan, a preposition *de* would be necessary in these cases both in partitives and quantitatives:

- | | | |
|---------|--------------------------------|--------------|
| (87) a. | dos milions dels estrangers | partitive |
| | two millions of-the foreigners | |
| b. | (dos) milions d'estrangers | quantitative |
| | two millions of-foreigners | |

⁶² Needless to say, in this case the preposition would be necessary as well in the corresponding partitives:

(i) a. dozens of the books
b. millions of the foreigners

as it would be in English with other quantificational expressions such as *a lot* or *a cup*:

- | | |
|-------------------------------|-----------------------------|
| (88) a. a lot of the problems | (89) a. a cup of the coffee |
| b. a lot of problems | b. a cup of coffee |
| c. lots of problems | |

In other languages, the equivalents of (89b) or other quantitatives with the so-called *measure* nouns require no preposition, whereas it is still obligatory in the corresponding partitives:

Swedish:

- | | |
|---|--------------|
| (90) a. en kopp av detta goda te | partitive |
| a cup of this good tea | |
| ‘a cup of this good tea’ | |
| b. en kopp te | quantitative |
| a cup tea | |
| ‘a cup of tea’ | |

Dutch:

- | | |
|--|--------------|
| (91) a. een doos van uw heerlijke koekjes | partitive |
| a box of your delicious cookies | |
| ‘a box of your delicious cookies’ | |
| b. een doos koekjes | quantitative |
| a box cookies | |
| ‘a box of cookies’ | |

German:

- | | |
|--|--------------|
| (92) a. eine Dose von diesen leckeren Kekse | partitive |
| a box of those delicious cookies | |
| ‘a box of those delicious cookies’ | |
| b. eine Dose Kekse | quantitative |
| a box cookies | |
| ‘a box of cookies’ | |

Moreover, the different behaviour of partitives with respect to quantitativeness in extraposition (see 93, 94)⁶³ and extraction phenomena (see 95, 96)⁶⁴ seems to point in the same direction: partitives contain a lexical preposition whereas quantitativeness do not.

It has been observed that extraposition is not allowed in partitives in contrast with quantitativeness:

- (93) a. ?*Two of those reviews have been reprinted of Helen's first symphony.
 b. Two reviews have been reprinted of Helen's first symphony.
 c. (Those) reviews have been reprinted of Helen's first symphony.

(Selkirk 1977: 293, ex. 20-22)

- (94) a. ?*A number of the commentaries have appeared on Anne's latest book.
 b. A number of commentaries have appeared on Anne's latest book.
 c. (The) commentaries have appeared on Anne's latest book.

(Selkirk 1977: 306, ex. 73)

Differences have been noted as well in extractability of a *wh*-element or a genitive pronoun *ne*: the extraction is ungrammatical in the partitive construction but grammatical in the quantitative one.

- (95) a. Di chi hai comprato [molti [quadri [t]]]?
 'Of whom have you bought many pictures?'
 b. *Di chi hai comprato [molti [dei quadri [t]]]?
 'Of whom have you bought many of the pictures?'

(Cardinaletti and Giusti 1992: 129, ex. 29)

- (96) a. Ne ho comprato [molti [quadri [t]]]
 NE have_{1sg} bought many pictures
 'I have bought many pictures of him.'

⁶³ For more English examples, the reader is referred to Selkirk (1977). For examples in other languages, see Stickney (2004) and the references there.

⁶⁴ In Catalan the equivalent examples would have the same grammaticality status.

- b. *Ne ho comprato [molti [dei quadri [t]]]
 NE have_{1sg} bought many of-the pictures
 ‘I have bought many of the pictures of him.’

(Cardinaletti and Giusti 1992: 129, ex. 30)

These contrasts have usually been attributed to a more complex structure in partitives, in general involving a lexical PP that acts as an island for extraction (a blocking category). However, I will claim here that there is no need to postulate a PP in partitives but that the same data can be explained by considering that the cause of ungrammaticality is the presence of a DP. It is the extraction out of two DPs in partitives, the internal one and the external one, that is impossible. In quantitatives, where there is only one DP (the maximal nominal projection), extraction is allowed with no problem as is in cases of a definite DP. See more details about this account in §1.8.

1.3.2 *De/of* in partitives: a Case marker

Listed below there are several arguments in favour of the claim that *de/of* in partitives is a Case marker.

I. Though the presence of a prepositional element in partitives is very common, it is not universal but in different languages alternates with other strategies, which basically consist of morphological Case marking. Observe the following examples:⁶⁵

- (97) a. pala **tästä** **hyvästä** **kakusta** Finnish
 bit_{NOM} **this**_{ELAT} **good**_{ELAT} **cake**_{ELAT}
 ‘a bit of this good cake’
- b. ÜaŠka ètogo vkusnogo **Üaja** Russian
 cup_{NOM} this_{GENsg.m} **tea**_{GEN}
 ‘a cup of this good tea’
- c. mi gavath ayd hamov **surtch-ic** Armenian
 one cup_{NOM} that good **coffee**_{ABL}
 ‘one cup of that good coffee’

⁶⁵ These examples are taken from Koptjevskaja-Tamm (2001), a typological study of partitives and pseudopartitives that covers a large number of European languages, with special focus on the circum-Baltic

As illustrated in (97), the internal DP in partitives is marked with relative Case in Finnish, with genitive Case in Russian and with ablative Case in Armenian, and in all cases with no preposition.⁶⁶

II. Variation is not only found across languages but is also a language internal phenomenon. An example of this is German, where partitives can be construed in two different ways: with the preposition *von*, which requires dative Case on the definite determiner, and also without *von*, in which case genitive is required. This is illustrated in (98a) and (98b), respectively:

(98) a. Ich habe keines **von seinem Büchern** gelesen.

I have none of his_{DAT} books_{DAT} read

‘I have read none of his books.’

b. Ich habe keines **seiner Bücher** gelesen.

I have none his_{GEN} books_{GEN} read

‘I have read none of his books.’

(Helbig and Buscha 1991: §15.2.5)

Interestingly these two strategies are also used with genitive complements, as shown in (99):

(99) a. Man hört das Geräusch **eines Zuges**.

one hears the sound a_{GEN} train_{GEN.sg}

‘One can hear the sound of a train.’

languages (Finnish, Estonian, Lithuanian, Latvian, Russian, Byelorussian, Polish, German, Swedish and Danish). For more examples and information, the reader is referred to Koptjevskaja-Tamm’s work.

⁶⁶ Quantitatives in these languages also lack a preposition and have a Case marking, normally different from that in partitives:

(i) a. säkki **perunoita** Finnish

sack_{NOM} potato_{PART.pl}
‘a sack of potatoes’

b. Üäška **Üaja/Üaju** Russian

cup_{NOM} tea_{GEN/tea_{PART}}
‘a cup of tea’

c. mi gavath **surtch** Armenian

one cup_{NOM} coffee_{NOM}
‘one cup of coffee’

- b. Man hört das Geräusch **von Zügen**.

one hears the sound of trains_{DAT,pl}

‘One can hear the sound of trains.’

(Dreyer and Schmitt 1991: §3.II)

Actually, German traditional grammars treat both constructions under the genitive complements and specify when the alternative with *von* is used: it is obligatory in front of bare nouns or pronouns, as in (100), but it is in principle optional in the rest of cases.⁶⁷

- (100)a. Gerhard is der Bruder von Klaus.

Gerhard is the brother of Klaus

‘Gerhard is Klaus’ brother.’

(Dreyer and Schmitt 1991: §3.III)

- b. Es war keiner von Dresden anwesend.

there was none of Dresden present

‘There was none from Dresden.’

(Helbig and Buscha 1991: §15.2.5)

- c. Der Lehrer kennt jeden von uns.

the teacher knew each of us_{DAT}

(Helbig and Buscha 1991: §15.2.5)

So I take the alternation of the preposition *of* (or the equivalent *de*, *di*, *von*, etc.) with Case morphology as a further argument in favour of its functional status related to Case. Moreover, the fact that the preposition is obligatory with bare nouns and pronouns reinforces this idea as nouns in general show no Case inflection in German and personal pronouns in their genitive form would probably be confused with a possessive pronoun in this context, so the preposition is needed as a Case marker given that no other Case marking is available.

III. In contrast to the German situation is St’át’imcets, a Northern Interior Salish language spoken in the southwest interior of British Columbia, Canada, which has no morphological Case and also displays no preposition in partitives. According to Matthewson (2001: 162), “the claim that Case is what requires *of* to appear correlates well with the fact that St’át’imcets, which lacks an *of*-like element in partitives, lacks overt Case marking”. Thus, the

⁶⁷ However, according to Koptjevskaja-Tamm (2001), examples with *von* are the most frequent in the German partitive construction. I will not go into depth on this since what is relevant for the discussion is the possibility of the two strategies.

lack of the prepositional element in partitives in a language with no morphological Case might point in the same direction as well.⁶⁸

IV. Older stages of languages are also worth looking at, as Matthewson (2001: 162, fn. 13) indicates: “there is also diachronic evidence that a Case requirement was involved in English partitive constructions, and that the *of* came in when morphological Case agreement was lost (Barbara Partee, p.c.)”.

V. Finally, the fact that the preposition in partitives appears systematically can be taken as further evidence in the same line, or at least is not a problem for a Case based account: a DP cannot be realised inside a nominal with no Case marking because a DP is an argument and needs to be licensed by Case.

In summary, there are reasons to believe that the presence of a prepositional element in partitives is related to Case as is defended here.

This idea of the prepositional element in partitives as a Case marker is not new: see Battye (1990), Brucart (1997), Chierchia (1997)⁶⁹ and Matthewson (2001), among others.⁷⁰

Battye (1990: 9) claims that the head of the DP requires Case in order for it to be well-formed and that “there are two ways in which the morphological Case feature can be realised on D, either it is assigned directly to D or it becomes associated with the Case that has percolated to the head of the NP complement within DP via agreement”.⁷¹

⁶⁸ In contrast, all Romance languages and some Germanic languages such as Swedish have no morphological Case but display a preposition in partitives. Probably this is not an exception to the correlation stated for St’át’imcets since in old stages of those languages there was overt Case morphology which was progressively lost. One would expect no Case morphology in any stage of St’át’imcets for Matthewson’s claim to be of some strength, but I have no such information, so I leave this question unanswered and only report his claim.

⁶⁹ Although Chierchia (1997: §5) projects the prepositional element in partitives into a PP in the syntactic structure, he specifies that “the preposition *of* by itself has no meaning” and that it “is there for syntactic (case theoretic) reasons”.

⁷⁰ Bianchi (1992: §6) interestingly suggests that *di* is a Case marker in Italian partitives containing expressions such as *la maggior parte* ‘the majority’ and *la metà* ‘the half’ as in (i). According to this author, the whole quantificational expression is a Q that selects the DP as represented in (ii):

(i) Ho letto {la maggior parte / la metà} dei libri.
have_{1sg} read the major part the half of-the books
‘I read {the majority / half} of the books.’

(ii) [_{QP} [_Q la maggior parte] [_{DP} [_D dei] [_{NP} libri]]]

See Bianchi (1992) for the arguments based on a comparison with partitives containing weak quantifiers, in which *di* is analysed as a preposition selected by the Q, in line with Cardinaletti and Giusti (1992).

⁷¹ For the latter, see Giorgi and Longobardi (1991), who explicitly state such a proposal of Case percolation. Also notice that for Battye (1990), D can be a quantifier.

NP in quantitatives but a DP in partitives. It is the presence of an internal DP which requires the realisation of *de/of* in partitives, independently of the type of quantifier. So we can maintain the classification of cardinals as *adjectival quantifiers* but must consider that in partitives, Case cannot percolate due to the lack of agreement between Q and the DP and, therefore, *de/of* must appear in order to supply Case for the DP.

Interestingly, Brucart (1997) attributes the differences between partitives and quantitatives to the status of what he calls the *coda* (DP in partitives and NP in quantitatives). According to Brucart (1997: 166, end note 26), DPs and NPs impose different Case requirements: this author suggests that in partitives genitive Case is assigned to the DP whereas in quantitatives inherent partitive Case is assigned to the NP. This distinction would be parallel to that proposed by Belletti (1988) for accusative vs. partitive. Brucart also appeals to Enç (1992), where the opposition specific vs. non-specific is related to these two types of Case marking.

Here I will not consider this difference in the type of Case assigned in partitives and in quantitatives (genitive vs. partitive Case) as a general phenomenon because there is a lot of variation across languages in the Case used in partitives and quantitatives: sometimes the same Case is assigned in both constructions, sometimes a different one. In some languages only partitives are assigned a different internal Case, and quantitatives either do not have any internal Case morphology or agree in Case with the quantifier, etc. Indeed, the difference in the status of the coda, DP vs. NP, is relevant to Case, but we have just seen that the type of quantifier is very relevant as well. Given that in Catalan and in Romance languages in general there is no distinction between the realisation of the prepositional element in partitives and quantitatives, I will leave aside the question as to whether they encode a different Case or not as it does not affect the general argumentation.

Summarising, I conclude that the prepositional element that appears in partitives does not contribute to the meaning, but it is a functional category that has the role of Case marking. It appears systematically in a language like English or Catalan that has no Case morphology because the partitive construction contains an internal DP which as any DP requires to be Case marked. As the Case assigned to the whole nominal cannot percolate to the embedded DP given that there is no agreement between Q and the DP, an overt Case marker is necessary: the preposition *de/of*.⁷²

⁷² See Chapter 3, §3.3, for more discussion and some revision.

The next section will deal with partitives being required to contain an internal DP.

1.4 The Partitive Constraint

As already noted, it is generally assumed that the noun in partitives must be preceded by a definite determiner: a definite article, a demonstrative or a possessive. Since Jackendoff (1977: 113), this requirement has been known as the *Partitive Constraint*—see (7) above, §1.0, which we repeat here for convenience:

(103) *Partitive Constraint*

In an *of*-N''' construction interpreted as a partitive, the N''' must have a demonstrative or genitive specifier.

Jackendoff (1977: 113) considers that the Partitive Constraint “is part of the semantic component”, yet gives no semantic explanation or motivation for its existence.

Since Jackendoff, several authors have attempted to give a semantic characterisation of the Partitive Constraint (i.e. Barwise and Cooper 1981, Ladusaw 1982, Hoeksema 1984, De Hoop 1997 and 1998, Barker 1998, and more recently Ionin, Matushanski and Ruys 2006). Other authors have argued against a syntactic or semantic approach of the Partitive Constraint and have proposed a pragmatic analysis to account for the data (i.e. Reed 1996, Abbott 1996). Hoeksema himself later claims, in the introduction of the 1996 book on partitives containing Reed’s and Abbott’s articles, that the Partitive Constraint is “best thought of in pragmatic terms, rather than as a syntactic or a semantic condition (as conceived of earlier)” (Hoeksema 1996: 20).

In this section I will discuss all the different analyses and will reach the conclusion that a syntacticosemantic approach is superior to the pragmatic one and that the Partitive Constraint is better thought of as a specificity constraint, that is to say, the internal nominal must be specific, at least in Catalan. This includes definite DPs but also indefinite nominals provided they have a specific interpretation. I assume that every nominal that is specific is a DP where D^0 has a [+Spec] feature: if it contains an indefinite determiner or quantifier, this element must raise to the DP projection (this analysis is developed in Chapter 3, §3.4.1.3).

Many authors take the Partitive Constraint to be a definiteness restriction: the embedded DP in the partitive construction must be definite. Barwise and Cooper (1981) made

the attempt of giving a detailed semantic characterisation of definite DPs and argued that exactly this type of DP is allowed in the embedded position of partitives. However, they failed to account for the contrast in (104):⁷³

- (104) a. one of the two books
 b. *one of both books

According to their definition of definite DPs,⁷⁴ both examples should be acceptable as *both* is characterised as a definite determiner, yet *both* yields ungrammaticality.

Ladusaw (1982) and Hoeksema (1984) improve Barwise and Cooper (1981)'s work by providing an explanation for the ungrammaticality of (104b): the embedded nominal in partitives must have a group reading and *both* is rejected because it can only receive a distributive reading. In contrast, *the two* can have a collective reading (besides a distributive reading), and that is why it is accepted in partitives.⁷⁵

⁷³ The same would apply to Catalan, where (ic) is a more colloquial version of (ib)—*ambdós* is rather formal:

- (i) a. un dels dos llibres
 one of-the two books
 b. *un d'ambdós llibres
 one of-both books
 c. *un de tots dos llibres
 one of all two books

In contrast, Hoeksema (1984) notes that *beide* in Dutch, unlike its English counterpart *both*, can get a collective reading—see (iia)—and, as expected, is allowed in a partitive—see (iib):

- (ii) a. Het verschil tussem beide voorstellen is groot
 the difference between both proposals is large
 b. een van beide taalkundigen
 one of both linguists

⁷⁴ They actually use the term 'NP', but it corresponds to our 'DP'.

⁷⁵ The different possible readings of *the two* and *both* can be verified in sentences containing collective predicates, which require a group reading of the nominal. Observe the following examples taken from Ladusaw (1982: 236, ex. 13, 14):

- | | |
|---|--|
| (i) a. The two students are a happy couple. | (ii) a. *Both students are a happy couple. |
| b. The two students love each other. | b. *Both students love each other. |
| c. The two students separated. | c. *Both students separated. |

When a group reading is forced, *both* is ungrammatical as expected (see ii), whereas *the two* is fine (i). This shows that *both* is irreducibly quantificational and cannot be identified with any single entity. In contrast, *the two* can in a certain context denote a group individual consisting of, for example, Jim and Mary.

In the light of the contrast between *both* and *the two*, Ladusaw (1982: 238) claims that “the Partitive Constraint can be stated in terms of individuals...by requiring that the NP in a partitive phrase always denote an individual”. In Ladusaw’s terminology, “individual” explicitly includes non-atomic (‘plural’) entities: for example, in a certain context *the two men* might denote the group individual consisting of Sam and Tom. *Both* is excluded by Ladusaw’s Partitive Constraint because it can never refer to an individual (it can never have a group reading).

As Barker (1998: 691) notes, “even though Ladusaw presents his hypothesis as an extension of Barwise and Cooper’s approach,...there is in fact no essential connection between Ladusaw’s Partitive Constraint and definiteness”.

Indeed, Ladusaw (1982: 240, ex. 20) himself notes the existence of well-formed partitives which contain an indefinite embedded nominal:

- (105) a. That book could belong to one of three people.
- b. This is one of a number of counterexamples to the PC.
- c. John was one of several students who arrived late.

Ladusaw (1982: 240) claims that the acceptability of the examples in (105) “does not, however, argue that there is no partitive constraint or that its statement does not involve the notion [of] individual” as they “are appropriately used only when the user has a particular group of individuals in mind. (20a) [= (105a)] invites a continuation: ‘namely, John, Mary and Bill’”.

So, here it could be concluded that the relevant notion is not definiteness but rather specificity: although the embedded nominals in (105) are indefinite, they are specific, and thus the reason they are grammatical.

Interestingly, some years earlier Elisabeth Selkirk had already noted that “it does seem to be possible for the lower phrase of a partitive to contain a null determiner, as (i) shows: (i) *I heard too much of one speech and not enough of the other*. This possibility is only available when that noun phrase is interpreted as [+specific]” (Selkirk 1977: note 7).

Ladusaw suggests that perhaps the pragmatic notion of an introduced discourse entity is relevant here. This is the approach taken later by Reed (1996: 149), who proposes replacing the semantic version of the Partitive Constraint with a parallel constraint at the level of discourse representation: she claims that the embedded NP in a partitive “must access a discourse group” and that this requirement is responsible for the Partitive Constraint effects.

However, as already noted by Ladusaw (1982: 241), it does not seem that “the entire effect of the Partitive Constraint can be reduced to discourse pragmatics. There are at least two types of NP which are reasonably construed as individual-denoting which do not seem to have any connection to context of use”.

One type involves non-presuppositional *the* or non-deictic *those*, as in a sentence like *The / Those students who enroll in 100a must also enroll in 100b*. As there is no existential presupposition associated with these determiners, Ladusaw (1982: 241) claims that “it is difficult to see how the partitive in (106) could receive interpretation from context of use alone”.

(106) None of {those / the} students who enroll in 100a may enroll in 100b.

The other type involves free relatives, e.g. *what John earns*, which receive a mass interpretation when they appear in the partitive construction:

(107) Most of what John earns is spent on books.

Again, as Ladusaw (1982: 241) points out, “the interpretation of free relatives seems independent of context of use”.

His conclusion is that “the semantics of the partitive constraint cannot be completely reduced to quantification over contextually specified sets” (1982: 241).

From a pragmatic perspective, Abbot (1996) also claims that the embedded NP in partitives is not always specific or does not need to refer to an entity already existing in the discourse, as the examples below “could clearly be used by a speaker who has no particular individuals in mind as referents of the underlined indefinites”:

- (108)a. John was apparently one of several students who arrived late – I have no idea how many, or who they were.
- b. Mary thinks that this is only one of a number of counterexamples to the PC.
- c. Probably every speaker will only tell one of many possible jokes related to the topic.

- d. Kim asked them to tell the caterer to put two strawberries on each of three pies, and kiwi slices on the remainder.

(Abbott 1996: 37, ex. 21)

She also notes that the embedded NP in partitives does not always entail the widest possible scope reading, contrary to what we would expect if it was a specific or referential indefinite (property of referential indefinites noted by Fodor and Sag 1982). She provides the examples in (109), in which the embedded indefinites have a narrow scope with respect to other quantifiers in the sentences:

- (109)a. Each of us has any one of several options open to us, if only we would stop to think.
 b. Every year only one of many applicants is admitted to the program.
 c. If three or more of some professor's manuscripts get published, the University benefits.
 d. Anybody who breaks more than one of any dishes they're given won't get any more.

(Abbott 1996: 37, ex. 22)

From all this she concludes that there is no need for any semantic or pragmatic version of the Partitive Constraint as according to her, all determiners are possible in the embedded NP in partitives: the only condition is that "some reason must be provided for mentioning the outer group. All that is needed is sufficient propositional or contextual material to explain the relevance of the embedded NP" (Abbott 1996: 41). That is to say, pragmatics can save all kinds of partitives, and we can discard any Partitive constraint.

Supporting that view, this author notes that mass partitives (*half the apple*), which she claims to be the same construction as countable partitives (*three of the apples*), do not at all require the embedded NP to be definite nor specific or refer to an introduced discourse element:

- (110)a. Why settle for half of a loaf?
 b. There was most of a birthday cake and all of a large vegetarian pizza on the buffet.

(Abbott 1996: 32, ex. 14b,c)

nor do they even admit quantificational embedded NPs:

- (111) a. One third of every book Chomsky writes is footnotes.
 b. At least a quarter of most fruits consists of rind and seeds.

(Abbott 1996: 32, ex. 15b,d)

The only embedded nominals not allowed in partitives are bare nominals (a bare plural or a bare mass noun), as shown below:

- (112) a. *some of men
 b. *most of cheese from the Netherlands
 c. *little of water

(Abbott 1996: 49, ex. 32a,c,d)

Assuming that in a partitive the embedded nominal always has wide scope within the partitive, that is, the embedded determiner has scope over the higher determiner, Abbott attributes the unacceptability of bare nominals in partitives to the fact that bare nominals always take the narrowest possible scope, a property noted by Carlson (1977).

Although all the data and considerations provided in Reed (1996) and Abbot (1996) suggesting that the semantics of the partitive construction should be reduced completely to discourse-related pragmatic principles, subsequent proposals by Barker (1998), De Hoop (1997, 1998) and Ionin, Matushansky and Ruys (2006) argue against that and keep trying to provide a semantic account that can cover all data.

Barker (1998: 695), going back to Ladusaw's (1982) work, claims that the notion of individual—either group level or individual level—is the clue for the semantics of partitives: according to him, whether or not the Partitive Constraint ultimately turns out to be semantic or pragmatic, the semantic of partitives is consistent with the form of the Partitive Constraint as stated by Ladusaw. Barker shows that the Partitive Constraint can explain all examples if we relativise it to contexts, that is to say, if the requirement is taken as that “whenever an NP occurs in a partitive, it must denote an individual in the context in which the partitive is used”. Thus, partitives containing indefinite noun phrases will be acceptable only in contexts in which these indefinite noun phrases have denotations that are accidentally (isomorphic to) group individuals. In this sense, (113) is good in a context in which *true* and *false* are the only (relevant) truth values and therefore the indefinite nominal *two truth values* accidentally

denotes the same as *the two truth values*, whereas the examples in (114) are unacceptable because they entail the existence of additional entities with the relevant properties:

(113) Because each proposition denotes at most one of two truth values.

(114) a. *This is one of several of 10 counterexamples to the PC.

b. *It is likely that at least two of most people in this room have the same birthday.

De Hoop (1997, 1998) also considers the notion of individual as basic, but she focuses on the type of quantifier that enters a partitive construction and proposes a distinction between quantifiers that quantify over entities and quantifiers that quantify over sets of entities in order to account for all the data, as was already noted in §1.2. So De Hoop claims that the Partitive Constraint can be stated as a restriction on the semantic type of embedded noun phrases in partitives: according to her, the reformulated Partitive Constraint simply states that noun phrases that are allowed in partitives must be entity-denoting if the higher quantifier quantifies over entities, and set-denoting if the higher quantifier quantifies over sets. This has the advantage of accounting for all the data, including the contrast in (115) that would be problematic in Ladusaw's analysis:

(115) a. half of Jane and Jacky

b. *one of Jane and Jacky

In Ladusaw's analysis *Jane and Jacky* is considered a (group) individual, so one would expect it to be good in a partitive construction. However, as shown in (115), that is not always the case. De Hoop defends the idea that *Jane and Jacky* denotes an entity (a complex one), but does not denote a set of entities: that is why it is accepted in an entity partitive as (115a), but yields ungrammaticality in a set partitive as in (115b).

Finally, Ionin, Matushansky and Ruys (2006) explore another semantic line of explanation and claim that the Partitive Constraint can be derived from what they call the *atomicity requirement*: cardinals require the nominal they quantify over to be atomic (a set of atoms), which means that the embedded noun phrase in partitives containing cardinals⁷⁶ may not be a mass noun nor involve quantification. As the atomicity requirement does not hold for fractions and measure nouns, partitives containing non-cardinals allow mass nouns and

⁷⁶ This includes numbers but also vague cardinals such as *many*, *some*, etc.

quantification in the embedded noun phrase. Although these authors seem to account for most data, they have no explanation for the contrast in (115) (see their fn. 13) contrary to De Hoop.

In this dissertation, I will assume De Hoop's reformulation of the Partitive Constraint and will focus on the syntactic category of the embedded nominal. I will claim that the embedded nominal in partitives is always projected into a DP, given that it normally contains a definite determiner (definite article, demonstrative or possessive), or if it contains a weak quantifier, it is usually specific, at least in set partitives. I will assume a DP is projected also in entity partitives as well. This will be stated in selectional terms: quantifiers that enter a partitive construction select a DP.

To conclude this section, it is worth noticing that Catalan exhibits the same behaviour in the equivalent examples of the data presented except for the cases of embedded nominals with weak quantifiers and no presuppositional reading (recall examples 108 and 109). In all these cases a definite DP would sound much more natural in Catalan, even if non-specific, which I take as support in favour of the idea that the embedded nominal in partitives is always a DP (at least Catalan points in that direction). Instead of a partitive, another option in Catalan would be to use a quantitative expression, with or without an *among* modifier (*d'entre*). For example, (108c) would be better reformulated in Catalan as follows (notice that (116a) is its exact Catalan counterpart):

- (116) a. ?*Probablement cada ponent explicarà només *un de molts possibles acudits sobre el tema*.
 'Probably every speaker will tell only one of many possible jokes related to the topic.'
- b. Probablement cada ponent explicarà només *un dels molts possibles acudits sobre el tema*.
 'Probably every speaker will tell only one of **the** many possible jokes related to the topic.'
- c. Probablement cada ponent explicarà només *un acudit **d'entre** els molts possibles que hi ha sobre el tema*.
 'Probably every speaker will tell only one joke **from among** the many possible ones related to the topic.'

1.5 Partitives preceded by a definite determiner?

It is commonly observed in the literature that partitives reject being preceded by a definite determiner (cf. Milner (1978) for French,⁷⁷ de Jong (1991) for English and Dutch, and Giusti (1993) for Italian), as illustrated in (117) for Catalan:

- (117) a. tres dels homes
 three of-the men
 b. *els tres dels homes
 the three of-the men

However, as noted by Jackendoff (1968, 1977) and Barker (1998),⁷⁸ if the partitive receives additional modification, then a definite determiner is allowed in partitives:

- (118) a. *the three of the men
 b. the three of the men that you met yesterday

(Jackendoff 1968: 425, ex. 38, 40)

Interestingly, this is not the case in Catalan, where a partitive can never be preceded by a definite determiner, no matter whether it is modified or not, as shown by the ungrammaticality of (119) (the Catalan counterpart of the well-formed English example (118b)):

- (119) *els tres dels homes que vas conèixer ahir

The aim of this section is to explore the reason why the partitive construction rejects a definite determiner unless modified and why Catalan partitives never allow a definite determiner.

1.5.1 Weak partitives and anti-uniqueness

According to Barker (1998), the property that partitives cannot be preceded by a definite determiner unless modified derives from the semantics of the partitive construction, and he appeals to the notion of *anti-uniqueness*.⁷⁹ This author proposes that “partitivity is always

⁷⁷ Recall Milner’s description of partitives in (1b) above.

⁷⁸ See also Zamparelli (1996) and more recently Ionin, Matushansky and Ruys (2006), among others.

⁷⁹ See Ionin, Matushansky and Ruys (2006) for an alternative analysis: they assume improper partitivity and argue that anti-uniqueness is due to pragmatics rather than semantics. According to them, the fact that anti-uniqueness is alleviated by the context suggests it is a pragmatic rather than a semantic phenomenon. For

proper partitivity. This will guarantee that any property denoted by a partitive will have at least two entities in its extension, and cannot uniquely identify an individual; thus partitives are anti-unique” (Barker 1998: 679). So, under the assumption of proper partitivity, a partitive like *two of John’s friends* presupposes that John has more than two friends, for example, Mary, Tom, and Bill. The count domain *C* that involves only Mary, Tom, and Bill contains seven entities, as illustrated below:

$$\begin{array}{rcccl}
 (120) & & & (m + t + b) & \\
 & (m + t) & (m + b) & (t + b) & \\
 & m & t & b &
 \end{array}$$

The example *two of John’s friends* has more than one entity in its extension: in this case, $(m + t)$, $(m + b)$, and $(t + b)$. Therefore, according to Barker (1998: 709), “because the definite determiner presupposes that its complement has at most one entity in its extension, we have explained why **the two of John’s friends* is bad”. Thus, it is the uniqueness requirement of definite determiners that yields an ungrammatical result with partitives given that partitives are anti-unique.

Data in (118) support this semantic account: a definite determiner is allowed in partitives only if the partitive receives additional modification so that anti-uniqueness does no longer holds.⁸⁰

Also observe the following examples from Barker (1998: 679):

- (121) a. **I met the one of John’s friends.*
 b. I met the [[one of John’s friends] that he travelled with from Mexico]

other arguments see their paper, §5. I disregard their analysis on the basis of Catalan data: no context can license the presence of a definite determiner in Catalan partitives, from which I infer it cannot be simply a pragmatic issue but involves semantics and syntax, as will be seen later in §1.5.2.

⁸⁰ Other examples would be:

- (i) a. **the group of the men*
 b. the group of the men that had already left (Jackendoff 1968: 425)
 (ii) a. **the many of the men*
 b. the many of the men that you met (Jackendoff 1977: 109)
 (iii) a. The three of John’s friends he traveled with from Mexico just arrived.
 b. *?I have seen the ten of the participants who were out in the street before.*
 (Barker 1995, quoted in Zamparelli 1996: 247).

The brackets in (121b) show that the relative clause refers not to all of John's friends but only to one of them. That would explain why the construction in that case can be preceded by the definite article: the addition of a relative clause has restricted the extension to only one element, making it compatible with the uniqueness presupposition of the definite article.

Not only relative clauses can rescue partitives preceded by a definite determiner, but also other modifiers such as ordinal adjectives (i.e. *first* or *last*):

- (122)a. *The three of John's friends just arrived.
 b. The first three of John's friends just arrived.

- (123)a. *I have seen the ten of the participants.
 b. I have seen the last ten of the participants.

(Zamparelli 1996: 247, ex. 645, 646)

The explanation so far looks very convincing. However, Barker's analysis is based on the assumption that all partitives are anti-unique, contrary to fact as Zamparelli (1996: 242) points out: partitives can have a strong reading—which is actually the preferred one as he observes—and also a weak reading. Semantically, a 'strong' partitive denotes a specific subset of the denotation of the embedded DP while a weak partitive denotes the set of every possible plural individual with the required cardinality that can be extracted from the entity denoted by the lower DP. Only weak partitives then are actually anti-unique, so Barker's (1998) account would only hold for this kind of partitives provided we do not derive anti-uniqueness from proper partitivity as he does (strong partitives follow proper partitivity and they are not anti-unique).

However, if Barker's semantic explanation is on the right track, why is a definite determiner rejected in strong partitives if they meet uniqueness as definite determiners require? An explanation will be explored in the next paragraph which involves syntax and not only semantics.

1.5.2 Strong partitives

In the literature it has often been claimed that partitives are always strong (or specific), especially since Enç's (1991) definition of specificity: for Enç specific nominals are those whose denotation is linked to previously established discourse referents, and the nature of

this linking is ‘inclusion’: “specificity involves a...link...of being a subset or of standing in some recoverable relation to a familiar object” (Enç 1991: 24). So partitives are specific by definition and also behave as expected: like other specific nominals they are rejected in existential sentences, contrary to non-specific indefinites. Observe the following examples from Enç (1991: 14, ex. 44, 45):

- (124)a. There are some cows in the backyard.
 b. There are two cows in the backyard.
 c. There aren’t any cows in the backyard.

- (125)a. *There are some of the cows in the backyard.
 b. *There are two of the cows in the backyard.
 c. *There aren’t any of the cows in the backyard.

However, Zamparelli (1996) notes that although the specific interpretation is the preferred one, a non-specific interpretation is also available in partitives. Observe the two possible readings of example (126a): a specific one, paraphrased as (126b), and a non-specific one, paraphrased as (126c).⁸¹

- (126)a. The children are playing. Be careful to watch them: two of these children often start a fight when they play together.
 b. ... Two of these children, namely Jack and Jim, often start a fight when you put them together.
 c. ... Put any two of these children together, and you often get a fight.

The ungrammaticality of the examples in (125) is due to the fact that the presence of a familiar set of elements from which the quantifier extracts a subset often implies a specific reading although that is not always the case as shown by the availability of a non-specific reading (126c) in an example like (126a).

⁸¹ According to Enç’s definition of specificity, in both readings the partitive nominal would be considered as specific because what matters for her is the fact that the set from which the quantifier extracts a subset is contextualised. We are actually dealing with two notions of specificity here, which will play a role in the analysis that will be defended in Chapter 3 later (see especially §3.4.1.3).

Going back to the possibility or not of a partitive being preceded by a definite determiner, it is obvious that the reason cannot only be semantic. Since Enç, specificity has often been related to a [+specific] feature, usually located in D^0 . I will claim here that specific partitives are always projected into a DP and D^0 has the feature [+Spec]. There are two possibilities for that feature to be valued:

(i) In ‘strong’ partitives the quantifier has a [+Spec] feature, and it moves obligatorily to the specifier of the top DP projection (where D^0 gets a [+Spec] value by agreement with the QP). The presence of the QP in the DP projection would account for the fact that a definite determiner is rejected in the partitive construction: the Spec of DP is filled with the QP, so no other lexical material is required nor allowed in the DP projection. This is represented in (127):⁸²

(127) [DP $\uparrow$ [D' $D^0_{[+Spec]}$ [some_[+Spec] of the cows]]]

(ii) A ‘strong’ partitive can also contain a weak quantifier, which would not have a [+Spec] feature. In this case, the only way of getting a [+Spec] value for the feature located in D^0 is by inserting a definite determiner. This explains the well-formedness of partitives preceded by a definite article in examples like those presented above in §1.5.1 (recall 118b, 121b, 122b, 123b and the grammatical examples in fn. 80). In this line, Zamparelli (1998: 248) concludes that a numeral after a definite determiner must always be weak.⁸³

In contrast, in weak partitives the feature located in D^0 is not [+Spec], so no definite determiner is allowed, and that explains why partitives with a non-specific reading cannot be preceded by a definite determiner.

Going back to the example in (126), the insertion of a definite article would yield ungrammaticality under both readings:

⁸² In Chapter 3 the whole structure and derivation for partitives will be provided. Here only the relevant nodes are specified for the discussion.

⁸³ See also Giusti (1993) and Cardinaletti and Giusti (1992, 2006), according to whom quantifiers preceded by a definite determiner are analysed as N modifiers (they consider them APs) in examples such as *the three men*. In contrast, when no definite article precedes a quantifier, this category is projected into a QP and Q^0 selects the NP: *three men*. Here it will be defended that quantifiers are always Qs, whether preceded by a determiner or not (see Chapter 3, §3.2.2.6 and also §3.4.3.3).

- (128) *The children are playing. Be careful to watch them: *the two of these children* often start a fight when they play together.

Under the specific reading, (128) is unfelicitous because *two* is strong and has raised to Spec DP, so no other lexical material can be inserted in DP; under the non-specific reading, (128) is unacceptable because *two* is weak and D^0 does not have a [+Spec] feature, so again no definite determiner can be inserted as it would have a [+Spec] feature.

For a specific reading to be available with a weak Q, a modifier must be added so that the reference of the nominal becomes more restricted and a [+Spec] feature in D^0 can be justified. A lexical determiner can then be inserted to value the feature in D^0 as [+Spec].⁸⁴

Assuming this syntactic account of the behaviour of partitives with definite determiners, we are ready to account for the Catalan data. As noted above, in Catalan, partitives always reject to be preceded by a definite determiner:

- (129) a. *els tres dels homes que vas conèixer ahir (=*119* above, cf. *118b*)
 the three of-the men that met_{2sg} yesterday
 b. *Vaig conèixer l'un dels amics d'en John amb qui va viatjar
 met_{1sg} the-one of-the friends of John with whom travelled_{3sg}
 des de Mèxic. (cf. *121b*)
 from Mexico

I will claim that in Catalan the quantifiers that enter a partitive construction are always strong,⁸⁵ so they must raise to Spec DP, and therefore the insertion of a definite determiner in D^0 is not allowed. This explanation naturally captures the restrictions on the types of quantifiers that are licensed in Catalan partitives discussed above in §1.2.

⁸⁴ I wonder why a modifier is needed in partitives but not in quantitatives: compare *the three men (whom I met)* and *the three of the men *(whom I met)*. I have no explanation for that, but notice that this requirement applies to quantitatives as well in the case of vague numerals: *the many men *(whom I met)*—similar to *the many of the men *(whom I met)*.

⁸⁵ This is enough of an account at this point, but the reader is referred to Chapter 3, §3.4.1.3, for further discussion and a detailed analysis.

1.5.3 Entity partitives

So far all the examples discussed have been of set partitives. Do entity partitives behave in a similar way, or as in the case of the embedded nominal, are they more flexible?

Apparently, partitives that denote subparts of a whole admit being preceded by a definite determiner. However, in that case they are not partitives but indefinite nominals where the first noun does not act as a quantifier but gets an object interpretation.

- (130)a. Dóna'm *aquell tros del pastís de xocolata que ha quedat*.
 give-me that piece of-the cake of chocolate that has been-left
 'Give me that piece of the chocolate cake that's left.'
- b. *La part del vi que vas comprar que vam guardar a la cuina* s'ha fet
 the part of-the wine that brought_{2sg} that kept_{1pl} in the kitchen CL-has made
malbé amb la calor. Per sort, la part del vi que vam guardar al celler està bé.
 sour with the heat by luck the part that kept_{1pl} in-the cellar is good
 'The part of the wine you brought that we kept in the kitchen turned sour because
 of the heat. Luckily, the part that we kept in the cellar is fine.'

The nominals in italics in (130) are fine with a definite determiner because *tros* 'piece' and *part* 'part' refer to objects: portions that can be individualised and identified. In contrast, when *tros* and *part* can only get a quantity meaning (see (131), where the presence of the modifier *bo* (*bon*, *bona*) precludes any possible object reading), a definite determiner is excluded as the ungrammatical examples in (132) show:

- (131)a. La Mar s'ha menjat *un bon tros del pastís de xocolata*.
 the Mar CL-has_{3sg} eaten a good piece of-the cake of chocolate
 'Mar ate a big piece (=a lot) of the chocolate cake.'
- b. *Bona part del vi que vas comprar* s'ha fet malbé.
 good part of-the wine that brought_{2sg} CL-has made sour
 'Most of the wine you brought turned sour.'

- (132)a. *S'ha menjat *aquell bon tros del pastís de xocolata*.
 b. **La bona part del vi que vas comprar que vam guardar a la cuina* s'ha fet malbé.

A different treatment must be given to cases such as those in (133):

- (133) a. *la meitat de la novel·la*
 the half of the novel
 ‘half the novel’
 b. *la majoria de la gent*
 the majority of the people
 ‘the majority of people’
 c. *la major part {del temps / de l’electorat / dels polítics}*
 the bigger part of-the time of the-electorate of-the politicians
 ‘most of the time’ / ‘most of the electorate’ / ‘most politicians’

Notice that in English no article, except for *majority*, is needed which suggests that the presence of the definite article has to do with the lexical requirements of the quantifiers, which can vary across languages.

It is worth pointing out that in these cases no alternative without the article is available in Catalan probably because *meitat* and *majoria* are nouns and *part*, despite being allowed as a bare noun or modified by adjectives like *bona* or *gran*,⁸⁶ in this case is modified by a degree adjective such as *major* (yielding a kind of superlative):

- (134) a. **meitat de la novel·la*
 b. **majoria de la gent*
 c. **major part {del temps / de l’electorat / dels polítics}*

However, these quantificational expressions allow an indefinite determiner:

⁸⁶ Recall (131b) and see also examples below:

(i) (*bona/gran*) *part del temps / de l’electorat / dels polítics*
 good big part of-the time of the-electorate of-the politicians
 ‘quite a lot of the time’ / ‘quite a lot of the electorate’ / ‘quite a lot of the politicians’

- (135)a. Una meitat de la novel·la em va agradar més que l'altra. / La primera meitat
 one half of the novel to-me like more than the-other the first half
 em va agradar més.
 to-me like more
 'I liked one half more than the other half.' / 'I liked the first half better.'
- b. una gran majoria de la gent
 a large majority of the people
 'a large majority of people'
- c. una major part {del temps / de l'electorat / dels polítics}
 a big part of-the time of the-electorate of-the politicians
 'most of the time' / 'most of the electorate' / 'most politicians'

Given that (135b) and (135c) are equivalent to their counterparts with the definite article (see (133b,c) above), I infer that here the article does not play any role related to definiteness or indefiniteness, so it can be taken as a spurious article required by the presence of a noun but with no semantic effect (this article is semantically vacuous). For further discussion, see Chapter 3, §3.2.2.3. In contrast, the presence of the indefinite article *una* or the combination of the definite article *la* with the adjective *altra* ('other') or the ordinal *primera* ('first') in (135a) reflects that *meitat* is not working as a quantifier but is used referentially to refer to an entity, as was the case in examples in (130) above.

1.6 Agreement

This section is devoted to the behaviour of partitives with respect to gender and number agreement, both within the nominal domain—see §1.6.1—and externally, between the nominal and another constituent in the sentence (a verb, an adjective or participle)—see §1.6.2. The lack of number agreement within the nominal gives rise to cases in which the quantifier is singular and the embedded DP is plural. Interestingly, when such a number mismatch takes place, the nominal shows the possibility of agreeing with an external element both in singular and also in plural if certain conditions are met. This double external agreement is not restricted to partitives but takes place with the so-called pseudopartitives as well, given that this type of quantitative nominal also shows no internal number agreement.

1.6.1 Internal agreement

As has commonly been observed in the literature, partitives display gender agreement but no number agreement between the quantifier and the DP. This contrasts with quantitatives, which show both gender and number agreement between the quantifier and the NP. In both types of nominals, agreement is obviously only possible if the quantifier allows inflection for the relevant feature(s) or, in the case it looks invariable, it does not require the presence of a preposition *de* in quantitatives (as is the case of *cap* ‘no(ne)’, which is inflected for singular with zero suffix but which has no gender inflection). When the quantifier is a quantitative expression containing a noun, such as *part* ‘part’, *meitat* ‘half’, *mund* ‘pile, lot’ or *mar* ‘sea’, then agreement with the embedded noun will not take place and a preposition appears in quantitatives yielding the so-called pseudopartitives. All this is illustrated in (136) for partitives and (137) for quantitatives:

- (136) a. *un dels meus amics* partitives
 one_{m.sg} of-the_{m.pl} my_{m.pl} friends_{m.pl}
 ‘one of my friends’
- b. *cap de les solucions*
 none_{sg} of the_{f.pl} solutions_{f.pl}
 ‘none of the solutions’
- c. **un del meu amic*
 one_{m.sg} of-the_{m.sg} my_{m.sg} friend_{m.sg}
- d. **cap de la solució*
 none_{sg} of the_{f.sg} solution_{f.sg}
- e. *dues de les novel·les*
 two_{f.pl} of the_{f.pl} novels_{f.pl}
 ‘two of the novels’
- f. **dues dels llibres*
 two_{f.pl} of-the_{m.pl} books_{m.pl}
- g. *part dels obrers*
 part_{f.sg} of-the_{m.pl} workers_{m.pl}
 ‘part of the workforce’
- h. *la meitat del pastís*
 the_{f.sg} half_{f.sg} of-the_{m.sg} cake_{m.sg}

- (137) a. *un meus amics quantitatives
 one_{m.sg} my_{m.pl} friends_{m.pl}
- b. *cap solucions
 no_{sg} solutions_{f.pl}
- c. un meu amic
 one_{m.sg} my_{m.sg} friend_{m.sg}
 ‘a friend of mine’
- d. cap solució
 no_{sg} solution_{f.sg}
 ‘no solution’
- e. dues novel·les
 two_{f.pl} novels_{f.pl}
 ‘two novels’
- f. *dues llibres
 two_{f.pl} books_{m.pl}
- g. un munt d’obers
 a_{m.sg} lot_{m.sg} of-workers_{m.pl}
 ‘lots of workers’
- h. la mar de problemes
 the_{f.sg} sea_{f.sg} of problems_{m.pl}
 ‘lots of problems’

Thus, both partitives and quantitatives require gender agreement as indicated by the ungrammatical examples in (136f) and (137f) except when the quantifier cannot agree for the reasons indicated above, as illustrated in (136g,h) and (137g,h). Number agreement is required in quantitatives, as shown by the contrast between the ungrammatical (137a,b) and the well-formed (137c,d), but it is not required in partitives, as the grammaticality of examples in (136a,b) indicates.

Notice that in the case of partitives it is not just a question of lack of number agreement. As the ungrammaticality of the example in (138) shows (see also (136c,d) above), set partitives also have the requirement for the embedded DP to be plural:

- (138) *dues de la novel·la
 two_{pl} of the_{sg} novel_{sg}

How can all these facts related to agreement be accounted for? I will assume that the need for the embedded DP in set partitives to be plural as well as the lack of number agreement and the need for gender agreement derive from the semantics of partitives, as suggested by Brucart (1997: 172): because of proper partitivity, the set denoted by the embedded DP must be larger than the subset denoted by the quantifier, which means that the DP must refer to a set of at least two elements (so the DP must be plural). If the set contains two elements, then the subset can contain but one single element, and that is when the number mismatch obtains (as actually happens whenever the subset refers to just one element, no matter how large the set is). So in general, given that the quantifier extracts a subset of a set, Q cannot agree in number with the DP (the fact that both Q and the DP are plural in (136e) is just a coincidence), but we do expect it to agree in gender given that the Q quantifies over elements of the set denoted by the DP. In quantitatives, where no subsets but just amounts are denoted, agreement is required in both gender and number, as expected in a nominal.

I will claim that the behaviour with respect to agreement both in partitives and quantitatives can be stated in selectional terms: so far we have seen that quantifiers that select a DP form partitives whereas quantifiers that select an NP form quantitatives. To account for the agreement phenomena, it can be further stated that if an NP is selected, both gender and number agreement with Q is obligatory (provided the Q admits gender and number inflection); in contrast, if a DP is selected, we must distinguish between set partitives and entity partitives. In the case of set partitives, gender agreement is required but no number agreement: in terms of selection, I claim that Q selects a DP containing a countable noun which must be plural—recall the examples in (136a–d) and (138). In the case of entity partitives, there is neither gender nor number agreement given that the quantifier is a fraction or a quantitative expression that denotes a part of a whole, usually of a nominal type. In this kind of partitive the only requirement is that Q selects a DP, since this can contain a mass noun as in *part del vi* ‘part of the wine’, a collective noun as in *la meitat del públic* ‘half of the audience’, a countable noun in the singular as in (136h) or a countable noun in the plural as in (136g). Recall that agreement does not take place if the quantifier is a nominal expression.

An alternative view is that defended in the proposals that claim an empty noun following the quantifier in (set) partitives:⁸⁷ according to them, the quantifier agrees in gender and number with a N in both partitives and quantitatives and the ‘*of PP*’ is considered some

⁸⁷ See Zamparelli (1998), Kester and Sleeman (2002), Cardinaletti and Giusti (2006), among others.

1.6.2 External agreement

Let us now turn to the external agreement patterns in partitives in comparison to quantitatives. Our conclusion will be that the quantifier determines the number of the whole nominal in both types of nominals, and, therefore, any external constituent will agree with the partitive or the quantitative in the same features the quantifier has. So, in principle, if the quantifier is singular, we expect the whole nominal to be singular no matter whether it is partitive or quantitative; hence, the agreement with an external constituent will be in the singular. This is illustrated in (140):

- (140) a. Un dels estudiants {ha / *han} arribat tard. partitive
 one_{sg} of-the_{pl} students_{pl} has / have_{3pl} come late
 b. Un estudiant {ha / *han} arribat tard. quantitative
 one_{sg} student_{sg} has / have_{3pl} come late

However, in some occasions the nominal can agree in the plural despite the quantifier being singular. As observed by Brucart (1997: 172), external plural agreement is possible if two conditions are met: (i) if the singular quantifier is a collective noun such as *grup* ‘group’, *multitud* ‘lit. crowd’, *majoria* ‘majority’, etc. and (ii) if it gets a distributive reading. Despite being formally singular, these nouns denote a plurality of elements and therefore they are semantically plural. If they have a group reading, they are taken as a whole, so they cannot agree in the plural; but under a distributive reading, they refer to a collection of individuals, and that allows them to agree with the verb in the plural (remember that under the distributive reading there are as many events as individuals). Notice that agreement in the singular is available as well under any meaning because these quantifiers are formally singular.

1.6.2.1 ‘Ad sensum’ agreement

As suggested by Brucart, whom I follow here,⁸⁸ this plural agreement between a nominal containing a singular collective quantifier and the verb or any other external constituent is a case of agreement ‘ad sensum’. This implies that the structure of the nominal is the same no

⁸⁸ Though see later in this section for a slight modification on this account.

matter whether it agrees in the singular or in the plural as the possibility of plural agreement is triggered by semantic reasons, not syntactic ones.⁸⁹

Indeed, the examples in (141) show that in a context where only a group reading is possible, plural agreement does not obtain and singular agreement is the only available.⁹⁰

- (141) a. Cada parell de versos forma una estrofa.
 each pair_{sg} of lines_{pl} constitute_{3sg} a verse
 b. ?*Cada parell de versos formen una estrofa.
 each pair_{sg} of lines_{pl} constitute_{3pl} a verse

In contrast, in (142)⁹¹ and (143) two possibilities of agreement are available: agreement in the singular in (142a) and (143a), where the group reading is the preferred interpretation although a distributive reading is possible as well, and agreement in the plural in (142b) and (143b), where the only reading available is the distributive one. That is to say, in (142a) the interpretation can be either that the contestants in group, all together, asked to stay in the game (only one event of asking) or that they asked one by one (as many events of asking as contestants), whereas in (142b) only the latter interpretation is possible. A similar contrast obtains in (143): (143a) can be interpreted as (i) the workers have made a collective decision (one event = group reading) or (ii) the workers have decided each one on his own so have

⁸⁹ However, see recent attempts to account for this kind of agreement ‘mismatch’ in syntactic terms by distinguishing between two types of syntactic features: *index features* (which constrain the noun’s referential index and are relevant to pronoun-binding and subject-predicate agreement) and *concord features* (which are more closely related to the noun’s morphology and are relevant to the agreement internal to the nominal). This has been suggested by Danon (2009) for Hebrew indefinite nominals, based on a proposal by Wechsler and Zlatić (2000, 2003) in the HPSG framework.

Danon adapts Wechsler and Zlatić’s analysis of two sets of features and the possibility that they have different values to the Minimalist framework by allowing complex features and considering Agree as a feature sharing operation (as suggested by Frampton and Gutmann 2000, 2006, and Pesetsky and Torrego 2007; see also Danon 2010). Danon (2009) claims that Q and N have both sets of features, and mismatches with respect to verb agreement are obtained when Q enters the derivation with unvalued index features and gets them valued by agreement with the N index features (in our case, plural), which may not match Q’s concord features (in our case, singular). Despite this proposal looking very appealing, it is not clear why the same Q entering the same kind of nominal should have the double possibility of valued and unvalued index features nor what regulates this option, which is not always or equally available, nor how the different semantics that is sometimes associated with different agreement patterns is accounted for. Moreover, attributing index features to Qs seems unjustified (especially if, according to Danon 2009, Q can enter the derivation with “lexically specified INDEX features”), given that this type of feature is in principle connected to referential properties and to the possibility of having a referential index, usually restricted to nouns and pronouns. For all these reasons, I do not explore this type of analysis in this thesis.

⁹⁰ (141) is a Catalan translation of Brucart’s (1997: 172) Spanish examples (26a,b).

⁹¹ These examples are a Catalan translation of Brucart’s (1997: 172) Spanish examples (27c,d).

(142) a. Un grup de concursants va demanar continuar en el joc. quantitatives
 a_{sg} group_{sg} of-contestants_{pl} asked_{3sg} to-continue in the game
 b. Un grup de concursants van demanar continuar en el joc.
 a_{sg} group_{sg} of-contestants_{pl} asked_{3pl} to-continue in the game

(143) a. La majoria dels treballadors va decidir fer un dia de vaga. partitives
 the_{sg} majority_{sg} of-the workers_{pl} decided_{3sg} to-do one day of strike
 b. La majoria dels treballadors van decidir fer un dia de vaga.
 the_{sg} majority_{sg} of-the workers_{pl} decided_{3pl} to-do one day of strike

(144) a. Els alumnes es van distribuir en dos grups: un dels grups va anar al pati mentre l'altre grup es va quedar a l'aula.
'Students got into two groups: one of the groups went to the playground whilst the other group stayed in the classroom.'

b. La majoria socialista va votar-hi en contra.
'The socialist majority voted against.'

⁹² Brucart provides the following examples, which show that the plural agreement only obtains when the collective noun is interpreted as a quantifier—see (ia), where *votaron* is the form for 3rd person plural:

(i) a. Un grupo de senadores socialistas votaron en contra del proyecto.
‘A group of socialist senators voted against the project.’
b. *El grupo de senadores socialistas votaron en contra del proyecto.
‘The group of socialist senators voted against the project.’

In (ia) *grupo* is interpreted as a quantifier, but that is not the case in (ib).

referential. In (144b), it is the presence of the adjective *socialista* that forces the referential interpretation of *majoria*.⁹³

Going back to the quantifier usage of collective nouns, Brucart (1997: 172) notices that the possibility of an ‘ad sensum’ agreement depends on the presence of a plural embedded N, as shown in (145).⁹⁴

- (145) a. La majoria dels estudiants pensen aprovar. partitives
 the_{sg} majority_{sg} of-the_{pl} students_{pl} think_{3pl} to-pass
 ‘The majority of the students think they will pass.’
 b. *La major part de la gent miren la televisió al vespre.
 the_{sg} bigger_{sg} part_{sg} of the_{sg} people_{sg} watch_{3pl} the television to-the evening
 ‘Most people watch television in the evening.’

A plural agreement is only possible in (145a) as the partitive nominal contains a plural DP *els estudiants*; the singular DP *la gent* in the partitive in (145b) prevents its agreeing in the plural with the verb.⁹⁵ Observe that singular agreement is possible in both cases:

- (146) a. La majoria dels estudiants pensa aprovar. partitives
 the_{sg} majority_{sg} of-the_{pl} students_{pl} thinks to-pass
 ‘The majority of the students think they will pass.’
 b. La major part de la gent mira la televisió al vespre.
 the_{sg} bigger_{sg} part_{sg} of the_{sg} people_{sg} watches the television to-the evening
 ‘Most people watch television in the evening.’

⁹³ In this case, it is not interpreted as a partitive quantifier, as indicated by the ungrammaticality of (ia). As expected, plural agreement is only possible under the quantifier interpretation: see (ib). (Examples are from Brucart 1997: note 8.)

(i) a. *la mayoría socialista de los senadores
 ‘the socialist majority of the senators’
 b. La mayoría socialista {votó / *votaron} en contra.
 the majority socialist voted_{3sg} voted_{3pl} in against
 ‘The socialist majority voted against (it).’

⁹⁴ These examples are a Catalan translation of Brucart’s (1997: 172) Spanish examples (28a,b).

⁹⁵ The same would apply to other collective nouns such as *població* ‘population’, *canalla* ‘kids’, *quitxalla* ‘kids’, *mainada* ‘kids’, *jovent* ‘young people’. Note that in Catalan all these nouns only admit singular verb agreement despite denoting a plurality or group of individuals:

(i) a. La {gent / població / canalla / quitxalla / mainada} {mira / *miren} la televisió al vespre.
 the people population kids kids kids watches watch_{3pl} the television to-the evening
 ‘{People / The population / Kids} watch TV in the evenings.’
 b. El jovent {mira / *miren} la televisió al vespre.
 the young-people watches watch_{3pl} the television to-the evening
 ‘Young people watch TV in the evening.’

Why should the ‘ad sensum’ agreement depend on the number of the embedded N if it is the quantifier that triggers the agreement because it is a collective noun and has a distributive meaning? The following data show that in the so-called ‘ad sensum’ agreement not only plural agreement is triggered despite the quantifier having singular number but curiously also gender agreement in the features that the embedded N has (and not in the features of the quantificational noun):

(147) a. Un grup de noies han estat seleccionades.

a_{m.sg} group_{m.sg} of girls_{f.pl} have_{3pl} been selected_{f.pl}

‘A group of (=several) girls have been selected.’

b. La majoria dels participants han quedat eliminats el primer dia.

the_{f.sg} majority_{f.sg} of-the_{m.pl} participants_{m.pl} have_{3pl} been eliminated_{m.pl} the first day

‘Most of the participants were eliminated on the first day.’

In (147) the participle is inflected in the same number and gender features as the embedded noun, which are different from the number and gender features of the quantificational noun: so, in (147a) *seleccionades* is feminine and plural like *noies* (cf. *grup*, which is masculine and singular) and in (147b) *eliminats* is masculine and plural like *participants* (cf. *majoria*, which is feminine and singular).

From this I infer that the ‘ad sensum’ agreement does not take place with the quantifier but with the whole nominal, which semantically refers to a plurality of individuals under the distributive reading: the subject *un grup de noies* in (147a) refers to several *noies* ‘girls’ and the subject *la majoria dels participants* in (147b) refers to several *participants* ‘participants’. Thus, I take Brucart’s account as basically correct though with the modification that the ‘ad sensum’ agreement involves the whole nominal, not just the quantifier. Now his observation that the embedded noun has to be plural follows naturally: if the embedded noun is singular (it is a collective noun such as *gent* ‘people’), no distributive reading is possible⁹⁶ and no ‘ad sensum’ agreement becomes available.

⁹⁶ Collective nouns only admit a collective reading, as shown by the ungrammaticality yielded in (i) by *cadascun*, which forces a distributive reading:

(i) La canalla va cantar una cançó (*cadascun).
the kids sang a song each-one

Interestingly, even nominals containing quantificational expressions such as *un munt*, *una pila*, *una colla*, *una barbaritat*, (*una*) *infinitat*, etc.—which are lexicalised expressions with a meaning equivalent to ‘much’ or ‘many’ and are equivalent to *a lot* or *lots* in English—allow two possibilities of agreement:⁹⁷

- (148) a. Avui {ha / han} marxat un munt de turistes. quantitatives
 today has / have_{3pl} left a_{sg} lot_{sg} of tourists_{pl}
 ‘Lots of tourists left today.’
- b. Una pila d’amics {vindrà / vindran} a la festa.
 a pile of-friends come_{fut.3sg} / come_{fut.3pl} to the party
 ‘Lots of friends will come to the party.’ (Martí-Girbau 2008: §5.1.4)
- c. Aquest examen, {l’ha / l’han} suspès una barbaritat d’alumnes.
 this exam it-has / it-have_{3pl} failed a_{sg} barbarity_{sg} of students_{pl}
 ‘This exam, an awful lot of students have failed it.’
- d. {M’ha / M’han} arribat una infinitat de queixes.
 me-has / me-have_{3pl} arrived an_{sg} infinity_{sg} of complaints_{pl}
 ‘I have received a great many complaints.’

Probably due to the degree of lexicalisation exhibited by these quantificational expressions containing *mund*, *pila*, etc., the plural agreement is in general the preferred one, and it also seems that the nominal tends to be interpreted distributively, though not necessarily. In the case that the measure noun can function as a bare Q, with no determiner preceding it, the

⁹⁷ By lexicalised expressions I mean that the noun they contain cannot be inflected in the plural nor be quantified, as illustrated in (ia,b): the noun always appears in the singular and preceded by an indefinite article that can be considered as a default determiner (as some authors have claimed—see Vos 1999). Moreover, contrary to ordinary nouns, some of them can appear with no determiner: for example, *infinitat*, as shown in (ic). Finally, they do not allow any modification apart from the adjective *bo* ‘good’ with the intensifier meaning (‘large’) in the case of *mund*, *pila* and *colla*—see (id):

- (i) a. *Avui han marxat dos munts de turistes.
 today have left two lots of tourists
 b. *Unes piles d’amics vindran a la festa.
 a_{pl} piles of-friends come_{fut.3pl} to the party
 c. S’han rebut infinitat de queixes.
 ES-have received infinity of complaints
 ‘A great many complaints were received.’
 d. Tinc una bona pila de problemes.
 have_{1sg} a good pile of problems
 ‘I have a good many problems.’

plural agreement then becomes obligatory: {**M'ha / M'han*} *arribat infinitat de queixes* (example like (148d) above but with no indefinite article before *infinitat*).⁹⁸

Also in this case the plural agreement with an external element that inflects for gender shows the gender features of the embedded noun:

- (149) a. Aquest any una pila de conductors han estat multats per excés de velocitat.
 this year a_{f.sg} pile_{f.sg} of drivers_{m.pl} have_{3pl} been fined_{m.pl} for excess of speed
 ‘Lots of drivers have been fined for speeding this year.’

⁹⁸ However, see Kupferman (1999: 44), who claims for French that nominals containing quantificational expressions with nouns such as *multitude*, *foule*, *tas*, *infinité*, etc. (*une multitude de ressources* ‘numerous resources’, *foule d’ennuis* ‘a lot of inconvenience’, *tas de soucis* ‘numerous troubles’, etc.) only allow plural agreement (singular agreement would imply according to him a referential interpretation of the noun). He only provides two examples, the former taken from Gaston Gross (see Kupferman 1999: 44, fn. 13):

- (i) a. Une montagne de scrupules {l’ont / *l’a} empêché d’agir
 a mountain of scrupules him-have/ him-has prevented of-act
 ‘A pile of scrupules have / has prevented him from acting.’
 b. Une foule d’ennuis {l’ont / *l’a} assailli.
 a crowd of-inconvenience_{pl} him-have / him-has assailed
 ‘(S)he was assailed by a lot of inconvenience.’ (Kupferman 1999: 48)

But it seems that these judgements are perhaps too strong, given the following examples from *Le Petit Robert. Dictionnaire de la langue française*, with agreement in the singular:

- (ii) a. La multitude des lois fournit souvent des excuses aux vices.
 the crowd of-the laws provides often excuses to-the vice
 ‘A lot of the laws often provide some excuse for vice.’ (Petit Robert, multitude)
 b. Une foule de clients, de visiteurs est venue aujourd’hui.
 a crowd of clients of visitors is come_{f.sg} today
 ‘Numerous clients, visitors came today.’ (Petit Robert, foule)

Interestingly, in the entry of *foule*, the example (iib) is followed by the explanation: “(totalité considérée collectivement : verbe au sing.)” [‘(whole considered collectively : verb in the sing.)’]. Next an example with plural agreement is offered, also with a comment: “Une foule de gens pensent que c’est faux (pluralité considérée individuellement : verbe au plur.)” [lit. A crowd of people think that this is false ‘Lots of people think this is false’ ‘(plurality considered individually : verb in the plur.)’].

Similarly to Kupferman for French, Gutiérrez (2008: Ch. 7, §6.2) claims for Spanish that this type of lexicalised quantifier expression only allows plural agreement with the verb: i.e. *un montón*, *la mar*, *la tira*, *un sinfín*, (*gran*) *cantidad*, *gran número*, *infinidad*, *mogollón* (all with the meaning ‘loads, a great amount/number’). But this is only true of bare quantifiers such as *cantidad*, *infinidad* and *mogollón* in her list (or another one would be *multitud*), as described in Martínez (1999: §42.10.13). Observe (iii) (= his example (194)):

- (iii) a. Infinidad de problemas me {agobian / *agobia}.
 infinity of problems me overwhelm_{3pl} / overwhelms
 ‘A great many problems are overwhelming me.’
 b. Multitud de papeles {rodaban / *rodaba} por los suelos.
 crowd of papers rolled_{3pl} / rolled_{1sg} by the floors
 ‘Numerous papers were rolling across the floor.’
 c. Cantidad de personas {acudieron / *acudió} curiosas.
 quantity of people came_{3pl} / came_{1sg} curious
 ‘A large number of people came out of curiosity.’

In fact, Spanish works just like Catalan as far as I can see. The only difference seems to be that bare quantifiers such as those in (iii) are rare in Catalan in comparison with Spanish—nouns such as *infinitat* or *multitud* clearly prefer to be preceded by an indefinite article as in (148d)—or are just impossible in Catalan as is the case of *quantitat*, which always requires an indefinite article in this language.

- b. Una infinitat de viatgers han estat afectats pels continus retards.
 an_{f.sg} infinity_{f.sg} of commuters_{m.pl} have_{3pl} been affected_{m.pl} by-the continual delays
 ‘A great many commuters have been affected by the continual delays.’
- c. Infinitat de vols han estat cancel·lats a causa del tornado.
 infinity_{f.sg} of flights_{m.pl} have_{3pl} been cancelled_{m.pl} because of-the tornado
 ‘A great many flights have been cancelled because of the tornado.’

So like before, I conclude that the ‘ad sensum’ agreement involves the whole nominal, not just the quantifier.

Catalan cannot provide data to see whether these quantificational expressions behave similarly in a partitive with respect to agreement as they are not licensed in this type of construction (they are always [–Spec]), but other languages show that partitives pattern with quantitatives in this case as well. For example, in English the expression *an infinity* behaves the same way in quantitatives and in partitives. Observe (150):

- (150) a. There is not an infinity of chances of loss against the chance of winning.
 (British National Corpus: [AMT](#) 417)
- b. There are an infinity of ways to do it.
- c. There {is / are} an infinity of them.

As shown in (150c), partitives containing the quantificational expression *an infinity* allow singular as well as plural verbal agreement as is the case with non-partitive nominals—see (150a,b).

To sum up, in both partitives and pseudopartitives the quantifier is always the element that triggers verb agreement, no matter whether it is a single element like a cardinal or a vague quantifier or it is a quantificational expression containing a measure noun. In the latter case, if the measure noun is a singular collective noun (i.e. *grup* ‘group’, *parell* ‘pair’, etc.) and it has a distributive interpretation, then the nominal can agree with the verb in the plural: an ‘ad sensum’ agreement is available. In certain cases the ‘ad sensum’ agreement is the preferred one: when the quantifier is a fixed expression like *un munt*, *una pila*, *una barbaritat*, (*una*) *infinitat* (with the meaning equivalent to the English *a lot* or *loads*), probably due to the degree of lexicalisation of the quantificational expression.

1.6.2.2 Syntactic agreement

The view just presented contrasts with other proposals in the literature according to which the different agreement patterns correspond to different syntactic structures under the assumption that the verb agrees with the head of the nominal projection.⁹⁹ These analyses are based on data basically involving collective nouns (*pila* ‘pile’, *munt* ‘pile’, *manat* ‘bunch’, *grup* ‘group’, etc.) and also container nouns (*tassa* ‘cup’, *ampolla* ‘bottle’, *capsa* ‘box’, etc.). Both kinds of nouns can be used as measures indicating a quantity or as ordinary referential nouns (as denoting objects):

- (151) a. Aquest estiu he llegit una *pila* de llibres. measure
this summer have_{1sg} read a pile of books
'This summer I read lots of books.'
- b. Hi ha dues *piles* de llibres damunt la taula. object
there has two piles of books on the table
'There are two piles of books on the table.'
- (152) a. He pres una *tassa* de cafè. measure
have_{1sg} had a cup of coffee
'I had a cup of coffee.'
- b. He trencat una *tassa* de cafè. object
have_{1sg} broken a cup of coffee
'I broke a coffee cup.'

Applying different criteria such as verb agreement and selectional restrictions among others, the general conclusion is that when these nouns are used as quantifiers, they are somehow defective (that would explain the behaviour of *munt*, *pila*, *barbaritat*, *infinitat* mentioned above: the preference for plural agreement), so the head of the construction is the second noun —*llibres* or *cafè* in the examples. In contrast, when the collective and container nouns are referential, they are not defective at all but behave like ordinary nouns, so they are the head of the construction and the second noun is treated as a N complement.

⁹⁹ This has been a common line of thought since the early years of GG: see Akmajian and Lehrer (1976), Selkirk (1977).

(151b) illustrates that *pila* behaves like a regular noun when it refers to an object: it can be used in the plural and be quantified. As noticed above, that is not the case when it is used as a measure noun (see fn. 97). With respect to modification, (152a) shows that *tassa* is transparent to the semantic selection of the verb as *prendre* selects a drink in this case: the coffee that is contained in the cup, not the cup itself. In contrast, in (152b) the verb selects an object that can be broken: *tassa*, which here refers to a container.

Moreover, it has been claimed that certain adjectives can modify the embedded noun across the measure noun: see (153a), where *tasteless* refers to coffee. That is not possible under the object reading: see (153b), where *cup* refers to the container and therefore cannot be modified by *tasteless*.

- (153) a. I drank a tasteless cup of coffee.
 b. *I broke a tasteless cup of coffee.

As for verb agreement, based on examples like (154), it is assumed that in the measure interpretation the verb agrees with the second noun. This is a natural statement given that the second noun is considered to be the head of the nominal:

- (154) a. The herd of large African *elephants* *were* stampeding toward us. measure
 b. The *herd* of large African elephants *was* larger than I thought. object

(Akmajian and Lehrer 1976: 405, ex. 23)

To sum up, since Akmajian and Lehrer (1976) and Selkirk (1977), it has been quite commonly assumed that in pseudopartitives—where the collective and container noun are interpreted as measures—the head is the second noun, whereas under the object reading of these nouns, the first noun is taken as the head of the nominal and the second noun is treated as a complement. In line with this view, some authors have claimed in the last decade that measure nouns are actually functional (or semi-functional) categories in contrast with their (fully) lexical counterpart (the one that has the object interpretation): see Vos (1999), Löbel (2001), Stavrou (2003), Alexiadou, Haegeman and Stavrou (2003), Stickney (2004), Gutiérrez (2008).¹⁰⁰

¹⁰⁰ Vos (1999) and Gutiérrez (2008) consider measure nouns as functional nouns, but the other authors mentioned use the term *semi-functional* or *semi-lexical* to capture the fact that these nouns maintain some nominal properties but are not a full NP: so they are partially lexical and partially functional. Stavrou (2003) and Alexiadou, Haegeman and Stavrou (2003) suggest that these elements have their own functional projection, a Measure/Classifier phrase, which is selected by a Q. Stickney (2004) proposes a very similar

However, this syntactic view has some problems: the assumption that in pseudopartitives the verb agrees with the second noun, considered as the head of the nominal, is clearly not correct. Akmajian and Lehrer (1976: 408) already noticed the existence of examples like (155), which in their words “present an interesting problem” given that in these examples the verb seems to agree with the first noun instead of the second:

(155) Two bottles of wine {*is / are} {fermenting / spilling}.

These authors tentatively assume that mass nouns are ‘unspecified’ for number and that in this case the plural quantifier phrase *two bottles* assigns to the unspecified head *wine* the feature plural. In this way the hypothesis that the verb agreement is governed by the head of the subject is not invalidated. However, this stipulative explanation would not work for examples where the second noun was plural such as (156):

(156) One box of chocolates was {shared / eaten} by the three of us.

In (156), the verb agrees in the singular with the first noun despite the second noun being clearly specified for number: it has plural inflection.

structure, including a Measure phrase selected by Q. (See Stickney (2004) for more details of her proposal and a detailed revision of previous ones.) Gutiérrez (2008) proposes a structure where these nouns are functional nouns, which generate as an NP that is selected by Q (mediated by a NumP) and N moves to Q to form a complex quantifier:

(i) [_{SCu} [_Q dos] [_{SNum} Num [_{SN} botellas [_{SK} de [_{SNum} leche]]]]] ‘two bottles of milk’

where *botellas* moves to Num and then to *dos* to form the quantificational expression *dos botellas*.

Gutiérrez makes a distinction with lexicalised expressions, which she generates directly as quantifiers:

(ii) [_{SCu} [_Q mogollón] [_{SK} de [_{SNum} Num [_{SN} niños]]]] ‘lots of kids’

The noun *mogollón* is generated as Q, and here there is only one NumP, the one corresponding to the lower noun *niños*, which according to Gutiérrez would explain the plural verbal agreement: the verb agrees in the plural because *niños* is plural. This account suits this example in which *mogollón* is not preceded by an indefinite article and plural agreement is the only available (recall footnote 98), but one wonders how this structure would accommodate other more complex lexicalised expressions (containing determiners and modifiers such as *un mogollón* or *(una) gran cantidad*) and how the possibility of singular agreement would be derived in them.

With the exception of Vos (1999), none of the other authors mentioned deals with the problem presented by examples such as (155), and in general they all stick to the idea that both verb agreement and verb s-selection determine the head in pseudopartitives, which according to them would be the second noun. Vos (1999) provides a solution to cover all the data, which consists of distinguishing between the semantic head of the nominal—which determines s-selection by the verb and adjectival modification—and the syntactic head of the nominal—which determines verb agreement. Whereas in pseudopartitives¹⁰¹ the semantic head would always be the second noun, the syntactic head could be the first or the second, and that would explain the different agreement patterns. According to Vos, agreement is determined by the highest functional node specified for number, so when the first noun has number, then the verb agrees with it (this would be the case in 155 and 156). However, when the first noun has no number, then the verb agrees in number and gender with the second noun (this would be the case in 154a). So Vos has to assume that nouns like *barbaritat*, *infinitat*, *munt*, *mar*, *multitud* in expressions like *una barbaritat*, *una infinitat*, *un munt*, *la mar* and *una multitud* (meaning ‘a lot’)¹⁰² have no number and although they have gender as is shown by the agreement with the determiner (*munt* is masculine whereas the other nouns are all feminine), it is a weak feature that cannot trigger external agreement.

Although the distinction between the semantic head and the syntactic head has been very appealing and captures the traditional distinction between the lexical head and the functional head of a constituent since the 80s (when functional categories were added to phrase structure), there are cases that would be difficult to account for under that view, such as those commented above in (142) (repeated here for convenience):

- (142) a. Un grup de concursants va demanar continuar en el joc.
 a_{sg} group_{sg} of-contestants_{pl} asked_{3sg} to-continue in the game
 b. Un grup de concursants van demanar continuar en el joc.
 a_{sg} group_{sg} of-contestants_{pl} asked_{3pl} to-continue in the game

Remember that (142a), with singular verb agreement, has two interpretations (group reading and distributive reading) and that (142b), with plural verb agreement, is unambiguous (it only has a distributive reading). These would be cases of *Direct Partitive*

¹⁰¹ Direct Partitive Construction (DPC) in Vos terminology.

¹⁰² Vos’ claims concerning gender are based on Spanish data, but the same is true for Catalan and—I presume, though needs confirmation—any other Romance languages.

Construction (DPC) in Vos' terminology since *group* is interpreted as a quantifier, denoting an amount, and in both examples the semantic head would be the second noun *concurants*. However, given the different verbal agreement, it must be assumed that *grup* is the syntactic head in (142a) (in Vos' hypothesis, this is because *grup* has number and therefore determines verb agreement in the singular), whereas in (142b) the syntactic noun would be *concurants* given that the verb agrees in the plural. For the plural agreement to be possible, it should be assumed that in (142b) *group* has no number, which seems rather unplausible if it had number in (142a) (this is especially contradictory given that (142a) and (142b) share the distributive interpretation).

Vos might claim that (142a) is actually a case of what she calls *Direct Content Construction* (DCC), where the syntactic and semantic head is the first noun (*grup* in the example), and that (142b) would be the only case of DPC, with *concurants* as the syntactic and semantic head (*grup* would be treated as having no number). However, this does not seem to be correct, as a group interpretation does not imply that the collective noun *grup* is used as a referential noun because this reading is possible in ordinary quantifiers such as *many*. And even if we considered that to be correct, the availability of the distributive reading in (142a) would still remain unexplained.

Turning now to partitives, Selkirk (1977: 311) provides examples which show that partitives behave just like pseudopartitives in allowing an object reading or a quantifier reading of the first noun when this is a collective or a container noun, which has consequences in the agreement and the s-selection behaviour of the whole nominal:

- (157) a. A bunch of those flowers {was / were} thrown out on the back lawn.
 b. She {broke / drank} a bottle of that good wine.

As observed for pseudopartitives, the plural verbal agreement corresponds to the interpretation of *bunch* as a quantifier, whereas the singular verbal agreement corresponds to the interpretation of *bunch* as an object in (157a).¹⁰³ In the case of *bottle*, the use of *broke*

¹⁰³ However, notice the existence of examples like (ia) next to (ib) in English:

- (i) a. There was a bunch of kids waiting and zillions of reporters. (OALD, zillion)
 b. A bunch of kids were hanging around outside. (OALD, kid)

Though in (ia) the verb agrees in the singular, *bunch* is not interpreted referentially but as a measure like in (ib), so *bunch* seems to pattern with nouns like *group* (recall example (142) above).

indicates that it is interpreted as an object (a container) whilst the use of *drank* corresponds to its interpretation as a measure.

As with pseudopartitives, she considers that the head of the partitive construction is the second noun, based on the plural agreement in (157a) and the s-selection in (157b), ignoring examples where verbal agreement is determined by the quantifier. Akmajian and Lehrer (1976) point out that under their analysis, where the second noun is considered to be the head in partitives as well, they have no way to account for the number agreement in examples like (158):

(158) One of the boys {is / *are} here.

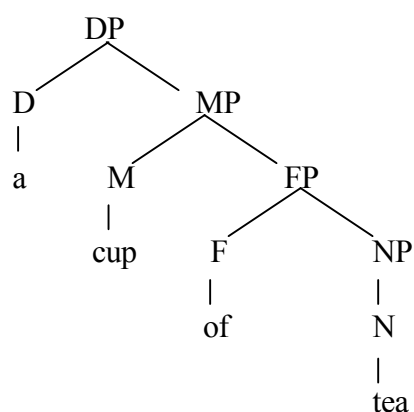
and curiously conclude that “such constructions seem to be unusual and should be looked upon as peripheral rather than paradigmatic sentences for the analysis” (Akmajian and Lehrer (1976: 408)).

Selkirk’s data and observation concerning this similarity between partitives and pseudopartitives seem to have gone unnoticed in the literature. Authors like Vos (1999) and Stickney (2004) both claim that, in contrast with pseudopartitives, in partitives the first noun is a lexical noun and the second is its complement, introduced by a true preposition. According to them, the first noun in partitives is the one s-selected and the one triggering agreement (the features of the embedded one are not visible because it is too deeply embedded under a PP).

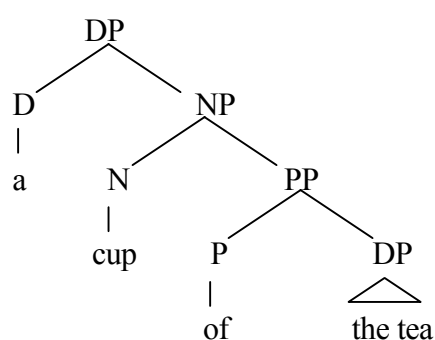
In Vos’ (1999) hypothesis, the syntactic and the semantic head in partitives is the first noun, which can be non-overt if the quantifier is a cardinal or which is overt in the case of measure nouns. In contrast, recall that for her, the semantic head in pseudopartitives is the second noun and the syntactic head could be the first or the second noun depending on whether the first noun had number or not respectively.

Stickney (2004) proposes two different structures for pseudopartitives and partitives:

(159) a. pseudopartitive



b. partitive



According to Stickney (2004), in pseudopartitives the first noun heads a functional projection MP (Measure Phrase) and *of* is not a preposition but a functional element as well. The lexical head of the nominal is the most embedded noun, in this case *tea*. This contrasts with partitives, where the first noun is lexical and *of* is a true preposition.

Both Vos and Stickney defend that whereas pseudopartitives are a macro-N-projection similar to ordinary quantitatives, in contrast partitives contain two N projections, mostly based on differences with respect to extraction and extraposition.

However, it is easy to find data that contradict and therefore invalidate Vos and Stickney's claims that attribute verbal agreement and s-selection to the first noun in partitives. The examples in (160) show that the verb can agree in the plural despite the first noun being singular and the examples in (161) illustrate that the embedded noun is visible for s-selection by the verb:¹⁰⁴

¹⁰⁴ BNC stands for British National Corpus. The other examples are taken from Internet.

- (160) a. India at that time and long afterwards was considered the “end of the world,” and **an infinity** of the strangest “travellers’ tales” and mythological fables **were** in circulation concerning it. (http://www.mountainman.com.au/apollonius_mead_06.htm)
- b. **A bunch** of the boys **were** whooping it up in the Malamute saloon.
(<http://www.poetryoutloud.org/poems/poem.html?id=174349>)
- c. **An awful lot** of the listeners **recognise** the importance of the cultural patronage.
(http://www.gramophone.co.uk/interviews_detail.asp?f=2671&id=2672)
- (161) a. After I had **read a bunch** of the comments posted here.
(<http://www.apartmentratings.com/rate/PA-Philadelphia-Park-Towne-Place-157840.html>)
- b. Dacourt **had a cup** of the same wine and suffered no ill effects. (BNC, [HH5](#) 1129)
- c. Luce was **sipping a glass** of the refreshing straw-coloured tea when Rosa returned, accompanied by the cats, and placed the crutch within easy reach. (BNC, [JY2](#) 2165)

Moreover, under Vos and Stikney’s accounts it would be difficult to explain the double possibility of agreement in partitives containing collective nouns with a distributive reading, such as *majoria*, in the examples discussed before (recall (143)).

1.6.2.3 Conclusion

My conclusion is that it is the type of quantifier or quantificational expression which determines the behaviour of the whole nominal with respect to agreement and not whether a quantifier enters a pseudopartitive construction or a partitive one, which highlights the similarities between these two kinds of nominals and the important role of the type of quantifier. If the quantifier is a cardinal, it will trigger agreement in both pseudopartitives and partitives, as illustrated in example (140) above. If the quantifier is a quantificational expression containing a container noun such as *cup*, *glass*, *bottle*, etc., again the quantifier will trigger verbal agreement in both pseudopartitives and partitives (although this cannot be illustrated in Catalan given that partitives are not possible with measure phrases, it can be easily verified in other languages: recall the example (155) above for pseudopartitives; for partitives, an example in a recipe context could be *Two cups of the corn flour were added to the mixture*), and so on for all classes of quantifiers. It must be noticed that expressions involving collective nouns, such as *a lot*, *an infinity*, etc., prefer the verb to be plural both in pseudopartitives and partitives (again this cannot be illustrated in Catalan given that these

expressions are allowed in pseudopartitives but not in partitives, but it is easily verified in other languages: recall examples (148), (149), (150) and (160)).

Under this view, as defended in this dissertation, the behaviour of partitives illustrated in (160) and (161) is the one expected given that the only difference between pseudopartitives and their partitive counterparts is the type of element quantified over: undetermined elements versus contextualised elements, projected into a NP versus a DP respectively.

To finish this section on external agreement, I would like to make a final comment on the distinction between functional (or semi-lexical) categories and lexical categories. This distinction seems to complicate the lexicon unnecessarily as the amount of functional elements would increase substantially: all collective nouns and container nouns would be listed independently as lexical categories and also as functional categories with no way of relating the ones to the others. In some cases it would be difficult to establish whether there must be a functional category for nouns like *bus* given the existence (or possibility) of examples such as *Ha arribat un autobús de turistes alemanys* ('A bus of German tourists has arrived.').¹⁰⁵ If *bus* is a functional category (despite examples like the one mentioned not being very common), should *taxi* or *train* or any noun of means of transport be functional categories as well? This seems neither very economical nor natural.

It seems to me that it would be better if this distinction were considered as a lexical property of the lexical items.¹⁰⁶ The possibility of a lexical item functioning as a quantifier might be stated in the entry of each word (as it is usually the case in dictionaries, which give two meanings for container nouns—the first referring to the container, the second referring to the amount contained in it—and also in collective nouns—the first referring to the object and the second referring to the amount), or it could even follow from a generalisation, as it is clear that the quantifier usages derive from the non-quantifier meanings: in the case of container nouns, the quantifier interpretation could be seen as a case of metonymy (*M'he pres una copa* lit. I had a glass, meaning 'I had a drink') and in the case of the collective nouns, it is just transferring the meaning of collection to a more abstract environment so that it is merely interpreted as an amount (*un munt de llibres* vs. *un munt de problemes* 'a pile of books' vs. 'lots of problems'). Interestingly, some nouns can be used as quantifiers although they do not contain the idea of amount or collection: this is the case of a noun such as *barbaritat*, which can be used as a quantifier denoting an excessive number because of the idea of 'excess'

¹⁰⁵ See Vos (1999) who discusses similar examples in Dutch, German and Spanish.

¹⁰⁶ This is the position adopted by Brucart (1997) as well: see his end note 29.

involved in all its meanings, of an ‘extreme degree’. This meaning as a quantifier is listed in dictionaries in the entry of the noun *barbaritat*, but in other cases of similar words such as *bestialitat* or *passada* it is not. However, it can be easily obtained and understood in these latter two cases based on this notion of excess or extreme degree and in parallel to the behaviour of *barbaritat*. Similarly, nouns involving the notion of ‘craziness’ such as *bestiesa* or *bogeria* can be used as quantifiers with the meaning ‘an awful lot’ (such a great amount that it is ‘crazy’). Observe the data below:

- (162) a. Els futbolistes guanyen una {bestialitat / passada / bestiesa / bogeria} de diners.
 ‘Football players earn an awful lot of money.’
 b. Al concert hi va anar una {bestialitat / passada / bestiesa / bogeria} de gent.
 ‘Loads of people went to the concert.’

1.7 Relative clauses

In this section the behaviour of partitives with respect to relative clause modification will be studied in comparison to quantitatives: it will be shown—see §1.7.1—that partitives offer two possible antecedents to relative clauses, whereas quantitatives can provide only one. The reasons for that will be discussed and the clue for the difference will again be the existence of an internal DP in partitives, not present in quantitatives. The possibilities of relativising part of the partitive by using a relative pronoun will be explored as well—see §1.7.2.

1.7.1 Modification by relative clauses: two possible antecedents

As is well known, modification by a non-restrictive relative clause triggers ambiguity in partitives: the relative can be understood as modifying the bigger set or the subset, so there are two possible antecedents. In contrast, quantitatives modified by a non-restrictive relative clause are unambiguous. Observe (163):

- (163) a. Three of the children at the party, who were playing with a balloon, started fighting.
 b. Three children at the party, who were playing with a balloon, started fighting.

The sentence in (163a), in which a partitive nominal is modified by a relative clause, is ambiguous: it can mean that (i) all the children were playing with a balloon but only three of them started fighting, or (ii) only three children in the party were playing with a balloon and they started fighting. That is to say, the antecedent of the relative clause can be either all the children in the party (the bigger set) or three of them (the subset). In contrast, the sentence in (163b), in which a quantitative nominal is modified by the relative clause, is unambiguous and has only reading (ii).

This is a common observation in the literature, which was already noticed by Selkirk (1977). She illustrated the contrast with the following data:

- (164)a. She bought him dozens of those daffodils, only two of which were faded.
 b. She bought him dozens of daffodils, only two of which were faded.

As before, example (a) with a partitive, has two possible readings: the two faded daffodils could either be among the ones she bought, or among the group designated by *those daffodils*, and not necessarily chosen by her. In example (b), with a quantitative, the interpretations are reduced to one, the former: two of the purchased daffodils were faded.

Belletti (1979) offers more data that shows further contrasts between partitives and quantitatives with respect to relative clause modification. When the relative clause is not preceded by a comma, the number of interpretations is reduced in partitives as compared with quantitatives. Observe the following examples:

- (165)a. Ho letto molti libri che mi avevi prestato.
 have_{1sg} read many books that to-me had_{2pl} lent
 'I read many books that you had lent to me.'
 b. Ho letto molti dei libri che mi avevi prestato.
 have_{1sg} read many of-the books that to-me had_{2pl} lent
 'I read many of the books that you had lent to me.'

(Belletti 1979: 1542, ex. 27)

According to Belletti, the relative clause in (165a) can be interpreted as restrictive or as non-restrictive (in the latter case, it would be preceded by the typical entonational pause), but in (165b) there is a strong tendency to interpret the relative clause as only restrictive

However, there is clearly no need to postulate two nouns to account for the ambiguity of relative clauses in partitives: assuming Kayne (1994)'s DP hypothesis, in partitives there are two determiners that can license a relative clause: the upper one—I assume that partitives are all DPs—and the lower one. That's not the case in quantitatives, which only have the upper Determiner (I assume they are DPs as well). In (169) the structure of relative clauses in Kayne's framework is represented: he assumes a raising analysis, according to which the relative clause is a complement of D—see (169a)—and the antecedent raises from inside the relative clause to Spec CP—see (169b).

(169) a. [_{DP} D° CP]

b. the [_{CP} [_{NP} picture_j] [that [_{IP} Bill saw [_e]_j]]] (Kayne 1994: 94)

Even when Kayne's (1994) DP hypothesis is not assumed, the data can be explained in terms of NPs with no need of postulating two nouns, as defended by Belletti (1979):

(170) a. [_{NP} NP CP]

b. Ho letto molti dei libri che mi avevi prestato che parlano di linguistica

'I read many of the books you had lent me that deal with linguistics.'

c. [_{NP1} [_{NP} molti [_{PP} di [_{NP2} [_{NP} i libri] [_{CP2} che mi avevi prestato]]]] [_{CP1} che parlano di linguistica]] (Belletti 1979: 1543)

(170a) illustrates Belletti's analysis of nominals modified by relative clauses, according to which the relative clause adjoins to the maximal projection of the nominal: NP (in current terms it would be DP). In (170b) there are two relative clauses, each one taking a different antecedent: the first relative clause modifies the internal nominal *i libri* and the second relative clause modifies the whole nominal *molti dei libri*. That is to say, the antecedent of the relative clause can be either the internal NP (DP in the current theory)—the one following the preposition: NP2 in (170c)—or the whole nominal construction—NP1 in (170c). This is possible in partitives thanks to the presence of the internal definite determiner but not in quantitatives, which have no internal determiner.

No matter which analysis of relative clauses is adopted, what is relevant is that the contrast between partitives and quantitatives with respect to relative clause modification

derives from the existence of an internal DP in partitives which is not present in quantitatives.

1.7.2 Relativising partitives

As expected for a referential DP, the internal DP in partitives can be relativised. However, the only relative pronouns allowed by Catalan partitives are *el qual*, *la qual*, *els quals*, *les quals* as shown in (171).

- (171)a. Les meves amigues, **de les quals** una viu a Praga, vindran totes a la festa.
 the my friends of the whom one lives in Prague come_{3pl.fut} all to the party
 ‘My friends, one of whom lives in Prague, will all come to the party.’
- b. *Les meves amigues, **de qui** una viu a Praga, vindran totes a la festa.
 the my friends of whom one lives in Prague come_{3pl.fut} all to the party
- c. Al museu hi ha quadres modernistes, **molts dels quals** són de Russiñol.
 in-the gallery there has paintings modernist many of-the which are of Russiñol
 ‘In the gallery there are modernist paintings, many of which are by Russiñol.’
- d. *Al museu hi ha quadres modernistes, **molts de què** són de Russiñol.
 in-the gallery there has paintings modernist many of what are of Russiñol

Interestingly, the same restriction applies to possessor DPs such as *d'en Pau* in *una camisa d'en Pau* (‘a shirt of Pau’s’) or N complements of the sort *de la ciutat* in *la destrucció de la ciutat* (‘the destruction of the city’), where the preposition is considered as a Case marker: they too only allow for relatives *el qual*, *la qual*, *els quals*, *les quals*—see (172).¹⁰⁸

- (172)a. Les meves amigues, **de les quals** conec els pares, vindran totes a la festa.
 the my friends of the whom know_{1sg} the parents come_{fut.3pl} all to the party
 ‘My friends, whose parents I know, will all come to the party.’

¹⁰⁸ Another similarity between the internal DP in partitives and possessor DPs or N complements is worth noticing: the relative pronoun can precede the non-relativised part of the nominal as in (171a) and (172a), or it can follow it as in (171c) and (172c), in the latter case displaying the same order of non-relativised nominals.

- b. Les meves amigues, **de qui** conec els pares, vindran totes a la festa.¹⁰⁹
 the my friends of whom know_{1sg} the parents come_{fut.3pl} all to the party
 ‘My friends, whose parents I know, will all come to the party.’
- c. Al museu hi ha quadres modernistes, els autors **dels quals** són catalans.
 in-the gallery there has paintings modernist the authors of-the which are Catalan
 ‘In the gallery there are modernist paintings, the authors of which are Catalan.’
- d. *Al museu hi ha quadres modernistes, els autors **de què** són catalans.
 in-the gallery there has paintings modernist the authors of what are Catalan

In contrast, a range of relative pronouns are allowed in DPs that are the complement of a lexical preposition: these DPs can always be relativised by *el qual*, *la qual*, *els quals*, *les quals* but also by *què* if they are [–human] or by *qui* if they are [+human], as illustrated in (173).

- (173)a. Les meves amigues, **amb les quals** vaig parlar ahir, vindran totes a la festa.
 the my friends with the whom talked_{1sg} yesterday come_{fut.3pl} all to the party
 ‘My friends, with whom I spoke yesterday, will all come to the party.’
- b. Les meves amigues, **amb qui** vaig parlar ahir, vindran totes a la festa.
 the my friends with whom talked_{1sg} yesterday come_{fut.3pl} all to the party
 ‘My friends, with whom I spoke yesterday, will all come to the party.’
- c. Al museu hi ha quadres famosos, **dels quals** tothom parla.
 in-the gallery there has paintings famous of-the which everybody talks
 ‘In the gallery there are famous paintings, about which everybody talks.’
- d. Al museu hi ha quadres famosos, **de què** tothom parla.
 in-the gallery there has paintings famous of what everybody talks
 ‘In the gallery there are famous paintings, about which everybody talks.’

Given that in Catalan the relative pronouns *qui* and *què* require a true preposition to be licensed (in object or subject position they are not allowed except for *qui* in free relatives),

¹⁰⁹ Catalan grammars do not include *de qui* among the possessive relatives, but examples like (172b) are acceptable, especially in spoken Catalan (although for some speakers they are not completely grammatical). However, in contrast with *del qual*, *de la qual*, etc., the form *de qui* cannot follow the non-relativised part of the nominal:

(i) *Les meves amigues, *els pares de qui* conec, vindran totes a la festa.

I take the ungrammaticality of the examples in (171b,d) as further evidence that in partitives there is no lexical preposition but rather a Case marker just like in front of possessor DPs and N complements (see 172). This does not mean, however, that partitives have to be analysed exactly like nominals containing a N complement, as will be demonstrated later.

Notice that in Spanish the behaviour of partitives is also parallel to possessors and N complements when relatives such as *el cual*, *la cual*, *los cuales*, *las cuales* are used, with the difference with respect to Catalan being that Spanish has a possessive relative *cuyo*, *cuya*, *cuyos*, *cuyas* ('whose') that is restricted to possessors and N complement constructions:

- (174)a. Mis amigas, una **de las cuales** vive en Praga, vendrán todas a la fiesta. [≅ 171a]
 b. Mis amigas, los padres **de las cuales** conozco, vendrán todas a la fiesta. [≅ 172a]
- (175)a. *Mis amigas, **cuya** una vive en Praga, vendrán todas a la fiesta. partitive
 b. Mis amigas, **cuyos** padres conozco, vendrán todas a la fiesta. possessive

Interestingly, in French the possessive relative *dont* is allowed in both possessives and partitives, though in the latter with some restrictions: according to Kupferman (1999: 35), *dont* can relativise partitives if they are the subject of the relative clause but not if they are the object. Observe the contrast between (176a) and (176b), respectively:

- (176)a. ces fenêtres, **dont** trois renvoyaient des reflets partitive
 those windows of-which three sent reflections
 'those windows, three of which reflected the light'
- b. *ces fenêtres, **dont** nous avions cassé trois partitive
 those windows of-which we had broken three
 'those windows, three of which we had broken'
- c. les élèves **dont** tu connais les parents possessive
 the students of-whom you know the parents
 'the students, whose parents you know'

(Kupferman 1999: 33-35, ex. 15a, 16a, 11a)

Going back to Catalan, a contrast also seems to obtain between the partitive relatives depending on their function in the relative clause: compare the relativised partitives in (171), which were the subject of the relative clause, with the following example from Solà (2008: §21.5.3), in which the partitive is the object of the relative clause and the partitive clitic *en* is required.

- (177) S'hi van presentar cinc aspirants, dels quals només en vam aprovar dos.
 to-it presented_{3pl} five candidates of-the whom only NE passed_{1pl} two
 'Five candidates applied, of whom we passed only two.'

Based on the obligatoriness of the presence of the clitic *en* in this example, Solà claims that there is an empty noun in the structure of partitives which here would be represented by this clitic. According to this author, the relative clause in (177) would have the structure in (178):

- (178) Vam aprovar [_α dos aspirants [_β dels (esmentats) aspirants]]
 'We passed two candidates of the mentioned candidates'

Solà claims that the relative *dels quals* corresponds to the β fragment, whereas the clitic *en* replaces the noun *aspirants* in α , so (177) is not a case of reduplication (where *dels quals* and *en* would correspond to the same constituent), which would not be allowed in a Catalan relative clause in the standard language.¹¹⁰

However, observe (179), which is exactly like (177) but with a different order of elements in the relative clause:

- (179) S'hi van presentar cinc aspirants, només **dos** dels quals (*en) vam aprovar.

¹¹⁰ Relatives in Catalan cannot be reduplicated with a clitic within the relative clause, as illustrated by (i):

- (i) a. Sempre parla del seu fill petit, *del qual_i* (**n_i*) està molt orgullós.
 always talks of-the his son little of-whom_i NE_i is very proud
 'He is always talking about his little son, of whom he is very proud.'
 b. He conegut el germà de la Maria, *el qual_i* (**el_i*) trobo encantador.
 have_{1sg} met the brother of the Maria the whom_i him_i find_{1sg} charming
 'I met Maria's brother, whom I find charming.'

This example shows that when the quantifier raises above the VP in the relative clause, together with the relative pronoun, the clitic *en* is no longer licensed but yields ungrammaticality instead. Notice that without the clitic the sentence is grammatical. This is what we expect if there is no empty N in a partitive and I take (179) as evidence for that. Moreover, I conclude that (179) is the only possibility for a partitive to be relativised: the quantifier must be pied piped by the relative pronoun.

How can the example in (177) be accounted for? I will claim that in (177) the clitic *en* appears because it is not really a case of a relativised partitive, based on the data below. Observe the *a* examples, which are all well-formed despite the fact that a partitive nominal is impossible with a demonstrative or a proper noun, as illustrated by the ungrammaticality of the *b* examples:¹¹¹

(180) S'hi van presentar cinc aspirants,... ('Five candidates applied,...')

- a. dels quals només vam aprovar **aquest**.
of-the whom only passed_{1pl} this
- b. *només **aquest** dels quals vam aprovar.
only this of-the whom passed_{1pl}
... 'of whom we only passed this one.'

(181) S'hi van presentar cinc aspirants,... ('Five candidates applied,...')

- a. dels quals només vam aprovar **en Joan**.
of-the whom only passed_{1pl} the Joan
- b. *només **en Joan** dels quals vam aprovar.
only the Joan of-the whom passed_{1pl}
... 'of whom we only passed Joan.'

The relative clauses in (180a) and (181a) remind us of data involving left-dislocation, in which actually no movement can be proposed given that the left-dislocated element would be ungrammatical if it appeared inside the sentence as shown in (182b):

¹¹¹ Just as the ill-formed examples in (i):

- (i) a. *aquest dels aspirants (lit. this of the candidates)
- b. *en Joan dels aspirants (lit. Joan of the candidates)

(182)a. Dels aspirants, vam aprovar {aquest / en Joan}.

b. *Vam aprovar {aquest / en Joan} dels aspirants.

The sequence *dels aspirants* in (182a) must be generated in the left periphery and its role is to introduce the topic. It is a kind of discourse link which could be more or less equivalent to an expression such as *pel que fa als aspirants* ('concerning/as for the candidates').¹¹²

My conclusion is that in (177), the relative pronoun does not originate in the sentence but is inserted in that position, as a kind of left-dislocated element inside the relative clause—as in (180a) and (181a). Belletti (1979: 1559) claims for Italian that left-dislocation is also found in relative clauses, based on similar examples.¹¹³

The next section deals with the behaviour of partitives, compared to quantitatives, with respect to extraction and extraposition.

1.8 Extraposition and extraction phenomena

It has been extensively noted in the literature that partitives allow the *of DP* sequence to be extraposed or fronted whereas quantitatives in general do not license any extraposition or fronting of the (*of*) *NP* sequence. In contrast, extraction from inside *of DP* in partitives is not possible but is allowed from inside (*of*) *NP* in quantitatives. This different behaviour of partitives versus quantitatives has been commonly attributed to structural differences between

¹¹² See Akmajian and Lehrer (1976: 401) for similar conclusions in English:

(i) a. Of the stories about Watergate (that have so far appeared), only yesterday's was truly shocking.
b. *Only yesterday's of the stories about Watergate (that have so far appeared) was truly shocking.

or Belletti (1979: 1552) for Italian: *Di libri, ho letto questi* (lit. Of books, (I) have read these) vs. **Ho letto questi di libri*.

¹¹³ Belletti's (1979) examples are:

(i) a. Quei libri di linguistica, di cui Mario ne ha letti molti, erano piuttosto interessanti.
those books of linguistics of which Mario NE has read many were rather interesting
'Those books on linguistics, many of which Mario had read, were rather interesting.'
b. Quei ragazzi, di cui ne conoscevi già tre, sono amici di Piero.
those guys of whom NE knew_{1sg} already three are friends of Piero
'Those guys, three of whom I had already met, are friends of Piero's.'

As in Catalan, the clitic *ne* is rejected when the quantifier is pied piped by the relative pronoun in Italian:

(ii) a. *Quei libri di linguistica, molti di cui Mario ne ha letti, erano piuttosto interessanti.
b. *Quei ragazzi, tre di cui ne conoscevi già, sono amici di Piero.

With no clitic *ne*, the sentences are well-formed, though in that case no participle agreement takes place (therefore, *letto* instead of *letti* in (iia)) (I thank Laura Brugè (p.c.) for this observation and the data, where *cui* has been replaced by *quale* under her suggestion):

(iii) a. Quei libri di linguistica, molti dei quale Mario ha letto, erano piuttosto interessanti.
b. Quei ragazzi, tre dei quali conoscevi già, sono amici di Piero.

the two constructions; in general, a more complex structure is assumed in the case of partitives (they contain more layers).¹¹⁴

Here I will only comment on two main lines of analyses. A quite common proposal claims a true lexical preposition in partitives but a Case marker or some kind of functional element in quantitatives (or the so-called pseudopartitives).¹¹⁵ The idea is that only a true PP can be extraposed or is a blocking category for extraction. However, there is an alternative explanation, that I will assume here, according to which the contrast is due to the different character of the embedded noun projection: a DP in partitives but an NP in quantitatives.¹¹⁶ So there is no need to postulate a lexical preposition in partitives to account for the extraposition and extraction phenomena.

Moreover, it will be noted that extraposition and extraction data are not clear enough to be taken as a strong argument in favour of any proposal, though there are tendencies that need some explanation.

1.8.1 Extraposition of *de DP*

As noted by Selkirk (1977: 304) for English, extraposition is possible in partitives but not in quantitatives. Observe the following examples, often quoted in the literature:

(183) a. *A lot* has been eaten *of the leftover turkey*. partitives

b. *Only a handful* were asked *of those questions concerning electromagnetism*.

(184) a. **A lot* has been eaten *of leftover turkey*. quantitatives

b. **Only a handful* were asked *of questions concerning electromagnetism*.

For Spanish, Mallén (1992: 355) claims a similar contrast:

¹¹⁴ However, see Mallén (1992), who proposes the same structure for both partitives and pseudopartitives:

(i) [DP [QP Q [PP P [DP D NP]]]],

where QP selects a lexical PP which selects a DP in both cases. The difference between partitives and pseudopartitives is that D is lexical in the former but it is empty in the latter. According to this author, the P+DP sequence cannot be extraposed in pseudopartitives because the empty D must be properly governed, and it is the lexical D that blocks extraction from inside partitives.

¹¹⁵ See Eguren (1989) for Spanish and Stickney (2004) for English, among many others.

¹¹⁶ This is suggested as well by Brucart (1997: 166), who claims that the preposition is a Case marker in both partitives and pseudopartitives. The differences in the behaviour of P may be due, according to this author, to the different Case requirements DP and NP have: genitive versus partitive. I think the distinction between two types of Case is not relevant nor necessary (as argued in Chapter 3, §3.3.2; see especially fn. 121). Recall also §1.3.2 above.

- (185) a. Sólo *un puñado* quedó sin discutir *de los temas que habíamos propuesto*.
 only a handful was-left without discuss of the topics that had_{1pl} proposed
- b. *Sólo *un puñado* quedó sin discutir *de temas que habíamos propuesto*.
 only a handful was-left without discuss of topics that had_{1pl} proposed

However, as noted by Brucart (1997), Spanish does not allow extraposition so easily as English and the same would apply to Catalan, as illustrated by the following examples, which are similar to the English in (183) and (184):

- (186) a. ?**Una part* s'ha hagut de llençar *del gall dindi que havia sobrat*.
 'Part had to be thrown away of the leftover turkey.'
- b. ?**Només dues* es van poder fer *de les preguntes sobre electromagnetisme*.
 'Only two could be asked of the questions concerning electromagnetism.'
- (187) a. **Una bona quantitat* s'ha hagut de llençar *de gall dindi que havia sobrat*.
 'A good amount had to be thrown away of leftover turkey.'
- b. **Només un parell* es va(n) poder fer *de preguntes sobre electromagnetisme*.
 'Only a couple could be asked of questions concerning electromagnetism.'

The problem of the Catalan data is that quantifiers in quantitatives and in partitives are usually different, so data cannot be compared, but a tendency is found as well that indicates that partitives allow extraposition more easily than quantitatives.

In fact, it seems that judgements on extraposition may vary considerably depending on semantic and discursive factors (cf. Demonte 1980, Eguren 1989, among others), so the conclusion is that extraposition data are not so neat as usually presented and therefore do not provide good proof for determining the structure of partitives and quantitatives.¹¹⁷ In any case and despite the data variation, there is some kind of contrast between partitives and quantitatives, and one should be able to provide an explanation which is more semantic and discourse related than syntactic. Indeed, to account for this Brucart (1997) appeals to Cinque (1990), who has shown that non-referential elements are not so easily extracted as referential arguments. Referentiality seems to be the clue for extraposition, so the fact that DPs are

¹¹⁷ See Demonte (1980: 56) for Spanish examples of extraposition and extraction where partitives and quantitatives pattern alike.

referential arguments would explain why the sequence P+DP in partitives is in general more autonomous than the sequence P+NP in quantitatives. I take this explanation as being on the right track and will not pursue the issue further.

Let us turn now to possibilities of extraction from inside partitives and quantitatives.

1.8.2 Extraction from inside *de DP*

As mentioned above, partitives and quantitatives contrast with respect to extraction phenomena: quantitatives allow a modifier to be extracted outside the nominal whereas partitives reject this extraction. Examples can be found in the literature illustrating the phenomenon in different languages:

English:

- (188) a. *A lot of reviews* were published today *of Helen's first symphony*.
 b. **A lot of the reviews* were published today *of Helen's first symphony*.

- (189) a. *A number of commentaries* have appeared *on Anne's latest book*.
 b. ?**A number of the commentaries* have appeared *on Anne's latest book*.

Selkirk (1977: 306)

French:

- (190) a. *C'est de Zola que j'ai lu beaucoup de livres*.
 'It is by Zola that I've read a lot of books.'
 b. **C'est de Zola que j'ai lu beaucoup des livres*.
 'It is by Zola that I've read a lot of the books.'

(Milner 1978: 71)

Italian:

- (191) a. Di chi hai comprato [molti [quadri [t]]]?
 of whom have_{2sg} bought many pictures
 'By whom have you bought many pictures?'
 b. *Di chi hai comprato [molti [dei quadri [t]]]?
 of whom have_{2sg} bought many of-the pictures
 'By whom have you bought many of the pictures?'

- (192) a. Ne ho comprato [molti [quadri [t]]]
 NE have_{1sg} bought many pictures
 ‘I have bought many pictures by him/her.’
- b. *Ne ho comprato [molti [dei quadri [t]]]
 NE have_{1sg} bought many of-the pictures
 ‘I have bought many of the pictures by him/her.’

(Cardinaletti and Giusti 1992: 129)

Spanish:

- (193) a. Nos enseñaron un montón de fotos aquella noche de Reagan a caballo con su mujer.
 ‘We were shown a lot of pictures that night of Reagan riding next to his wife.’
- b. *Nos enseñaron un montón de las fotos aquella noche de Reagan a caballo con su mujer.
 ‘We were shown a lot of the pictures that night of Reagan riding next to his wife.’

(Mallén 1992: 355, ex. 10)

As mentioned above, there are two lines of analysis based on blocking categories, according to which the ungrammaticality of extraction in partitives is due to the presence of a PP or of an embedded DP which acts as a blocking category for movement (an island); the lack of that blocking constituent (a lexical PP or a DP) in quantitatives would account for the well-formed examples with extraction. Is there any evidence in favour of one line of analysis or the other? Observe the following examples, where extraction is possible in French despite crossing a lexical PP:

- (194) a. *Quels événements* se souvient-il encore d’avoir vus pendant son séjour à Paris?
 ‘Which events does he still remember having seen during his stay in Paris?’
- b. Ce sont les actions *que* je me réjouis toujours de ne pas avoir vendues.
 ‘These are the shares that I’m always pleased not to have sold.’

(Battye 1990, ex. 22)

In the examples in (194), the *wh*-phrase *quels événements* and the relative *que* (referring to *les actions*) have been extracted from inside the prepositional complement of the main verb

se souvenir ('remember') and *se réjouir* ('be pleased'), respectively. The result is grammatical, which indicates that the PP does not act as a blocking category here.

More interestingly, the following examples suggest that what acts as a blocking category is a DP, instead of a PP. Notice that in the examples in (195) and (196) there is no preposition, and we would expect the extraction to be possible, but this is not the case. On the contrary, the nominals in (197) do not contain a DP and extraction is possible despite there being a prepositional element *de*, which in principle, however, should not be taken as a lexical preposition.

- (195) a. ?/*De qui has comprat [els tres quadres t]?
 of whom have_{2sg} bought the three pictures
 'By whom have you bought the three pictures?'
 b. ?/*De qui has comprat [aquests tres quadres t]?
 of whom have_{2sg} bought these three pictures
 'By whom have you bought these three pictures?'
- (196) a. ?/*N'he comprat [els tres quadres t].
 NE-have_{1sg} bought the three pictures
 'I have bought the three pictures by him/her.'
 b. ?/*N'he comprat [aquests tres quadres t].
 NE-have_{1sg} bought these three pictures
 'I have bought these three pictures by him/her.'
- (197) a. De qui has comprat [un parell de quadres t]?
 of whom have_{2sg} bought a pair of pictures
 'By whom have you bought a pair pictures?'
 b. N'he comprat [un parell de quadres t].
 NE-have_{1sg} bought a pair of pictures
 'I have bought a pair of pictures by him/her.'

From this we can conclude that the ungrammaticality of the examples in (188-193) can be explained because of the presence of an internal DP: the projection of the definite article is the one that blocks extraction.¹¹⁸

However, extraction is more complex than it appears to be, and probably an explanation in terms of blocking categories is not completely correct: similar data show different degrees of grammaticality, which suggests that different factors intervene in this phenomenon. Cardinaletti and Giusti (1992: 138, end note 7) already point out that an example such as (198a) is better than (191b), which according to them shows that “the ungrammaticality of the latter example does not depend on the definiteness of the partitive phrase, but on the presence of a PP-barrier”. We have seen that (197) are counterexamples to this hypothesis, and the examples in (195) also contrast with (198a) and the equivalent Catalan example (198b).

(198) a. *Di chi* hai comprato *i quadri*?

‘By whom have you bought the pictures?’

b. *De qui* has comprat *els quadres*?

Moreover, variation in the degree of grammaticality is found in partitives as well, so it seems that different factors are intervening here and no definite conclusions can be drawn from extraction examples: the unacceptability of (188b) and (189b) contrasts with the better acceptability of (199a) and (199b), respectively.

(199) a. Have *all of the commentaries* appeared already *on Mary’s work*?

b. *None of the reviews* have appeared yet *of this important work*.

(Oehrle 1977: 320-321)

¹¹⁸ Selkirk (1977) proposes a similar explanation for English data—see ex. (188, 189)—based on Ross’ (1967) and Akmajian’s (1975) boundedness constraint on movement, which is formulated by Akmajian (1975: 119) as follows: “No element may be extraposed more than one cycle up from the cycle containing it”. Selkirk claims that the partitive noun phrase contains a noun phrase within a noun phrase and therefore, “a PP-complement to the head will always be ‘two cycles down’” (p. 294). According to that constraint, a PP should never be able to be extraposed out of a partitive noun phrase. In non-partitive noun phrases there is just one NP, and extraposition is allowed as a PP is not “two cycles down”.

In conclusion, the extraction data need deeper study than possible here, but I hope to have shown that they cannot be taken as a definitive argument in favour of an analysis based on blocking categories that can indicate what the structure of partitives is.

1.9 Dislocation and *ne* cliticisation

1.9.1 Dislocation of *de DP/NP*

Related to the previous section is the phenomenon of dislocation and *ne* cliticisation. Again there is too much variation in this area to take it as a strong argument for any proposal, but let us have a look at some data. According to Milner (1978: 71-72), the *de DP* sequence in partitives appears to be mobile and thus can be preposed for stylistic reasons—see (200a,c); in contrast, such mobility seems to be excluded in quantitatives, where the sequence is *de NP*—see (200b,d):

- (200)a. Des pommes, beaucoup étaient trop mûres.
 of-the apples many were too ripe
- b. *De pommes, beaucoup étaient trop mûres.
 of apples many were too ripe
- c. Des pommes, j'en ai mangé beaucoup.
 of-the apples I-NE have eaten many
 'Of the apples, I have eaten many of them.'
- d. *De pommes, j'en ai mangé beaucoup.
 of apples I-NE have eaten many
 'Of apples, I have eaten many of them.'

However, as noted by Battye (1990), this contrast is not so neat as usually presented as there are cases where the sequence *de NP* can be moved for stylistic purposes in quantitatives.¹¹⁹ For example, this is possible in negative contexts, as already noted by Milner (1978: 38, note 1):

- (201)a. de livres, point
 of books none

¹¹⁹ Battye also mentions Guéron's (1979) work, which shows that in English there is the possibility as well of moving part of the pseudopartitive for stylistic purposes. Unfortunately I have not had access to that paper.

- (201) b. de livres, je n'en ai guère
 of books I not-NE have many
 'Books, I haven't got many.'

Mobility also seems to be more acceptable in quantitatives the heavier the *de NP* sequence is, that is to say, if modifiers are added to it (though according to Battye not for all informants):

- (202) a. De Roumains qui seraient favorables à la confirmation de Nicu Ceausescu à la présidence, vous n'en trouverez pas énormément/beaucoup à Bucarest aujourd'hui!
 'Roumanians who would be in favour of the confirmation of Nicu Ceausescu as a president, you won't find many in Bucarest today!'
- b. De livres qui sont si pleins de problèmes théoriques et qui vous fournissent des détails tellement intéressants, peu se lisent avec autant de plaisir.
 'Books that are so full of theoretical problems and that provide such interesting details, few are so pleasant to read.'

When we look at Catalan, it becomes obvious that both partitives and quantitatives can be equally left-dislocated. Observe the following examples, equivalent to those in (200):

- (203) a. ^{??}De les pomes, moltes eren massa madures.
 b. *De pomes, moltes eren massa madures.
 b. De les pomes, n'he menjat moltes.
 c. De pomes, n'he menjat moltes.

The lower degree of acceptance of (203a,b) has to do with the fact that an indefinite subject is more reluctant to be 'partially' left-dislocated if it is specific.¹²⁰ Indefinite objects typically allow themselves to be 'partially' left-dislocated and cliticised by *ne*.

Compare with the following examples:

¹²⁰ Judgements vary slightly among speakers, but in general (203a) is considered not to be completely grammatical (at least [?]) and (203b) is found to be a bit worse (^{??} or ^{*}).

- (204)a. *Moltes de les pomes*, és evident que eren massa madures.
 many of the apples is obvious that were_{3pl} too ripe
 ‘Many of the apples, it is obvious that they were too ripe.’
- b. *Moltes pomes*, és evident que eren massa madures.
 ‘Many apples, it is obvious that they were too ripe.’
- c. *Moltes de les pomes*, me *les* he menjades jo.
 many of the apples ME them have_{1sg} eaten I
 ‘Many of the apples, I’m the one who has eaten them.’
- d. *Moltes pomes*, me *les* he menjades jo.
 ‘Many apples, I’m the one who has eaten them.’

(204a,b) show that the whole subject as a constituent allows left-dislocation with no problem. The indefinite object can be dislocated as a whole when specific, which explains the presence of a definite clitic *les* within the sentence—see (204c,d).¹²¹

Again the variation in data as illustrated in (200-203) weakens the possible conclusions concerning the structure of partitives and quantitives that could be drawn from that data. Moreover, it must be noted that dislocation data do not involve movement, as generally assumed in the literature, nor necessarily correspond to the non-dislocated structure, as already mentioned in §1.7.2 (see esp. fn. 112). Recall examples in (182), repeated here for convenience:

- (182)a. *Dels aspirants*, vam aprovar {aquest / en Joan}.
 of-the candidates passed_{1pl} this / the Joan
 ‘Of the candidates, we passed {this one / Joan}.’
- b. **Vam aprovar {aquest / en Joan} dels aspirants*.
 passed_{1pl} this the Joan of-the candidates

The grammaticality of (182a) indicates that a left-dislocated structure cannot be derived from the corresponding non-dislocated structure, given that (182b) is not well-formed. The

¹²¹ Similar examples in Italian are provided by Benincà et al. (1988: 166, ex. 81):

- (i) a. *Molti dei tuoi amici*, li ho conosciuti bene.
 many of-the your friends them have_{1sg} known well
 ‘Many of your friends, I have known them well.’
- b. *Alcuni dei quadri*, Giorgio li ha esaminati ieri.
 some of-the paintings Giorgio them has examined yesterday
 ‘Some of the paintings, Giorgio examined them yesterday.’

left-dislocated material must be understood independently, as generated in the left-periphery to introduce the topic of the sentence, something similar to an expression *pel que fa als aspirants* ('as for/concerning the candidates'), as I had already suggested above.

However, Cardinaletti and Giusti (2006) claim for Italian that examples similar to (182a) correspond to what they call the adjunct partitive, the one headed by the preposition *fra/tra* ('among'). For some reason, and they provide none, when left-dislocated, the preposition can be not only *fra/tra* as in (205a) but also *di* ('of') as in (205b), which would explain the well-formedness of the latter example:

- (205) a. {Tra/Fra} i libri di linguistica, ho letto quelli che mi avevi consigliato.
 among the books of linguistics have_{1sg} read those that me had_{2sg} recommended
 'From among the books on linguistics, I've read the ones you had recommended to me.'
- b. Di (quei) libri, ho letto solo questi.
 of those books have_{1sg} read only these
 'Of those books, I've read only these.'

(Cardinaletti and Giusti 2006: §3.1, ex. 102)

The ungrammaticality of (182b) in Catalan (and also in Italian) would be due to the fact that in this case the partitive PP is selected, and this type of partitive PP shows more restrictions than the adjunct PP (the one headed by *fra/tra*). Indeed, the equivalent with a PP headed by *tra/fra* is licensed in that context: compare the well-formed (206a) to the unfelicitous (206b).

- (206) a. Ho letto solo questi libri di linguistica {tra/fra} quelli che mi avevi
 have_{1sg} read only those books of linguistics among those that me had_{2sg}
 consigliato.
 recommended
 'I've read only these books on linguistics from among those you had recommended to me.'
- b. *I libri di quelli che mi avevi consigliato.
 the books of those that me had_{2sg} recommended

So far so good, but what prevents (206b) from being interpreted as an example of an adjunct partitive as it is (205b)? That is to say, for what reason can the adjunct partitive PP be introduced by *di* only when it is dislocated but not when it is within the sentence, in which case the prepositions are restricted to *tra/fra*? This seems a purely stipulative ad hoc statement.

Moreover, there are more data suggesting that the dislocation contexts can be very free, so there is no need to identify, at least syntactically, the dislocated material with any constituent inside the sentence. Observe the following Catalan examples:

- (207)a. *De camises blanques, només tinc aquesta.*
 of shirts white only have_{1sg} this
 ‘White shirts, I only have this one.’
- b. *De camises blanques, només en tinc una.*
 of shirts white only NE have_{1sg} one
 ‘White shirts, I only have one.’
- c. **Només tinc aquesta camises blanques.*
 only have_{1sg} this_{f.sg} shirts_{f.pl} white_{f.pl}
- d. **Només tinc una camises blanques.*
 only have_{1sg} one_{f.sg} shirts_{f.pl} white_{f.pl}

(207a) and (207b) are grammatical, despite the fact that the left-dislocated material is plural and the demonstrative *aquesta* and the numeral *una* within the sentence are singular: there is no need for syntactic agreement. In contrast, in (207c) and (207d) this lack of syntactic agreement inside the nominal triggers ungrammaticality, as expected. The conclusion is that in the examples with left-dislocation there is only need for semantic identity between the left-dislocated material and the corresponding constituents within the sentence. In other words, given that we are talking about white shirts (that is the topic), the demonstrative *aquesta* in (207a) must point to a white shirt and the clitic *en* in (207b) must also be interpreted as white shirt. Notice that the following examples with the left-dislocated material in the singular are possible as well:

- (208)a. *De camisa blanca, només tinc aquesta.*
 b. *De camisa blanca, només en tinc una.*

In conclusion, the possibility of a sequence ‘*de* DP/NP’ to be dislocated—or to be located at the front of a sentence—does not tell much about the structure of partitives or quantitatives given that the dislocation structure does not derive from the non-dislocated structure and the fronted material can simply be a topic without necessarily having a syntactic correlate inside the sentence.

1.9.2 *Ne* cliticisation in partitives?

More interesting is to explore the possibilities of a partitive to be cliticised by *ne*. Observe the following example by Milner (1978: 84):

- (209) J’en ai pris $\left\{ \begin{array}{l} \text{un kilo} \\ \text{dix} \\ \text{beaucoup} \end{array} \right\}$ de celles-ci.

I-NE have taken {a kilo/ten/many} of these

where according to this author: *en* = *des pommes* (‘apples’) and *celles-ci* = *ces pommes* (‘these apples’). Milner takes this example as evidence for the existence of a noun following the quantifier in the partitive construction, given that the clitic *ne* can only be related to a noun¹²² in that position as with quantitatives. The same argument is defended by Cardinaletti and Giusti (2006) for Italian:

- (210)a. Ne ho letti molti di quelli (che mi hai consigliato).

NE have_{1sg} read many of those (that to-me have_{2sg} recommended)

- b. Ne ho letti molti di questi qui.

NE have_{1sg} read many of these here

- c. Ne ho visti molti di LORO, non di voi.

NE have_{1sg} seen many of them, not of you

- d. Quei libri di linguistica, di cui Mario ne ha letti molti, erano
those books of linguistics, of which Mario NE has read many, were
piuttosto interessanti.

very interesting

(Cardinaletti and Giusti 2006: §3.3.4, ex. 141)

¹²² Actually, not only a noun but its projection as well, which will be an N’, NP or DP depending on the analysis. See Cardinaletti and Giusti (2006: §4) for an exhaustive discussion on the type of nominal

As noted by these authors: “When the DP is realised by *ne*, the partitive PP always contains a pronoun: a demonstrative pronoun, such as *quelli* in (141a) and *questi* in (141b), a focused personal pronoun such as *loro* in (141c), or a relative pronoun such as *cui* in (141d)”. Observe the following examples, which are ungrammatical because the PP contains an overt N *libri*:

- (211)a. *Ne ho letti molti dei libri (che mi hai consigliato).
 NE have_{1sg} read many of-the books (that to-me have_{2sg} recommended)
- b. *Ne ho letti molti di quei libri (che mi hai consigliato).
 NE have_{1sg} read many of those books (that to-me have_{2sg} recommended)
- (Cardinaletti and Giusti 2006: §3.3.4, ex. 142)

All these examples become grammatical if the clitic *ne* is not present. The connection between the presence of *ne* and the necessary null N in the PP, at first sight not obvious, receive a natural account by Cardinaletti and Giusti (2006). These authors claim that the lexical NP in (211) is excluded by principle C of Binding Theory, since it is co-indexed with and c-commanded by *ne*. An empty noun or a pronoun is allowed as they do not obey principle C.

This explanation is supported by Dutch data, where the clitic *er*—which is the equivalent to the clitic *ne* in Romance—can only appear if the N within the PP is non-overt as in Italian—see (212a)—or crucially if the PP with an overt N is not c-commanded by *er*—compare (212b,c) and (212d,e):¹²³

- (212)a. Ik heb er twee gekocht, van degene die je me aangeraden had.
 I have ER two bought of those that you to-me advised had
- b. Ik heb (*er) [twee *e* van deze boeken] gekocht.
 I have ER two of those books bought
- c. [Twee *e* van die boeken] heb ik (*er) gisteren gekocht.
 two of the books have I ER yesterday bought

projection the quantitative *ne* pronominalises (they conclude it is a DP) and the differences with respect to the prepositional *ne*.

¹²³ Examples (212a-c) are taken from Cardinaletti and Giusti (2006: §4.4, ex. 192). Examples (212d,e) are from Bennis 1986: 199; 251, end note 8 (quoted by Cardinaletti and Giusti 2006: §4.4, ex. 193).

(212)d. Ik heb van die boeken *(er) gisteren [twee e] gekocht.

I have of the books ER yesterday two bought

e. Van deze boeken heb ik *(er) [twee e] gekocht.

of these books have I ER two bought

In Dutch the PP can be separated from the quantified noun phrase and appear in the middle field—as in (212d)—or in sentence-initial position—as (212e). In these cases, where the PP is not in the c-commanding domain of the clitic, *er* is obligatory.¹²⁴

Similarly, in Catalan a clitic *ne* can apparently pronominalise part of a partitive construction:

(213)a. He llegit un llibre. ⇔ N_i'he llegit un [e_i].

have_{1sg} read a book NE-have_{1sg} read one

b. He llegit un dels teus llibres. ⇔ N'he llegit un (dels teus).

have_{1sg} read one of-the your books NE-have_{1sg} read one of-the yours

The presence of a clitic *ne* in (213b) is parallel to (213a): it represents the noun *llibre*. As we saw for French and Italian, the clitic is only licensed if the PP contains an empty noun, as illustrated by the following example:

(214)a. (*N')he visitat un dels pisos nous.

NE-have_{1sg} visited one of-the apartments new

'I have visited one of the new apartments.'

b. *(N')he visitat un dels nous.

NE-have_{1sg} visited one of-the new

'I have visited one of the new ones.'

¹²⁴ This seems to derive naturally from the claim that *ne* is licensed only if it does not c-command a noun with the same reference, but Cardinaletti and Giusti (2006) do not mention it for Dutch and consider (212d,e) as instances of the adjunct partitive PP (equivalent to the PP headed by *tra/fra* in Italian) as opposed to the selected partitive PP in (212a-c). The following example can be taken as further support of the claim above as the presence of *er* requires an empty N in the PP headed by *van* if it is in the c-commanding domain of the clitic as in (i)—compare it to (212b), where the N within the PP is overt:

(i) Ik heb er gisteren [twee e] [van t] gekocht.

I have ER yesterday two of bought

Bennis (1986: 199) (quoted by Cardinaletti and Giusti, §4.4, ex. 194)

These data seem to contradict the claim I have been defending throughout this thesis: partitives do not contain an empty N following the quantifier. My conclusion here is that these data are not cases of true partitives as partitives contain no empty N following Q, so no clitic *ne* can pronominalise it. Rather, they are examples of indefinite nominals of the type described in Chapter 2, §2.1: quantitative nominals with an adnominal modifier introduced by *de*. The reader is referred to the next Chapter for a description of the properties this type of indefinite nominal has.¹²⁵ Here I will only present some data concerning the clitic *ne* which I take as evidence against analysing true partitives as containing a N following Q.

If, as defended by several authors, partitives contained a N following Q, we would expect *ne* to be licensed (and actually required) whenever the PP does not contain an overt N under the c-commanding domain of the clitic. However, *ne* does not work very well with personal pronouns,¹²⁶ at least in Catalan, and there is no reason why as nothing should prevent it given the explanation in terms of binding:

- (215)a. *N'han seleccionat moltes d'elles.
 NE-have_{3pl} selected many_f of-them_f
 'They have selected many of them.'
- b. *En visitaré dos de vosaltres.
 NE visit_{fut.1sg} two of you
 'I will visit two of you.'

Moreover, when the clitic *ne* is used, the restrictions on the type of quantifier imposed by the partitive construction seem to disappear, which is a further indication that we are not dealing with true partitives in this case:

- (216)a. N'he vist un munt de les seves.
 NE-have_{1sg} seen a pile of the his/hers
 'I have seen a great number of his/hers.'

¹²⁵ See Martí-Girbau (2003) as well for further arguments against postulating the existence of a N following Q in partitives.

¹²⁶ Although Cardinaletti and Giusti (2006) include personal pronouns among their data (recall example (210c) above), it seems that the corresponding Italian examples in (215) would not work very well, as is the case in Catalan (Giuliana Giusti, p.c., as noted in Martí-Girbau (2003: 53, fn. 16)).

(126)b. N'he vist unes vuit o nou de les que va rodar a França.

NE-have_{1sg} seen about eight or nine of the that shot_{3sg} in France

'I have seen about eight or nine of the ones (s)he shot in France.'

(217)a. *He vist un munt de les seves pel·lícules.

have_{1sg} seen a pile of the his/her films

b. *He vist unes vuit o nou de les pel·lícules que va rodar a França.

have_{1sg} seen about eight or nine of the films that shot_{3sg} in France

If (216) were examples of *partitives*, we would not expect them to be well-formed given the ungrammaticality of the examples of *partitives* in (217) with the quantificational expression *un munt* or the approximate quantity *unes vuit o nou* (with a cardinal modified by *uns*).

Our conclusion is that true *partitives*, as opposed to *quantitatives*, cannot be pronominalised by *ne* as they do not contain any noun projection that the clitic can correspond to.

1.10 Conclusions

In this chapter, the properties exhibited by *partitives* have been thoroughly described and some conclusions have been reached after discussing the different possibilities of analysis. The conclusions obtained are the following:

(218)a. *Partitives* have the form 'Q + *de* + DP' and an interpretation where a partition is denoted. There are two types of *partitives*: the ones that denote a subset of a set (set *partitives*) and the ones that denote a part of a whole (entity *partitives*).

b. The quantifier in *partitives* has to meet certain restrictions in Catalan, not present in *quantitatives*: quantifiers in set *partitives* must have the property of denoting individuals, not collections or imprecise amounts of them, and quantifiers in entity *partitives* must have the property of denoting fractions or portions, not amounts. In general, *partitive* quantifiers have to bear a [+Spec] feature and be a phonetically strong form. This excludes weak quantificational expressions such as *un munt* ('a pile') or *uns deu* ('about ten'), for example.

- c. The preposition *de* is a functional category that does not contribute to the semantics of the construction but appears for licensing conditions that seem to be Case related.
- d. Partitives have to contain an internal DP, which can be either a definite DP or an indefinite but specific nominal projection, which also projects into a DP.
- e. The interpretation of the different types of partitives derives from the selectional relation between the quantifier and the DP.
- f. Partitives cannot be preceded by a definite determiner.
- g. From the partitive interpretation it follows that in partitives there is no internal syntactic agreement between Q and DP, but these elements must share the gender feature (if the Q can be inflected for gender) via semantic agreement given that they refer to individuals of the same type.
- h. Extraction from inside partitives is in general not possible in contrast with quantitatives, but the variation in the data does not provide us with strong arguments in favour of any proposal. One could attribute this difficulty of extraction to the presence of a DP projection, which can be considered as a blocking category (an island).
- i. Partitives seem to allow a great mobility of the *de DP* sequence in contrast with quantitatives and the sequence *de NP*, but again the variation found in the data on both types of nominals weakens the conclusions obtained, which seem to attribute a greater mobility of DP to its higher degree of referentiality with respect to NP.
- j. Dislocation contexts in which part of the partitive construction (i.e. *de DP*) seems to be fronted are misleading and do not provide any clue to the partitive structure since dislocated sentences do not derive from the non-dislocated versions of them (dislocation data do not involve movement—as generally assumed in the literature—nor necessarily correspond to the non-dislocated structure).
- k. Partitives, contrary to quantitatives, cannot be pronominalised by *ne*.

In Chapter 3 I will present an analysis that accounts for all these properties, but before that it is important to identify a true partitive and distinguish it from what here will be called *false partitives*. The characterisation obtained in this first chapter will prove to be very useful in this respect. Chapter 2, therefore, is devoted to some nominals that look very similar to partitives (they have been considered as such by some authors), but which are

actually instances of quantitatives: indefinite nominals with an adnominal modifier introduced by *de* (e.g. *dues novel·les de les que vas comprar l'estiu passat* 'two novels of the ones you bought last summer') and the *among* construction (i.e. *moltes novel·les d'entre els llibres que et van deixar* 'many novels among the books that were lent to you'). The description of these nominals will show that they clearly pattern with quantitatives instead of partitives. Moreover, from their study two further properties will obtain as characteristic of partitives that will be very relevant for the analysis in Chapter 3: (a) partitives have a single-noun structure and (b) only the prepositional element *of* (but not *among*) or its equivalent in other languages can form partitives by relating Q and the embedded DP (*among* is a lexical preposition introducing a PP that can function as a predicate or modifier). Interestingly, these two properties show that partitives and quantitatives are more alike than usually claimed in the literature and suggest an analysis with a common basis for both constructions in which the structure contains a single N (projected as a DP in partitives or as a NP in quantitatives) and the prepositional element *of* as a licenser.

CHAPTER 2. False partitives

2.0 Introduction

In Chapter 1 the properties of the partitive construction were described. In characterising partitives, we often compared them to other indefinite nominals (mainly the so-called pseudopartitives such as *un munt de problemes* ‘a lot of problems’), which share some properties with them but which are not partitives. In this chapter we will pay attention to other indefinite nominals that look very similar to partitives but which are also not partitives: (a) indefinite nominals with an adnominal modifier introduced by *de*—e.g. *dues novel·les de les que vas comprar l’estiu passat* ‘two novels of the ones you bought last summer’, *molts acudits dels que acostuma a explicar en Joan* ‘many jokes of those (of the type) John usually tells’, and (b) the *among* construction—e.g. *moltes novel·les d’entre els llibres que et van deixar* ‘many novels among the books that were lent to you’, *dos entre els teus alumnes* ‘two among your students’. These nominals will be thoroughly described and systematically compared to partitives, and the conclusion will be that they are instances of quantitative nominals contrary to what some authors have asserted in the literature. In other words, they are *false partitives*.

Chapter 2 is structured in two sections, each one devoted to one of these nominals: §2.1 deals with indefinite nominals with an adnominal modifier introduced by *de* and §2.2 with the *among* construction.

2.1 Indefinite nominals with an adnominal modifier introduced by *de*¹

Partitives have often been related in the literature to nominals that contain the same elements in the string, but in a different order: in the latter the noun immediately follows the quantifier, as illustrated in (1b).

¹ An earlier version of section 2.1 was presented, under the title ‘*Two books of those*: a partitive nominal?’, at the *15th Colloquium on Generative Grammar*, held in the Universitat de Barcelona 4-6 April 2005, and disseminated as a research report of the Centre de Lingüística Teòrica of the Universitat Autònoma de Barcelona (see Martí-Girbau 2006). I thank the audience for all their comments and questions.

- (1) a. dues de les novel·les que em vas recomanar
 two of the novels that to-me recommended_{2sg}
 ‘two of the novels you recommended to me’
 b. dues novel·les de les que em vas recomanar
 two books of the that to-me recommended_{2sg}
 ‘two novels of the ones you recommended to me’

The difference between the partitive example in (1a) and the example in (1b) is apparently very slight, and in the literature it has been claimed that they share the same basic structure. Two different types of explanation have been defended. In one, these two examples are related derivationally: (1b) is the result of N movement applied to (1a), as represented in (2).²

- (2) a. dues de les [novel·les] que em vas recomanar
 b. dues [novel·les]_i de les t_i que em vas recomanar
- 

Another approach posits a basic structure with two nouns, the difference being which noun is phonetically realised: the lower one in (1a) and the upper one in (1b), as shown in (3).

- (3) a. dues ~~novel·les~~ de les novel·les que em vas recomanar
 b. dues novel·les de les ~~novel·les~~ que em vas recomanar

This latter approach is more commonly adopted than the former.³

However, a more careful look at the data shows that these two kinds of nominals have less in common than it at first seems. I will claim that examples like (1b) are not partitives based on the syntactic as well as semantic arguments given below. Indeed, the nominals in (1b) pattern with common indefinite nominals (quantitatives) and differ from partitives with respect to:

² This is proposed e.g. by Lorenzo (1995: 219) for Spanish.

³ See Bonet and Solà (1986), Ramos (1992), Brucart and Rigau (2008) for Catalan; Hernanz and Brucart (1987) for Spanish; Milner (1978) for French; Cardinaletti and Giusti (1992, 2006), Zamparelli (1998) for Italian. Other authors that propose a basic structure with two nouns for partitives are Selkirk (1977), Jackendoff (1977), Abney (1987), Delsing (1993), Sleeman (1996), Doetjes (1997), Vos (1999).

1. the type of quantifier they allow
2. noun modification possibilities
3. adjacency phenomena, and
4. their interpretation.

Moreover: 5. Nominals like (1b) can co-occur with partitives.

The conclusion is that (1a) and (1b) are two types of nominals and need different analyses as their differences cannot be accounted for by any unitary approach—neither (2) nor (3). The data studied in this section strongly suggest that nominals like (1b) have a structure with two nouns like any ordinary indefinite nominal containing a PP modifier, whereas partitives have a structure with a single noun (which is not part of a PP modifier). The two different analyses are represented schematically in (4):

- | | | | |
|-----|----|---|---------------|
| (4) | a. | dues de les [_N novel·les] [que em vas recomanar] | partitive |
| | b. | dues [_N novel·les] _i [_{PP} de les [_N e] _i que em vas recomanar] | non-partitive |

The single-noun analysis of partitives, which considers that there is no empty noun following the quantifier, is not new in the literature as we have already mentioned.⁴ Most of the few authors defending such an analysis focus on the similarities between partitives and non-partitives and suggest that the difference between them lies in the type of the internal noun projection Q quantifies over: a DP in partitives and an NP in non-partitives. The basic parallel structure they suggest is sketched in (5), where the status of the prepositional element *de* in partitives has been left undetermined since it varies in the literature:⁵

- | | | | |
|-----|----|--|---------------|
| (5) | a. | dues de [_{DP} les novel·les [que em vas recomanar]] | partitive |
| | b. | dues [_{NP} novel·les _i [_{PP} de les e _i que em vas recomanar]] | non-partitive |

In the literature pursuing this line of research of a single-noun structure for partitives (as is defended in this thesis), a few empirical arguments can be found against the hypothesis of an empty noun structure in partitives.

⁴ See Belletti (1979), Eguren (1989), Battye (1991), Mallén (1992), Kupferman (1999), Martí-Girbau (1999, 2003, 2006), Gutiérrez (2008), Bosque and Picallo (2009), among others.

⁵ It has been considered a lexical preposition by Eguren (1989) among many others, a functional category such as a Case marker by Martí-Girbau (1999, 2003, 2006), and has even been considered by Kupferman (1999) as the realisation of the head of QP, in which case the lexical quantifier is claimed to be in Spec QP.

Eguren (1989) provides examples of partitives that are not covered by that hypothesis (he uses Spanish data, but the same would be true of other languages):

- (6) a. No he comido nada de esa tarta / He comido algo de esa tarta.
 not have_{1sg} eaten nothing of that cake have_{1sg} eaten something of that cake
 ‘I have eaten {none/some} of that cake.’
 b. ninguno de nosotros
 ‘none of us’

In (6a) and (6b) it is difficult to maintain that the partitive structure contains an empty noun: the so-called ‘neuter nouns’ such as *nada* (‘nothing’) or *algo* (‘something’) cannot precede phonetically realised nouns (**nada tarta* / **algo tarta*), and partitives where the internal DP is a pronoun as in (6b) raise the issue of recoverability of the empty noun.

Kupferman (1999: §4.3.3-7) provides some interesting contrasts between partitives and non-partitives based on French data that, as he claims, could not be explained if partitives had an empty noun in the structure. His data show contexts where non-partitive nominals with an elliptical noun are ungrammatical whereas partitives are well-formed—see (7a,b)—or vice versa—see (7c), and contexts where partitives are licensed but ordinary indefinite nominals are not, whether they contain an elliptical noun or not: clitic inversion contexts—see (7d)—and in combination with certain quantificational expressions—see (7e).

- (7) a. Paul et Marie sont {**deux rares* / ✓*deux des rares*} à avoir compris l’enjeu.
 Paul and Marie are two unique two of-the unique to have understood the-issue
 ‘Paul and Marie are two of the only ones that understood the issue (what is at stake).’
 b. {**Trois* ∅ / ✓*Trois des Ministres*} s’appellent Paul, Marie et Max.
 three three of-the ministers are-called Paul Marie and Max
 ‘Three (of the ministers) are called Paul, Marie and Max.’
 c. {*trois* / *de petites*} ∅ *magnifiques* // **trois grandes de ces fenêtres*
 three of little magnificent three big of these windows
 ‘{three / little} magnificent ones’ // ‘three big of those windows’

- d. { *Trois (invités) / ✓Trois des vos invités } sont-ils partis à 8 heures?
 three guests three of-the your guests are-they gone at 8 hours
 ‘Three ((of your) guests) left at eight?’
- e. { *bien / la plupart de malheurs // ✓bien / la plupart des malheurs }
 well the majority of misfortunes well the majority of-the misfortunes
 (lui sont arrivés).
 him are happened
 ‘{A good bunch of (the) misfortunes / Most (of the) misfortunes} happened to him.’

However, none of the authors defending a single noun structure for partitives deals with examples like (1b), which have been taken as one of the main arguments for the two noun structure for partitives, with the exception of myself (see especially Martí-Girbau 2006) and Gutiérrez (2008).⁶ Note, however, that Eguren (1989, end note 2) does mention the existence of these examples and the fact that some authors have taken them as paraphrases of partitives; he just points out that “a partitive meaning for the PP in (ii) seems questionable” (where (ii) is *un libro de los e de Chomsky* ‘a book of Chomsky’s’ and the PP would correspond to *de los e de Chomsky* ‘of Chomsky’s’).

The aim of this section is to provide further solid arguments in favour of the single noun structure in partitives and, particularly, against assimilating partitives to nominals with an overt noun following the quantifier. Catalan data is mainly used, but the conclusions reached are true of other Romance languages, where examples like (1b) coexist with true partitives as (1a).

In the next sections, the different behaviour of examples in (1) is extensively described and illustrated. A discussion on how the examined contrastive data puts unitary analyses in doubt is also provided for each point.

⁶ See Gutiérrez (2008: Ch. 4, §3.2) for a discussion on Spanish data for what she calls *falsos partitivos* (‘false partitives’), which include these nominals with an overt noun after Q and also the *among* construction, precisely the two types of nominals studied in this second chapter of my dissertation. She provides similar arguments based on the different behaviour these nominals have in comparison to partitives with respect to the type of quantifiers allowed or scope relations, possibility of no quantifiers or indefinite pronouns, etc.

2.1.1 Type of quantifier

Nominals with an overt noun following the quantifier are subject to fewer restrictions than partitives with respect to the type of quantifier allowed, a difference which we would not expect if they were instances of the same construction, no matter which approach is taken. Catalan provides interesting data given that in this language partitives show many restrictions on the quantifier, which are not present in examples like (1b).⁷

Observe the well-formed sentences in (8), where the nominals contain quantifiers such as *un munt* ('a pile'), *força* ('quite a lot'), approximative *uns* ('about'), *poc* ('few'), *nombrós* ('numerous'), the null quantifier (or the absence of a quantifier), *molt* ('much'), and *una mica* ('a little'):

- (8) a. He llençat *un munt de llibres dels* *que guardava a l'armari.*
 have_{1sg} thrown-away a pile of books of-the that kept_{1sg} in the-cupboard
 'I threw away *lots of books of the ones I kept in the cupboard.*'
- b. Han vingut *força alumnes dels* *de primer.*
 have_{3pl} come quite-a-lot students of-the of first
 'There came *quite a lot of students of the ones in the first year.*'
- c. Han acomiadat *uns quaranta treballadors dels* *que havien contractat*
 have_{3pl} fired about forty workers of-the that had_{3pl} employed
en els darrers dos anys.
 in the last two years
 'About *forty workers of the ones that had been employed in the last two years* have been fired.'
- d. He vist *poques pel·lícules de les protagonitzades pels* *germans Marx.*
 have_{1sg} seen few films of the starred by-the brothers Marx
 'I've seen *few films of the ones starred in by Marx brothers.*'
- e. En aquest llibre hi ha *nombrós errors dels* *que només cometria* *un mal editor.*
 in this book there has numerous errors of-the that only would_{3sg}-make a bad editor
 'In this book there are *numerous errors of the kind only a bad editor would make.*'

⁷ Although Spanish does not show so many restrictions on the quantifiers, the same argument can be used: nominals with an overt noun after Q accept quantifiers which are rejected in partitives such as *demasiados* ('too many') and *bastantes* ('enough') or no quantifiers such as the indefinite article *unos/unas*, which again are unacceptable in partitives (see Gutiérrez 2008: Ch. 4, §3.2.1, for data and discussion).

- f. A mi m'agrada llegir *novel·les* {*de les romàntiques* / *de les que t'emocionen*}.
to me pleases read novels of the romantic of the that to-you move_{3pl}
'I like reading *novels* {*of the romantic type* / *of the type that move you*}.'
- g. Al cistell hi ha *pomes* {*de les vermelles* / *d'aquelles que vam comprar l'altre dia*}.
in-the basket there has apples of the red of-those that bought_{1pl} the-other day
'In the basket there are *apples* {*of the red variety* / *of the ones we bought the other day*}.'
- h. He menjat molt pastís del que ha portat ta germana.
have_{1sg} eaten much cake of-the that has brought your sister
'I ate a lot of cake from the one your sister brought.'
- i. Només he comprat una mica de vi del blanc.
only have_{1sg} bought a bit of wine of-the white
'I only bought a little wine of the white variety.'

Notice that the quantifiers inside the nominals in (8) are all legitimate in common indefinite nominals, even null quantifiers (or the absence of a quantifier) as in (8f,g), but they are impossible or much less acceptable in their partitive counterpart, as shown in (9):⁸

- (9) a. */^{??}He llençat *un munt dels llibres que guardava a l'armari*.
'I threw away *lots of the books I kept in the cupboard*.'
- b. *Han vingut *força dels alumnes de primer*.
'There came *quite a lot of the first year students*.'
- c. */^{??}Han acomiadat *uns quaranta dels treballadors que havien contractat en els darrers dos anys*.
'*About forty of the workers that had been employed in the last two years* have been fired.'
- d. *He vist *poques de les pel·lícules protagonitzades pels germans Marx*.
'I've seen *few of the films starred in by Marx brothers*.'
- e. *En aquest llibre hi ha *nombrosos dels errors que només cometria un mal editor*.
in this book there are numerous of-the errors that only would make a bad editor

⁸ Recall Chapter 1, §1.2, on the type of quantifiers allowed in Catalan partitives.

- f. *A mi m'agrada llegir {*de les novel·les romàntiques* / *de les novel·les que*
to me pleases read of the novels romantic of the novels that
t'emocionen}.
to-you move_{3pl}
- g. *Al cistell hi ha {*de les pomes vermelles* / *d'aquelles pomes que vam comprar*
in-the basket there has of the apples red of-those apples that bought_{1pl}
l'altre dia}.
the-other day
- h. *He menjat molt del pastís que ha portat ta germana.
'I ate much of the cake your sister brought.'
- i. *He comprat una mica del vi blanc.
'I bought a little of the white wine.'

The contrast between the acceptability of the sentences in (8) and (9) would be very difficult to explain if the nominals in italics had the same structure and were just variants of the same construction.⁹

⁹ However, the indefinite article does not behave as expected: it is not allowed in partitives—see (ia)—and it does not work very well with nominals of the type in (8) either—see (ib), although it is fine with common quantitatives—see (ic):

- (i) a. *He llegit {*unes de les novel·les romàntiques* / *unes de les novel·les que em vas deixar*}.
have_{1sg} read a_{pl} of the novels romantic a_{pl} of the novels that to-me lent_{2sg}
b. */?He llegit {*unes novel·les de les romàntiques* / *unes novel·les de les que em vas deixar*}.
have_{1sg} read a_{pl} novels of the romantic a_{pl} novels of the that to-me lent_{2sg}
c. He llegit {*unes novel·les romàntiques* / *unes novel·les que em vas deixar*}.
have_{1sg} read a_{pl} novels romantic a_{pl} novels that to-me lent_{2sg}

I have no explanation for the contrast between (ib) and (ic), but note that there is still a difference with respect to partitives (as (ia) is completely ungrammatical), which becomes stronger in certain examples of the sort of (ib) in which the indefinite article is more acceptable:

- (ii) a. ?He conegut unes noies de les que van sempre a la moda.
have_{1sg} met a_{pl} girls of the that go always to the fashion
'I have met some girls of the ones (of the type) that always follow fashion.'
b. ?Uns alumnes dels de primer van arribar tard a l'acte.
a_{pl} students of-the of first arrived_{3pl} late at the-event
'Some students of the ones in the first year were late to the event.'

Note also that the reason for the ungrammaticality of (9) cannot be that those quantifiers are not licensed when they are followed by an empty noun, as the grammatical examples in (10) show:¹⁰

- (10) a. N'he llençat *un munt*.
NE-have_{1sg} thrown-away a pile
'I threw away lots of them.'
- b. N'han vingut *força*.
NE-have_{3pl} come quite-a-lot
'There came quite a lot of them.'
- c. N'han acomiadat *uns quaranta*.
NE-have_{3pl} fired about forty
'About forty have been fired.'
- d. N'he vist *poques*.
NE-have_{1sg} seen few
'I've seen few of them.'
- e. A mi m'agrada llegir-ne.
to-me pleases read-NE
'I like reading this kind of novel.'
- f. Al cistell n'hi ha.
in-the basket NE-there has
'There are some in the basket.'
- g. N'he menjat *molt*.
NE-have_{1sg} eaten much
'I ate much of it.'
- i. N'he comprat *una mica*.
NE-have_{1sg} bought a bit
'I bought a little of it.'

¹⁰ As the nominals are all in object position, the clitic *en* is necessary in Catalan, which is co-indexed with the empty noun following the quantifier. If they were in subject position, no clitic would appear, as in (i):

(i) a. [Uns quaranta *e*] es van manifestar davant de l'ajuntament.
'About forty demonstrated in front of the town hall.'

b. [Poques *e*] han estat doblades al català.
'Few have been dubbed into Catalan.'

where *e* stands for an empty category, which can refer to *treballadors* 'workers' and *pel·lícules dels germans Marx* 'Marx brothers films', respectively. Actually, the empty category is a noun phrase given that it can correspond to a noun with modifiers.

- In Catalan *altre* requires being preceded by the indefinite article in the singular, so it behaves as an adjective and is rejected in partitives.

- b. A part de l'Anna, no coneixes *altres noies de les que vénen a ioga?*
 apart of the-Anna no know_{2sg} other girls of the that come to yoga
 'Apart from Anna, don't you know *other girls of the ones in the yoga class?*'
- c. Oblida *certes coses de les que et vaig dir ahir:* vaig xerrar massa...
 forget_{2sg} certain things of the that you told_{1sg} yesterday talked_{1sg} too-much
 'Please forget *certain things of the ones I told you yesterday*: I talked too much...'
- d. Han descobert *que determinats quadres dels que s'exposen al museu* són falsos.
 have_{3pl} discovered that certain pictures of-the that exhibit at-the museum are false
 'It's been discovered that certain pictures of the ones exhibited at the museum are fakes.'
- (13) a. */^{??}Em dónes *un altre dels caramels de llimona?*
 to-me give_{2sg} another of-the sweets of lemon
 'Can I have *another of the lemon sweets?*'
- b. *A part de l'Anna, no coneixes *altres de les noies que vénen a ioga?*
 apart of the-Anna no know_{2sg} other of the girls that come to yoga
 'Apart from Anna, don't you know *others of the girls in the yoga class?*'
- c. *Oblida *certes de les coses que et vaig dir ahir:* vaig xerrar massa...
 forget_{2sg} certain of the things that you told_{1sg} yesterday talked_{1sg} too-much
 'Please forget *certain of the things I told you yesterday*: I talked too much...'
- d. *Han descobert *que determinats dels quadres que s'exposen al museu* són falsos.
 have_{3pl} discovered that certain of-the pictures that exhibit at-the museum are false
 'It's been discovered that *certain of the pictures exhibited at the museum* are fakes.'

New contrasts also appear with respect to the possibilities of internal quantifiers, as illustrated in (14):

- (14) a. Només he llegit *dues novel·les de **totes** les que em vas recomanar.*
 only have_{1sg} read two novels of all the that to-me recommended_{2sg}
 'I've read only *two novels of **all** the ones you recommended to me*'
- b. *Només he llegit *dues de **totes** les novel·les que em vas recomanar.*
 only have_{1sg} read two of all the novels that to-me recommended_{2sg}
 'I've read only *two of **all** the novels you recommended to me*.'

Again, the example with the overt noun following a quantifier as in (14a) shows fewer restrictions than the true partitive: it allows the internal quantifier *tot* ('all') contrary to partitives, as shown in (14b).

However, it is not always the case that true partitives are more restricted than nominals with an overt noun following the quantifier: some partitives have no counterpart with an overt noun after the quantifier, which I take as a further argument against identifying these two types of nominals as variants of the same construction. Partitives with no counterpart are those that involve quantifiers indicating fractions or subparts as *meitat* ('half'), *terç* ('third'), *part* ('part'), etc.—see examples in (15) and (16)—and also those that contain personal pronouns instead of common nouns—see (17).

- (15) a. Ja he llegit la meitat de les novel·les que em vas recomanar.
 already have_{1sg} read the half of the novels that to-me recommended_{2sg}
 'I've already read half of the novels you recommended to me'
- b. *Ja he llegit la meitat de novel·les de les que em vas recomanar.
 only have_{1sg} read the half of novels of the that to-me recommended_{2sg}
- (16) a. Part del públic que hi havia a platea va marxar a la mitja part.
 part of-the audience that there had in the-stalls left_{3sg} at the interval
 'Part of the audience that was in the stalls left during the interval.'
- b. *Part de públic del que hi havia a platea va marxar a la mitja part.
 part of audience of-the that there had in the-stalls left at the interval
- (17) a. una de nosaltres
 one_f of us
- b. alguns de vosaltres
 several_m of you
- c. molts d'ells
 many_m of-them_m
- d. una d'elles
 one_f of-them_f

In the partitives examples in (17)¹² there is no possibility of an overt noun following the quantifier.¹³

To sum up, partitives and nominals like (1b) show different restrictions on the type of quantifier they allow, which leads to the conclusion that they are not instances of the same construction and, therefore, cannot have the same basic structure. Assuming an empty noun in partitives in a structure parallel to that with an overt noun in examples like (1b) fails to explain all these contrasts, which is a good piece of evidence against this unitary analysis. Moreover, there are some examples of partitives (those containing pronouns) that have no counterpart with an overt noun, and if an empty noun is assumed in their structure, it is rather difficult (if not impossible) to provide it with a meaning or reference at all.

2.1.2 Noun modification

There is also a lack of parallelism between partitives and nominals with an overt noun immediately following the quantifier, with respect to noun modification possibilities: the latter admit modification of the noun by an adjective, as illustrated in (18), whereas true partitives do not license any noun modifier following the quantifier,¹⁴ as shown in (19):¹⁵

¹² Recall Eguren's observation illustrated above in (6b) with an example of his about the recoverability problem that partitives containing pronouns create for the empty noun hypothesis.

¹³ However, recall that Cardinaletti and Giusti (2006: §3.2) postulate an empty noun even in these cases, as shown in their examples (where the empty category is represented as '[e]'):

- (i) a. Uno [e] di noi pensa che...
 one_{m.sg} of us thinks that
 b. Molti [e] di noi pensano che...
 many_{m.pl} of us think that
 c. Ciascuna [e] di noi pensa / *pensiamo che...
 each_{f.sg} of us thinks think_{1pl} that

Cardinaletti and Giusti give no explanation of how [e] is justified nor interpreted in these examples, and it is unclear what this '[e]' really stands for, i.e. what its reference is, given that there is no overt noun from which it can be lexically non-distinct, but rather an overt pronoun.

¹⁴ This is also pointed out by Kupferman (1999: §4.3.7), who illustrates it in French: recall the example **trois grandes de ces fenêtres* (lit. three big of these windows) in (7c) above.

¹⁵ The only exception I know is the adjective *solo/sola* in Spanish (or the equivalent in other languages: Fr. *seul/seule*, etc.), that is admitted in partitives as shown in (ia), which contrasts with (ib):

- (i) Sp. a. He leído una sola de las novelas que me prestaste.
 have_{1sg}read one single of the novels that to-me lent_{2sg}
 'I have read just one of the novels you lent me.'
 b. *He leído una única de las novelas que me prestaste.
 have_{1sg}read one single of the novels that to-me lent_{2sg}
 'I have read just one of the novels you lent me.'

I have no explanation for the well-formedness of (ia) but this seems to be a specific property of the word *solo/sola* given that the synonym *único/única* patterns with the rest of modifiers and triggers ungrammaticality as expected. The grammaticality of (ia) might be related to the grammaticality of *solo/sola* with elliptical nouns, again an exceptional property of this lexical item because prenominal adjectives are not licensed by a non-overt noun: Sp. *He leído una sola* vs. **He leído una única*. This could be taken as an argument in favour of the existence of a non-overt N following the quantifier in partitives. However, in Catalan, interestingly, although the equivalent *sol, sola* is licensed in noun elliptical contexts like in Spanish

- (18) a. He llegit *una novel·la [molt divertida] de les quatre que em vas deixar*.
 have_{1sg} read a novel very amusing of the four that to-me lent_{2sg}
 ‘I’ve read *a very amusing novel of those four you lent me*’
- b. Va llogar *una habitació [doble] de les que encara quedaven lliures*.
 rented_{3sg} a room double of the that still were-left free
 ‘(S)he rented *a double room from those that were still free*.’
- c. Va triar *un cotxe [automàtic] dels que va provar*.
 chose_{3sg} a car automatic of-the that tried_{3sg}
 ‘(S)he chose an automatic car from those (s)he tried.’
- (19) a. *He llegit *una [de molt divertida] de les quatre novel·les que em vas deixar*.
 b. *Va llogar *una [de doble] de les habitacions que encara quedaven lliures*.
 c. *Va triar *un [d’automàtic] dels cotxes que va provar*.

How can the general contrast noted with respect to modification possibilities between nominals with a noun after Q and partitives be accounted for? A derivational approach could explain this contrast by claiming that if the noun moves up, it can pied pipe (some of) its modifiers as in (18), but no modifier can raise alone leaving the noun behind as in (19). So far so good. According to this approach, the basic structure from which the nominals in (18) are obtained through NP movement would be the partitive nominals in (20):

- (20) a. He llegit *una de les quatre novel·les tan divertides que em vas deixar*.
 ‘I’ve read one of the very amusing four novels you lent me’
- b. Va llogar *una de les habitacions dobles que encara quedaven lliures*.
 ‘(S)he rented one of the double rooms that were still free.’
- c. Va triar *un dels cotxes automàtics que va provar*.
 ‘(S)he chose one of the automatic cars (s)he tried.’

(although some speakers do not find it very natural, which is why I added a question mark in (iia)), in contrast it is completely rejected in partitives—see (iib), which is the Catalan counterpart of (ia):

(ii) a. ?N’he llegit *una de sola*.

b. *He llegit *una de sola de les novel·les que em vas deixar*.

In Catalan but not in Spanish the pronoun *en* is involved, but this does not seem to explain the difference between the two languages given that French patterns with Spanish:

(iii) a. J’en ai lu *un seul*.

b. J’ai lu *un seul des romans que tu m’as prêtés*.

However, I consider that the difference in number shown by the noun rules out the possibility of a derivational approach as the following remains unexplained: the noun is plural in its basic position—see (20)—but is singular once moved to the derived position—see (18). Perhaps it could be stated that the noun inflection for number would be determined later so that it would depend on the final position the noun would occupy, but this explanation looks quite ad hoc.

Even if the number issue could somehow be accounted for, there is a crucial difference in meaning between (18) and (20), which would remain unexplained in such an approach: in (18) the adjective qualifies only the element that the quantifier picks out, not the whole set of elements referred to in the PP. That is to say, in (18a) only the read novel among the four is qualified as being amusing, which contrasts with (20a), where the four novels are described as amusing. Similarly, in (18b) there is no implication that all the free rooms were double (they could be or not; we only know that the one rented is double), and in (18c) the adjective *automàtic* seems to be used to identify the type of car chosen, which probably implies that the other cars were not (at least not all) automatic. If we look at (20b,c), all the free rooms and all the cars tried were double and automatic, respectively. These differences in interpretation are not expected nor can they be accounted for in an analysis where the two structures are related derivationally.

Note as well the different intensifiers used in (18a) and (20a): *molt* ('very') vs. *tan* ('so'). They cannot be interchanged, which I take as further evidence against a derivational approach, according to which (18) would be obtained from (20) through NP movement.¹⁶

The approach that claims a single structure with two nouns in both types of nominal fails to account for the (18) vs. (19) contrast as well. It is worth noticing that the ungrammaticality of (19) cannot be attributed to any incompatibility of an empty noun with

¹⁶ These intensifiers have a complementary distribution in Catalan when interpreted as 'very': *molt* appears in indefinite nominals whereas *tan* is its counterpart in definite nominals, as shown in (i) (obviously *tan* can be licensed in indefinite nominals with other values: *No havia vist mai un noi tan tímid (com aquell)* 'I had never seen such a shy boy (as that one)', *Era un noi tan tímid!* 'He was such a shy boy!').

- (i) a. Ahir va venir a la classe un nen {*molt* / **tan*} tímid.
yesterday came_{3sg} to the class a boy very so shy
'A very shy boy joined the classgroup yesterday.'
b. Al cap d'una setmana, aquell nen {**molt* / *tan*} tímid ja es feia amb tothom.
after a week that boy very so shy already mixed_{3sg} with everybody
'A week later, that very shy boy already mixed with everybody.'

One explanation might be that *molt* and *tan* are two possible realisations of the same lexical item and that how it is actually realised depends on the final position the item occupies in the structure: as *tan* in (20a) because it is in the embedded definite nominal, but as *molt* in (18a) because it has come out of that definite nominal and is within an indefinite nominal.

those modifiers, as the grammatical examples in (21) demonstrate, where *e* stands for an empty noun:¹⁷

- (21) a. Aquest estiu he llegit dues novel·les_i avorrides i una *e_i* de molt divertida.
 this summer have_{1sg} read two novels boring and one of very amusing
 ‘This summer I read two boring novels and a very amusing one.’
- b. Com que no quedaven habitacions_i simples, en_i va llogar una *e_i* de doble.
 as no were-left rooms single NE rented_{3sg} one of double
 ‘As there were no single rooms left, (s)he rented a double one.’
- c. Va provar un cotxe_i amb marxés i un *e_i* d’automàtic.
 tried_{3sg} a car with gears and one of-automatic
 ‘(S)he tried a car with gears and an automatic one.’

Any theory that proposes two nouns in the structure of partitives needs a condition of some sort which ensures that those two nouns are lexically identical: the subset and the set must contain elements of the same type (*three of those books* can only be interpreted as ‘a subset of three books of that set of books’, so the proposed empty noun following *three* must be non-distinct from the overt noun *books*). However, given the possibility of examples with noun modifiers such as (18), which these theories would consider as partitives, the following question immediately arises: does the requirement of lexical identity apply only to nouns as is represented below in (22, 23) or to whole NPs—see the representation in (24, 25)?¹⁸

If the requirement of lexical identity applies only to nouns, the ungrammaticality of (23)—which corresponds to (19)—would not be expected nor explained as only the noun is

¹⁷ The reader will have noted that in Catalan *de* must be realised in these contexts of noun ellipsis. That is just a particular property of this language which is not relevant for the discussion, for the same contrast is found in other languages, where *de* is not required, such as Spanish. Observe the examples in (i), which are the Spanish equivalent of (19) above:

(i) a. *He leído una muy divertida de las cuatro novelas que me prestaste.
 b. *Alquiló una doble de las habitaciones que todavía quedaban libres.
 c. *Eligió uno automático de los coches que probó.

¹⁸ See the *lexical non-distinctness requirement* of Cardinaletti and Giusti (2006: §3.3.4), a particular kind of co-indexing that plays a role in the licensing of silent elements in the nominals under discussion. As they explicitly state, those silent elements are NPs (not just nouns), but as their data contains no noun modifiers, it is unclear how they would account for the contrast (18) vs. (19). Other analyses in the same line are less explicit: they do not formalise any condition of lexical identity and only mention the need for the two nouns to be lexically non-distinct, in general, by contrasting partitives with the *among* construction, which does not have that requirement (this is shown by the well-formedness of examples like *three dictionaries among those books* or *two policemen among those people*).

required to be identical in the two NPs and that is the case both in (22)—which corresponds to (18)—and (23).

(22) [$\rightarrow$ 18]

- a. He llegit una novel·la molt divertida de les quatre ~~novel·les~~ que em vas deixar.
- b. Va llogar una habitació doble de les ~~habitacions~~ que encara quedaven lliures.
- c. Va triar un cotxe automàtic dels ~~cotxes~~ que va provar.

(23) [$\rightarrow$ 19]

- a. *He llegit una ~~novel·la~~ *de* molt divertida de les quatre novel·les que em vas deixar.
- b. *Va llogar una ~~habitació~~ *de* doble de les habitacions que encara quedaven lliures.
- c. *Va triar un ~~cotxe~~ *d'*automàtic dels cotxes que va provar.

In contrast, if the requirement of identity applies to whole NPs, that could account for the ungrammaticality of (19) if its basic structure is (23), because the two NPs are not identical, or also maybe even if its basic structure is (24), where the NPs contain the same lexical material but part of it is overt in the upper NP and part of it is overt in the lower NP:

(24) [$\rightarrow$ 19]

- a. *He llegit una ~~novel·la~~ *de* molt divertida de les quatre novel·les ~~tan divertides~~ que em vas deixar.
- b. *Va llogar una ~~habitació~~ *de* doble de les habitacions ~~dobles~~ que encara quedaven lliures.
- c. *Va triar un ~~cotxe~~ *d'*automàtic dels cotxes ~~automàtics~~ que va provar.

An extra requirement would be needed that ensured the whole NP to be overt or covert, as shown in (25) —which corresponds to the well-formed (18), with the upper NP overt and the lower NP covert— or conversely in (26) —which corresponds to the well-formed (20):

(25) [$\rightarrow$ 18]

- a. He llegit una novel·la molt divertida de les quatre ~~novel·les tan divertides~~ que em vas deixar.
- b. Va llogar una habitació doble de les ~~habitacions dobles~~ que encara quedaven lliures.

- c. Va triar un cotxe automàtic dels cotxes automàtics que va provar.

(26) $[-\rightarrow 20]$

- He llegit una ~~novel·la molt divertida~~ de les quatre novel·les tan divertides que em vas deixar.
- Va llogar una ~~habitació doble~~ de les habitacions dobles que encara quedaven lliures.
- Va triar un ~~cotxe automàtic~~ dels cotxes automàtics que va provar.

Partial covertness would then be ruled out and so would (19), as represented in (24). However, under this analysis, the interpretation problem concerning (18) and (20) reappears: if we assume they share the basic structure as in (25-26), the only difference being which of the NPs is phonetically realised (the upper one or the lower one), then (18) should have the same interpretation as (20) contrary to fact.

The difficulties just seen disappear if different structures are attributed to partitive and indefinite nominals with an overt noun following the quantifier. Indeed, a very simple account of the data concerning N modifiers comes from an analysis of partitives that claims a single noun in their structure, as is defended in this thesis: if the partitive structure contains a single noun, which is in the embedded DP, that automatically excludes any noun modifier after the quantifier as there is no noun it can modify.

In contrast, in the nominals where a noun follows the quantifier as in the examples studied, one expects, as is the case, that noun to behave like any other noun and to allow modification. A lexical identity condition would be necessary only in this latter type of nominal (not in partitives, where a single noun is postulated), and given the interpretation of the data in (18), it would include the noun for sure and probably might also affect modifiers. I will not go deeper into the structure of this kind of nominal. What is relevant at this point is that the paradigm in (18) vs. (19) provides arguments in favour of a single noun structure for partitives, which is different from the structure that nominals of the type in (19) have. Recall the structures represented in (5), repeated below in (27) for convenience:

- (27) a. dues de [_{DP} les novel·les [_S que em vas recomanar]] partitive
 b. dues [_{NP} novel·les_i [_{PP} de les e_j que em vas recomanar]] non-partitive

More contrasts of the same sort of (18) and (19) are shown in (28) and (29):

- (28) a. *Una de les quatre habitacions dobles de la casa* era tancada.
 one of the four rooms doubles of the house was locked
 ‘One of the four double rooms in the house was locked.’
- b. *Una habitació doble de les quatre de la casa* era tancada.
 one room double of the four of the house was locked
 ‘One double room of the four in the house was locked.’
- (29) a. *Un dels músics estrangers que toquen al grup* no podrà actuar.
 one of-the musicians foreign that play in-the band not can_{fut.3sg} perform
 ‘One of the foreign musicians that play in the band won’t be able to perform.’
- b. *Un músic estranger dels que toquen al grup* no podrà actuar.
 one musician foreign of-the that play in-the band not can_{fut.3sg} perform
 ‘One foreign musician of those who play in the band won’t be able to perform.’

Again, in the partitive examples (28a) and (29a) all the rooms and all the musicians are double and foreigners, respectively. However, in (28b) and (29b) there is no such implication, and, on the contrary, the presence of the adjective modifying the noun which follows the quantifier seems to imply that the other rooms or musicians are not double or foreigners (at least not all of them).

2.1.3 Adjacency

Related to the possibilities of noun modification discussed in the previous section, another aspect in which partitives and indefinite nominals with a noun following the quantifier differ has to do with adjacency or, in other words, the possibility of inserting an element before the preposition *de*: partitives require the quantifier to be adjacent to the preposition, unlike nominals with an overt noun after the quantifier. An example of this contrast is (18a) and (19a), repeated here as (30a) and (30c) for convenience:

- (30) a. He llegit una novel·la *molt divertida* de les quatre que em vas deixar. (=18a)
- b. He llegit una novel·la de les quatre que em vas deixar *molt divertida*.
- c. *He llegit una de *molt divertida* de les quatre novel·les que em vas deixar. (=19a)
- d. He llegit una de les quatre novel·les que em vas deixar *molt divertida*.

The modifier *molt divertida* ('very amusing') can appear both after the noun as in (30a) or at the end of the whole nominal as in (30b). In partitives this modifier can appear only in final position, as illustrated by the ungrammaticality of (30c) and the well-formedness of (30d).

Syntactically we take this contrast to indicate that (30a,b) contain two noun modifiers of *novel·la*, an AP (*molt divertida*) and a PP (*de les quatre que em vas deixar*), which can appear in any order: the sentences can be paraphrased as 'I read a novel which was very good fun and which belongs to the set of four novels that were lent to me'. In contrast, in the partitive nominals (see 30c,d), the apparent PP and the AP cannot switch places, from which I infer that there is only one noun modifier, the AP, which must be the most peripheral element.¹⁹

The same contrasts obtain with a relative clause —here *que m'ha encantat* ('which I loved'):

- (31) a. He llegit una novel·la *que m'ha encantat* de les quatre que em vas deixar.
 b. He llegit una novel·la de les quatre que em vas deixar *que m'ha encantat*.
 c. *He llegit una *que m'ha encantat* de les quatre novel·les que em vas deixar.
 d. He llegit una de les quatre novel·les que em vas deixar *que m'ha encantat*.

The fact that (31a) admits a relative clause between the noun and the PP contrary to (31c) reinforces the idea that the PP in (31a,b) is a noun modifier in contrast with (31c,d). As a modifier, the PP can be paraphrased by a relative clause with *be* in nominals with an overt noun following the quantifier —see (32a,b)— but not in partitives —see (32c,d):

- (32) a. He llegit una novel·la [de les quatre que em vas deixar].
 b. He llegit una novel·la [*que és* de les quatre que em vas deixar].
 have_{1sg} read a novel that is of the four that to-me lent_{2sg}

¹⁹ See Cardinaletti and Giusti (2006: §3.1) for a discussion on how to analyse this PP and their arguments for not considering it as a complement of N (because it is predicative) nor as an adjunct —an optional partitive PP such as *among*— (because it is more restrictive). They claim that the optional partitive PP (with preposition *tra/fra* 'among' in Italian) can be introduced by *di* ('of') only if fronted in Italian.

A possibility of analysis of the examples with an overt N following Q would be to consider them as an instantiation of the *among* construction and extend the cases where this 'optional partitive' can contain the preposition *di* to the position adjacent to the noun, but only in quantitatives. It is not clear though why a universal Q or demonstratives should reject the optional PP with *di* but admit the PP with *among*. Maybe it has to do with the difference in meaning between *of* (which is usually semantically vacuous) and *among*. I leave this question open.

- c. He llegit una [de les quatre novel·les que em vas deixar].
- d. *He llegit una [*que és* de les quatre novel·les que em vas deixar].
 have_{1sg} read one that is of the four novels that to-me lent_{2sg}

Parentheticals are also allowed in nominals with an overt noun after the quantifier, but not, as expected, in partitives. Observe (33), where the time adverbial *aquest mes* ('this month') has been inserted:

- (33) a. He llegit una novel·la, *aquest mes*, de les quatre que em vas deixar que m'ha encantat.
- b. *He llegit una, *aquest mes*, de les quatre novel·les que em vas deixar que m'ha encantat.

The well-formedness of (34) with no overt noun following the quantifier is not surprising as it actually corresponds to the elliptical version of (33a) and not the partitive (33b):

- (34) N'he llegit una, *aquest mes*, de les quatre que em vas deixar que m'ha encantat.

In conclusion, any approach that attributes the same analysis to partitives and nominals with a noun following Q would have serious difficulties in accounting for the contrasts discussed related to adjacency.

2.1.4 Interpretation

Besides the syntactic differences described so far, the two types of nominals have different semantic properties. Whereas partitives are by definition specific and consequently are not allowed in non-specific contexts nor can they have a generic reading, nominals with an overt noun following the quantifier behave like quantitatives in general in that they can be both specific and non-specific and they allow a generic reading or are possible in non-specific contexts such as the existential construction or donkey sentences. All the following data illustrate the semantic contrast just stated.

2.1.4.1 Genericity

Consider the following examples in relation to the possibility of a generic reading:²⁰

- (35) a. *Un gos ben entrenat* sempre seu a la primera.
 a dog well trained always sits immediately
 ‘A well-trained dog always sits immediately.’
 b. *Un gos dels ben entrenats* sempre seu a la primera.
 a dog of-the well trained always sits immediately
 ‘A dog of those that are well-trained always sits immediately.’
 c. *Un dels gossos ben entrenats* sempre seu a la primera.
 one of-the dogs well trained always sits immediately
 ‘One of the well-trained dogs always sits immediately.’

The most natural interpretation of (35a) is as a generic statement with (35b) having the same generic reading: in that case (35b) could be paraphrased as ‘a dog, if it has the property of being well trained, then it always sits immediately’. In contrast, that interpretation is impossible in (35c), where the partitive nominal forces a specific reading: it can only refer to a particular dog, named e.g. Tim, which belongs to a particular set of dogs that share the property of being well trained.²¹ Certainly, the nominal in (35b) —and even in (35a)— can also have this specific reading in the appropriate context, but the relevant property here is that it admits a generic interpretation contrary to partitives.

Similar examples are given in (36):

- (36) a. *Una noia que vagi sempre a la moda* no es posaria aquest jersei.
 a girl that goes_{subj} always to the fashion not would_{3sg}-wear this jumper
 ‘A girl that always follows fashion would not wear this jumper.’

²⁰ Recall that in Catalan *un* can be both the indefinite article and the numeral *one*. In the glosses it was translated according to the interpretation of the sentence: as ‘a’ in (35a,b) and as ‘one’ in (35c).

²¹ A non-specific reading would be possible in a partitive nominal such as *qualsevol dels gossos ben entrenats* ‘any of the well-trained dogs’, but given that the embedded DP is obligatorily interpreted as specific (it refers to a specific set of dogs), the whole nominal always rejects a generic reading whether or not no particular dog is referred to as a subset.

- b. *Una noia de les que van sempre a la moda* no es posaria aquest jersei.
 a girl of the that goes_{ind} always to the fashion not would_{3sg}-wear this jumper
 ‘A girl of those that always follow fashion would not wear this jumper.’
- c. *Una de les noies que van sempre a la moda* no es posaria aquest jersei.
 a of the girls that goes_{ind} always to the fashion not would_{3sg}-wear this jumper
 ‘One of the girls that always follow fashion would not wear this jumper.’

Again, (36b) can have a generic interpretation equivalent to (36a)²² (meaning ‘no girl that always follows fashion would wear this jumper’ or ‘a girl, if she is of the fashion-conscious type, would not wear this jumper’) whereas the partitive nominal in (36c) has a specific reading and only refers to a particular fashion-conscious girl, e.g. Jane.²³

2.1.4.2 Existential constructions

In this subsection we will explore the behaviour of the nominals with an overt noun after Q under discussion in comparison with partitives in two types of existential constructions, both entailing a non-specific reading: *there*-sentences and existential *have*.

A) *There*-sentences

In an existential context such as that of *there*-sentences, which requires a non-specific nominal, partitives are not licensed as expected as in (37c) and (38c), but the nominals with a noun following the quantifier are, as illustrated in (37b) and (38b) (this data is in Spanish²⁴ because in Catalan the *definiteness effect*²⁵ does not apply in *there*-sentences, and no contrast would show up):

²² In this case, the generic reading is the only one available in (36a) given that the verb inside the relative clause is subjunctive.

²³ Again, although a non-specific reading is available in a partitive such as *cap de les noies que van a la moda* ‘none of the girls that follow fashion’ and hence the subset does not necessarily have to refer to a particular element or group of elements in partitives, nevertheless the whole nominal always rejects a generic reading given that the embedded DP is invariably specific.

²⁴ I thank Josep M. Brucart, M. Lluïsa Hernanz and Ángel Gallego for their help with the Spanish data.

²⁵ The so-called definiteness effect has in fact more to do with specificity than with definiteness as the examples in (37) and (38) prove. See also Sánchez López (1999: 1044), who describes the distribution of indefinite nominals in existential contexts in specificity terms: she observes that partitives, being specific, are rejected in these contexts, as illustrated in (ib)—cf. (ia).

(i) a.	Había {algunos/muchos/tres} libros en la mesa.	non-partitives
	‘There were {some/many/three} books on the table.’	
b.	*Había {algunos/muchos/tres} de los libros en la mesa.	partitives
	‘There were {some/many/three} of the books on the table.’	

- (37) a. En el despacho hay *una estufa antigua*.
 in the study there-has a fire antique
 ‘In the study there is an antique fire.’
- b. En el despacho hay *una estufa de las antiguas*.
 in the study there-has a fire of the antique
 ‘In the study there is a fire of the antique type.’
- c. *En el despacho hay *una de las estufas antiguas*.
 in the study there-has one of the fire old
 ‘In the study there is one of these specific antique fires.’
- (38) a. Hay *muchas hormigas aladas* en mi jardín.
 there-are many ants winged in my garden
 ‘There are many winged ants in my garden.’
- b. Hay *muchas hormigas de las aladas* en mi jardín.
 there-are many ants of the winged in my garden
 ‘There are many ants of the winged type in my garden.’
- c. *Hay *muchas de las hormigas aladas* en mi jardín.
 there-are many of the ants winged in my garden
 ‘There are many of these very winged ants in my garden.’

The nominals *las antiguas* in (37b) and *las aladas* in (38b) have a type interpretation: they denote a class of fires or ants, not a set of elements as is the case in partitives —see (37c) and (38c). The PP is then interpreted as a property of the noun (similar to a classifier adjective as in (37a) and (38a)),²⁶ which allows a non-specific interpretation of the whole nominal as required in the existential construction.

The “kind of” meaning illustrated by the examples in (37b) and (38b) is not always available in the PP (in cases where the nominal inside cannot have a type reading) and then the result is not well-formed, although the partitive version of it is always more degraded. Compare (39a, 40a) with (39b, 40b):

²⁶ Note that *antigua* in (37a) can also behave as a qualitative adjective, as indicated by the possibility of admitting the superlative suffix *-ísima* or of being modified by a gradable adverb such as *muy* ‘very’: *En el despacho hay una estufa {antiquísima / muy antigua}* (‘In the office there is a very old fire’). This is not the case with *aladas* in (38a), which can only work as a classifier adjective and is always interpreted as a property that characterises a type of ants.

- (39) a. ??Encima de la mesa hay *dos libros de los tres que compré esta semana.*
 on of the table there-have two books of the three that bought_{1sg} this week
 ‘On the table there are two books of the three I bought this week.’
- b. *Encima de la mesa hay *dos de los tres libros que compré esta semana.*
 on of the table there-have two of the three books that bought_{1sg} this week
 ‘On the table there are two of the three books I bought this week.’
- (40) a. ??En la UCI hay *un chico de los que hirieron ayer en la manifestación.*
 in the UCI there-has a boy of the that injured_{3pl} yesterday in the demonstration
 ‘In the intensive care unit is a boy of those who got injured yesterday in the demonstration.’
- b. *En la UCI hay *uno de los chicos que hirieron ayer en la manifestación.*
 in the UCI there-has one of the boys that injured_{3pl} yesterday in the demonstration
 ‘In the intensive care unit is one of the boys who got injured yesterday in the demonstration.’

B) Existential *have*

A paradigm similar to (37) and (38) can be found in Catalan when the verb *tenir* ‘have’ is used existentially (the same would apply to Spanish or other languages):

- (41) a. Tinc *un cotxe petit.*
 have_{1sg}-got a car small
 ‘I’ve got a small car.’
- b. Tinc *un cotxe dels petits.*
 have_{1sg}-got a car of-the small
 ‘I’ve got a car of the small type.’
- c. *Tinc *un dels cotxes petits.*
 have_{1sg}-got one of-the cars small
 ‘I’ve got one of the small cars.’

(41a) and (41b) are equivalent, they denote the existence of a car of a certain type (small), but (41c) is ungrammatical under that existential reading as the partitive denotes a specific car (or in any case a car that belongs to a specific set of cars).²⁷

2.1.4.3 Donkey sentences

Donkey sentences are another context where non-specific nominals are required, and they show the same pattern as was seen above in existential sentences: partitives are rejected in them as expected (see 42c), in contrast with nominals with an overt noun after the quantifier (see 42b), which are fine if they have a non-specific reading.²⁸

- (42) a. Tothom qui té *un company de feina molt xerraire* procura evitar-lo.
 everyone who has a colleague of work very talkative tries avoid-him
 ‘Everyone that has a very talkative colleague tries to avoid him.’
- b. Tothom qui té *un company de feina dels que no callen* procura evitar-lo.
 everyone who has a colleague of work of-the that not keep-quiet_{3pl} tries avoid-him
 ‘Everyone that has a colleague of those who do not keep quiet, tries to avoid him.’
- c. *Tothom qui té *un dels companys de feina que no callen* procura evitar-lo.
 everyone who has one-of-the colleagues of work that not keep-quiet_{3pl} tries avoid-him
 ‘Everyone that has one of the colleagues who do not keep quiet, tries to avoid him.’

(42a) and (42b) have a very similar reading—the indefinite nominal is interpreted as a free variable—and the PP *dels que no callen* in (42b) has a “kind of” interpretation. That reading is not possible in partitives (see 42c), and the result is ungrammatical.

²⁷ Of course, the sentence would be acceptable if the verb were not interpreted existentially but rather as meaning possession, with a secondary predication or not:

- (i) a. Tinc un dels cotxes petits.
 (= ‘Among a contextualised set of small cars, one is in my possession’)
 b. Tinc un dels cotxes petits espatllat.
 (= ‘I have several cars and among the small ones there is one that is broken’)

The sentence in (ia) is equivalent to *Un dels cotxes petits és meu* (‘One of the small cars is mine’); (ib) contains a small clause where *espatllat* (‘broken’) is predicated from *un dels cotxes*.

²⁸ Note that, like before, if the PP cannot get a “kind of” interpretation and therefore the whole nominal has a specific reading, then it is not licensed in the donkey sentence:

- (i) *Tot el qui té *un company de feina dels que es van emborratxar a la festa*, procura evitar-lo.
 all the who has-got a colleague of work of-the that got-drunk in the party tries avoid-him
 ‘Everyone that has got a colleague of those who got drunk in the party tries to avoid him.’

2.1.4.4 Quantifier scope

Further evidence of the semantic differences between partitives and nominals with a noun following Q is provided by contexts of non-selective binding, where an indefinite has to be interpreted under the scope of an external operator. Observe (43a), taken from Picallo (1994: 155),²⁹ and compare it to (43b,c):

- (43) a. En la majoria dels casos, si *una calaixera resistant* ha durat trenta anys,
 in the majority of-the cases if a chest resistant has lasted thirty years
 en durarà uns altres trenta.
 NE last_{fut.3sg} a_{pl} other thirty
 ‘In the majority of cases, if *a resistant chest* has lasted for thirty years, it will last
 for thirty more.’
- b. En la majoria dels casos, si *una calaixera de les resistents* ha durat trenta anys,
 in the majority of-the cases if a chest of the resistant has lasted thirty years
 en durarà uns altres trenta.
 CL last_{fut.3sg} a_{pl} other thirty
 ‘In the majority of cases, if *a chest of a resistant type* has lasted for thirty years, it
 will last for thirty more.’
- c. ??/*En la majoria dels casos, si *una de les calaixeres resistents* ha durat trenta
 in the majority of-the cases if one of the chests resistant has lasted thirty
 anys, en durarà uns altres trenta.
 years NE last_{fut.3sg} a_{pl} other thirty
 ‘In the majority of cases, if *one of the resistant chests* has lasted for thirty years, it
 will last for thirty more.’

The nominal in italics in both (43a) and (43b) has a weak interpretation, for it is interpreted as a variable under the scope of the quantified adverbial *en la majoria dels casos* (‘in the majority of cases’): these examples can be paraphrased as ‘the majority of resistant chests that have lasted for thirty years last for thirty more’. In contrast, the sentence in (43c) containing a partitive is degraded because it does not allow a weak interpretation of the nominal: *una de les calaixeres resistents* refers to a specific chest and, therefore, cannot be interpreted as a variable. This result is similar to that obtained by Picallo (1994: 154ff) with indefinite

²⁹ Example (43a) is adapted by Picallo from an example in Heim (1982).

nominals containing a prenominal qualitative adjective in Catalan, which obligatorily have a specific reading like partitives, as shown in (44), which is equal to (43a) but with the adjective *resistent* in prenominal position:

- (44) ^{??}/*En la majoria dels casos, si *una resistent calaixera* ha durant trenta anys, en durarà uns altres trenta.

Similarly, in the following examples the nominals in italics can be interpreted under the scope of the other quantified nominal *dues noies* ('two girls') in (45a) and (45b) but not in (45c):

- (45) a. Dues noies van llegir *un poema satíric de Salvador Espriu*.
 two girls read_{3pl} a poem satirical of Salvador Espriu
 'Two girls read *a satirical poem by Salvador Espriu*.'
- b. Dues noies van llegir *un poema dels satírics de Salvador Espriu*.
 two girls read_{3pl} a poem of-the satirical of Salvador Espriu
 'Two girls read *a poem of the satirical type by Salvador Espriu*.'
- c. Dues noies van llegir *un dels poemes satírics de Salvador Espriu*.
 two girls read_{3pl} one of-the poems satirical of Salvador Espriu
 'Two girls read *one of the satirical poems by Salvador Espriu*.'

The nominals in italics in (45a) and (45b) have two possible readings: (i) a weak reading (they are under the scope of *dues noies* and, therefore, interpreted as a variable: each girl reads a different poem) and (ii) a strong reading (they are out of the scope of *dues noies* and have a fixed denotation: the two girls read the same poem). As expected, the partitive in (45c) only has the strong reading.

2.1.4.5 Copular sentences

The two types of copular sentences, predicative and equative, constitute a good test to see that partitives and nominals with a noun after the quantifiers do not pattern alike: the former are licensed in equative copular sentences just as are definite nominals—although with some differences as will be seen—whereas the latter can only be accepted in predicative copular sentences, like indefinite nominals in general.

First of all, let us describe briefly the properties of the two types of copular sentences. Observe the paradigm in (46):

- (46) a. L'Oriol és *cuiner*.
 'Oriol is a cook.'
 b. L'Oriol és *un cuiner*.
 'Oriol is a cook.'
 c. L'Oriol és *el cuiner*.
 'Oriol is the cook.'

(46a) and (46b) are predicative copular sentences (the nominal in italics is interpreted as a property that indicates the class to which the subject belongs), and (46c) is an equative copular sentence (the nominal in italics is referential and identifies the individual that the subject denotes).³⁰ Syntactically, the nominal predicate in predicative sentences can be realised as a bare nominal—*cuiner*—or as an indefinite nominal—*un cuiner*—whereas in equative sentences it is a definite nominal—*el cuiner*.

The different types of nominal predicates do not correspond to the same interrogative words and behave differently with respect to order possibilities. Thus, the predicate of predicative sentences can be the answer to a *Què* ('what') question but not to a *Qui* ('who') question, whereas the predicate of equative sentences can be the answer to a *Qui* question but not to a *Què* question (except that the definite nominal is interpreted as a property) as shown in (47).³¹

- (47) a. Què és l'Oriol? És {cuiner / un cuiner / el cuiner}.
 what is the-Oriol? is cook a cook the cook
 'What is Oriol? He's {a cook / a cook / the cook}.'
 b. Qui és l'Oriol? És {*cuiner / *un cuiner / el cuiner}.
 who is the-Oriol is cook a cook the cook
 'Who is Oriol? He's {a cook / a cook / the cook}.'

With respect to order possibilities, the predicate of predicative sentences cannot precede the verb—see the ungrammatical (48a,b)—contrary to the predicate of equative sentences—see the well-formed (48c).

³⁰ Although definite descriptions such as *el cuiner* 'the cook' can be used as properties and, in that case, (46c) would be interpreted as a predicative copular sentence.

³¹ This was observed by Lyons (1977: 473). See also Bosque (1984: 247), among others.

- (48) a. *Cuiner és l’Oriol.
 b. *Un cuiner és l’Oriol.
 c. El cuiner és l’Oriol.

Observe now how partitives and the nominals with a noun after the quantifier under discussion behave in copular sentences. There is a contrast between (49) and (50):

- (49) a. L’Albert Adrià és *un dels cuiners que fan cuina creativa*.
 the-Albert Adrià is one of-the cooks that do cooking creative
 ‘Albert Adrià is *one of the cooks who do creative cooking*.’
 b. L’Albert Adrià és *un dels cuiners que han treballat al Bulli*.
 the-Albert Adrià is one of-the cooks that have worked at-the Bulli
 ‘Albert Adrià is *one of the cooks who have worked at the Bulli*.’
- (50) a. L’Albert Adrià és *un cuiner dels que fan cuina creativa*.
 the-Albert Adrià is a cook of-the that do cooking creative
 ‘Albert Adrià is *a cook of those who do creative cooking*.’
 b. L’Albert Adrià és *un cuiner dels que han treballat al Bulli*.
 the-Albert Adrià is a cook of-the that have worked at-the Bulli
 ‘Albert Adrià is *a cook of those who have worked at the Bulli*.’

The nominals in italics in (49) have a partitive interpretation—they are true partitives—and denote a specific individual that belongs to a particular set of individuals. The examples in (49) behave like equative copular sentences although they have an indefinite nominal as a predicate, for there is a sort of identification between two individuals, they correspond to the *Qui* (‘who’) question—see (51)—and the nominal in italics is accepted in preverbal position—see (52):

- (51) a. Qui és l’Albert Adrià?
 És *un dels cuiners que {fan cuina creativa / han treballat al Bulli}*.
 b. Què és l’Albert Adrià?
 #És *un dels cuiners que {fan cuina creativa / han treballat al Bulli}*.

- (52) a. *Un dels cuiners que fan cuina creativa* és l'Albert Adrià.
 b. *Un dels cuiners que han treballat al Bulli* és l'Albert Adrià.

In contrast, the nominals in italics in (50) pattern like common indefinite nominals and form predicative copular sentences. The tendency of a “kind of” reading for the PP becomes stronger in the copular construction: in (50a) it is the only available reading according to my judgments, and even the PP in (50b) is interpreted as a property denoting a class of cooks (those with the experience of having worked at the Bulli, a restaurant famous for its creative cooking, and therefore a class of cooks with a certain style of cooking).

The examples in (50) behave like typical predicative copular sentences: they correspond to the *Què* (‘what’) question—see (53)³²—and do not allow the indefinite nominal to be in preverbal position—see (54):

- (53) a. Qui és l'Albert Adrià?
 #És un cuiner {*dels que fan cuina creativa* / *dels que han treballat al Bulli*}.
 b. Què és l'Albert Adrià?
 És un cuiner {*dels que fan cuina creativa* / *dels que han treballat al Bulli*}.
- (54) a. **Un cuiner dels que fan cuina creativa* és l'Albert Adrià.
 b. **Un cuiner dels que han treballat al Bulli* és l'Albert Adrià.

2.1.4.6 Presupposition of existence

The specific reading attributed to partitives is related since Enç (1991) to presupposition of existence: partitives always presuppose the existence of the set or whole from which the quantifier picks out a subset or a part, and, in that sense, they are always specific. In contrast, indefinite nominals with a noun following the quantifier do not have such an implication, as the well-formed examples (55a) and (56a) show.

³² For some reason the answer to the *qui* question in (53a) does not seem to be as unacceptable as was the answer with a partitive to the *què* question in (51b), but what matters is that there is still a contrast between (53a) and the completely acceptable and more natural (53b), and especially a strong contrast between (51b) and (53b).

- (55) a. La Marta ens va explicar *un acudit dels seus*: se'l va inventar en aquell moment!
 the Marta to-us told a joke of-the hers SE-it made_{3sg}-up in that moment
 'Marta told us *a joke of hers* (=of the type she usually tells): she made it up then!'
- b. # La Marta ens va explicar *un dels seus acudits*: se'l va inventar en aquell moment!
 'Marta told us *one of her jokes*: she made it up then!'

(56) At a bakery:

- a. —Dóna'm *un llonguet dels grossos*.
 give-me a roll of-the big
 'Can I have *a roll of the big type*, please?'
 —Ho sento, no me'n queda cap, només en tinc *dels petits*.
 it sorry_{1sg} not to-me-NE is-left none only NE have_{1sg}-got of-the small
 'I'm sorry, I have none left; I only have *some of the small type*.'
- b. #—Dóna'm *un dels llonguets grossos*.
 give-me one of-the rolls big
 'Can I have *one of the big rolls*, please?'
 #—Ho sento, no me'n queda cap, només en tinc *dels petits*.
 it sorry_{1sg} not to-me-NE is-left none only NE have_{1sg}-got of-the small
 'I'm sorry, I have none left; I only have *some of the small ones*.'

The well-formedness of (55a) indicates that the PP *dels seus* does not refer to an existing list of jokes but has a "kind of" reading (*un acudit dels seus* means 'a joke of the kind of jokes she usually tells', e.g. political or racist): there is no presupposition of existence implied and, therefore, no contradiction to a statement that denies a previous existence, as is the case in (55b) with a partitive.

In (56a), a customer asks for one roll of a certain type (i.e. big), and the answer that none is left is completely adequate: there is no presupposition of existence involved, contrary to (56b). Moreover, note that in (56a) the shop assistant claims that only rolls of the small type are left by using the bare nominal [*e dels petits*], with a null quantifier, which has no partitive counterpart.

From the contrasts shown in (55) and (56), I conclude that only true partitives are inherently presuppositional: the construction in itself implies partition and, therefore, presupposition of existence. That is not the case in nominals with a noun following the

quantifier, which tend to get a “kind of” reading of the PP—as in (55a) and (56a)—whenever possible. When the PP does not get a “kind of” reading as in (57), a presupposition of existence is involved in the same way it is in indefinite nominals such as (58) with N modifiers *de la classe* and *de la meva biblioteca privada*.

- (57) a. tres nens dels que van a la meva classe
 three children of-the that go to my class
 ‘Three children of those in my group-class.’
- b. molts llibres dels que formen la meva biblioteca privada
 many books of-the that constitute the my library private
 ‘Many books of those that constitute my private library.’
- (58) a. tres nens de la classe
 three children of the class
 ‘three children in my class’
- b. molts llibres de la meva biblioteca privada
 many books of the my library private
 ‘many books from my private library’

As stated in the Introduction, we claim that the examples in (57) assimilate to (58) and not to true partitives, for the notion involved in (57) is more that of characterising the elements denoted by the Ns by giving the information that they belong to a group of individuals than a partition formally expressed. In both (57) and (58) the PP can be considered as a N modifier that provides extra information about the nouns. So the presupposition of existence is not connected to the notion of partition as it is in partitives, which are presuppositional by definition.

2.1.4.7 Vague quantifiers

As has been noted in the literature, in partitive nominals vague quantifiers acquire an interpretation that is proportional to the size of the set from which the quantifier picks out a subset. Consider (59):

- (59) a. L'Abel s'ha llegit *moltes novel·les de misteri* aquest estiu.
 the-Abel SE-has read many novels of mystery this summer
 'Abel read many mystery novels this summer.'
- b. L'Abel s'ha llegit *moltes de les novel·les que li vaig deixar*.
 the-Abel SE-has read many of the novels that him lent_{1sg}
 'Abel has read many of the novels I lent him.'

In (59a) it is stated that Abel read a large number of mystery novels in general terms. The particular number of novels could vary depending on how much Abel likes reading or other factors, but it must be a reasonably high number. In contrast, in (59b) it does not need to be a large number at all, but the sentence only tells us that it is somewhat more than half of the number of novels that were lent to him. For example, in a situation where Abel had read 4 or 5 novels, (59a) would not be very adequate as 4 or 5 is not a very big number that justifies the usage of *moltes* in general terms. However, in (59b) the adequacy would depend on the number of novels that had been lent to him: if it were 20, then the sentence would not be appropriate as 4 or 5 is a small amount with respect to 20, but if the number of novels lent had been 6 instead, then *moltes* would describe adequately that situation since 4 or 5 is more than the half of 6.

Observe now (60), which is like (59) but with the quantitative and the partitive replaced with an indefinite nominal with a noun following the quantifier:

- (60) a. L'Abel s'ha llegit *moltes novel·les de les de misteri* aquest estiu.
 the-Abel SE-has read many novels of the of mystery this summer
 'Abel read many novels of the mystery type this summer.'
- b. L'Abel s'ha llegit *moltes novel·les de les que li vaig deixar*.
 the-Abel SE-has read many novels of the that him lent_{1sg}
 'Abel has read many novels of those I lent him.'

(60a), with a "kind of" reading of the PP, works exactly as (59a): Abel is expected to have read a high number of novels in general terms. More interesting is the example in (60b), where, although the embedded nominal does not have a type reading, one tends to interpret

Abel as having read a large number of novels as well, and the PP adds the information that those many novels he read were lent to him by me.

Similarly, in (61) the quantifier *un* ('one') is interpreted in relation to the number in the embedded nominal in partitives—see (61a)—but not in nominals with a noun after the quantifier—see (61b):

- (61) a. La Marta ha explicat *només un dels quatre acudits que li vaig dir ahir*.
 the Marta has told only one of-the four jokes that her told_{1sg} yesterday
 'Marta told only one of the four jokes I told her yesterday.'
 b. La Marta ha explicat *només un acudit dels quatre que li vaig dir ahir*.
 the Marta has told only one joke of-the four that her told yesterday
 'Marta told only one joke which was one of the four I told her yesterday'

(61a) does not imply that only one joke was told in total, whereas (61b) does: a single joke that happens to be one of those learnt yesterday. This contrast is illustrated in (62):

- (62) a. Entre el munt d'acudits que ens ha fet escoltar, la Marta ha explicat
 among the pile of-jokes that us has made listen-to the Marta has told
només un dels quatre acudits que li vaig dir ahir.
 only one of-the four jokes that her told_{1sg} yesterday
 'Among the pile of jokes she made us listen to, Marta told only one of the four jokes I had told her yesterday.'
 b. ??/*Entre el munt d'acudits que ens ha fet escoltar, la Marta ha explicat
 among the pile of-jokes that us has made listen-to the Marta has told
només un acudit dels quatre que li vaig dir ahir.
 only one joke of-the four that her told_{1sg} yesterday
 'Among the pile of jokes she made us listen to, Marta told only one joke which was one of the four I had told her yesterday.'

(62a) is well-formed despite the fact that Marta has told a lot of jokes because the sequence *només un* ('only one') refers only to the set of four jokes, whereas that does not seem to be the case in (62b).

To conclude, the proportional reading typical of partitives does not seem to obtain or at least it is not the most salient reading in nominals with an overt noun after the quantifier:

again this type of nominal patterns with ordinary indefinite nominals and differs from partitives. Despite the differences in interpretation being a bit subtle, I take them as further evidence against a common analysis of partitives and nominals like (1b).

2.1.5 Co-occurrence with partitives

Partitives do not seem to allow recursiveness, though the well-formed sentences in (59) contain an indefinite nominal (in italics) with a quantifier followed by two PPs that look like ‘partitive’ PPs:

- (63) a. *Un [dels companys de la feina] [dels que no callen mai] m’ha fet*
 one of-the colleagues of the work of-the that not shut_{3pl}-up never to-me-has made
una visita: quin mal de cap!
 a visit what ache of head
 ‘One of the colleagues of those that never shut up (=of the very talkative type)
 visited me: what a headache!’
- b. *Un [dels companys de la feina] [dels que em van presentar ahir]*
 one of-the colleagues of the work of-the that to-me introduced_{3pl} yesterday
m’ha convidat a sopar.
 me-has invited to have-dinner
 ‘One of the colleagues of those I was introduced to yesterday has invited me for
 dinner.’

The examples in (63) do not contain recursive partitives as the interpretation is not that of a subset of a subset of a set but a partitive which is modified by a PP which could be paraphrased by a relative clause of the sort in (64), no matter if the PP has a “kind of” reading as in (63a) or not as in (63b):

- (64) a. *Un dels companys de la feina que és molt xerraire m’ha fet una visita.*
 one of-the colleagues of the work that is very talkative to-me-has made a visit
 ‘One of the colleagues who is very talkative visited me.’

- b. *Un dels companys de la feina que resulta que me'l* *van presentar ahir*
 one of-the colleagues of the work that results that to-me-him introduced_{3pl} yesterday
juntament amb altres m'ha convidat a sopar.
 together with others me-has invited to have-dinner
 'One of the colleagues that happens to be among those I was introduced to yesterday
 has invited me for dinner.'

Thus, I take the co-occurrence of the two PPs in the nominals in italics in (63) as an indication that the second PP is of a different sort: a noun modifier just as an AP or a relative clause could be. This claim is supported by the fact that the "PPs" cannot be interchanged, as illustrated by the ungrammatical examples in (65) (recall the discussion on adjacency in §2.1.3):

- (65) a. **Un [dels que no callen mai] [dels companys de la feina] m'ha fet una visita.*
 b. **Un [dels que em van presentar ahir] [dels companys de la feina] m'ha convidat a sopar.*

So our conclusion is that in (63) a PP modifier has been added to a partitive nominal. What happens if a PP of that sort is added, instead of to a partitive, to the non-partitive version with a noun following the quantifier? Observe (66):

- (66) a. ^{??}/**Un company [dels de la feina] [dels que no callen mai] m'ha fet*
 one colleague of-the of the work of-the that not shut_{3pl}-up never to-me-has made
una visita.
 a visit
 'One colleague among those at work of those that never shut up (=of the very
 talkative type) visited me.'
 b. ^{??}/**Un company [dels de la feina] [dels que em van presentar ahir]*
 one colleague of-the of the work of-the that to-me introduced_{3pl} yesterday
m'ha convidat a sopar.
 me-has invited to have-dinner
 'One colleague among those at work of those I was introduced to yesterday has
 invited me for dinner.'

Again the nominals with an overt noun following the quantifier show a different behaviour with respect to partitives: this is expected if the PP in the former acts as a noun modifier itself, as was concluded above. The ungrammaticality of the examples in (66) can be considered then as evidence that the two PPs are of the same sort given that they cannot co-occur.

(67) further illustrates the contrast between partitives and nominals with an overt noun following the quantifier with respect to allowing or not a PP modifier.

- (67) a. He llegit molts [dels llibres del programa][dels que el professor
have_{1sg} read many of-the books of-the syllabus of-the that the lecturer
ens va recomanar].
to-us recommended_{3sg}
'I read many of the books in the syllabus among those recommended to us by the lecturer.'
- b. ^{??}/*He llegit molts llibres [dels del programa][dels que el professor ens va recomanar].
'I read many books of the ones in the programme among those recommended to us by the lecturer.'

(67a) is parallel to the examples in (63): a partitive nominal is modified by a PP and the result is grammatical; in contrast, (67b) does not contain a partitive but an indefinite nominal with a noun after the quantifier and both PPs work as noun modifiers. As suggested above, the co-occurrence of two PP modifiers of the same type could be the reason why (67b) is odd (as it would be in an example like **la casa de fusta de pedra* lit. the house of wood of stone, 'the stone wooden house'). In any case, what I find interesting is that the contrast shown in (67) is further evidence of the difference in behaviour between partitives and nominals with an overt noun.³³

³³ Cardinaletti and Giusti (2006: §3.1) deal with the possibilities of adjacency of what they call 'selected partitive PP' (always with preposition *di* 'of') and 'adjunct partitive PP' (normally with preposition *tra/fra* 'among', but sometimes with *di*). These authors state that "the adjunct partitive can only be introduced by *tra/fra* and not by *di* if it is adjacent to the noun phrase" (*di* is only possible when the adjunct partitive appears in sentence-initial position). Observe (i) (= their (104)), where the first PP is a selected partitive and the second is an adjunct partitive (the brackets and bold are mine):

(i) a. Ho letto molti libri di storia [**di** quelli che mi avevi consigliato] [**tra** quelli in programma].
have_{1sg} read many books of hystory of those that to-me had_{2sg} recommended among those in syllabus.
'I've read many books on history of those you had recommended to me among those in the syllabus.'

b. *Ho letto molti libri di storia [**di** quelli che mi avevi consigliato] [**di** quelli in programma].

2.1.6 Conclusions

To sum up, in this section both syntactic and semantic evidence has been provided against considering indefinite nominals such as *dues novel·les de les que em vas recomanar* ('two novels of those you recommended to me') as instances of partitive nominals despite their apparent similarity with true partitives like *dues de les novel·les que em vas recomanar* ('two of the novels you recommended to me'). Data presented showed that those nominals behave as ordinary indefinite nominals; that is to say, they pattern like quantitatives and differ from partitives in allowing many kinds of quantifiers and noun modifiers in the structure as well as in being ambiguous, when possible, between a specific and a non-specific reading. As a consequence of their semantic possibilities, they can have a generic reading, can be licensed in existential contexts and "donkey" sentences and can be interpreted under the scope of other quantified expressions (all this in contrast with partitives, which cannot). Moreover, they can be the nominal predicate of predicative copular sentences unlike partitives, which can only form a sort of equative copular sentences. Finally, they do not inherently imply any presupposition of existence, and vague quantifiers are not interpreted relative to the embedded DP as is the case in partitives.

A last piece of data—see (68)—will serve as a final illustration of the difference in meaning between these nominals and true partitives: the former normally express a quantity of elements and the PP provides some extra information, which tends to be interpreted as a "kind" whereas partitives denote particular individuals with the notion of partition being inherently involved.

Cardinaletti and Giusti do not give any explanation of the distribution of *di* in adjunct partitive PPs and the impossibility of *di* inside the nominal looks like an ad hoc property. Interestingly, (ib) resembles very much our examples (66) and (67b), which are also odd: they all contain an overt noun following the quantifier. The ungrammaticality of (66) and (67b) was attributed here to the co-occurrence of two PP modifiers of the same sort; the same account would apply to the ungrammaticality of (ib): contrary to Cardinaletti and Giusti, I do not consider [*molti libri di storia di quelli che mi avevi consigliato*] as a real partitive—that is to say, as containing a 'selected partitive PP', in their terms—but as containing a noun modifier like [*di quelli in programma*]. In contrast, (ia) is well-formed because the PP with *tra* is a different kind of constituent (see §2.2 for more information on the *among* construction).

The well-formedness of (ii) in Italian, with a true partitive—similar to our examples (63) and (67a)—supports the view defended in this thesis and contradicts Cardinaletti and Giusti's predictions (under their analysis one would expect (ii) to be ungrammatical just like (ib), contrary to fact):

(ii) Ho letto molti [**di** quelli libri di storia che mi avevi consigliato] [**di** quelli in programma].

(68) At a shop, in front of a group of tables:

- a. A casa tinc *una taula d'aquestes*, és molt pràctica.
 at home have_{1sg} a table of-these is very practical
 'At home I have a table of this type; it is very practical.'
- b. # A casa tinc *una d'aquestes taules*, és molt pràctica.
 at home have_{1sg} one of-these tables is very practical
 'At home I have one of these very tables; it is very practical.'

The nominal in italics in (68a) does not refer to any particular table that the speaker has in front of him, but denotes a table similar to them that the speaker has at home: here the PP *d'aquestes* has a “kind of” reading meaning ‘of this type’. In contrast, the nominal in italics in (68b) refers to a particular table of that group of tables in the shop, and, therefore, the sentence is odd as it claims that the table is at the speaker’s home, which is impossible.

In conclusion, the differences attested in this section between true partitives and indefinite nominals with an overt noun after the quantifier invalidate any analysis that assigns the same structure to these two types of nominals. Both derivational proposals and approaches that claim two nouns in the structure are untenable because according to them, no such contrasts are expected nor can they be accounted for: (i) these approaches provide no explanation for the different restrictions on the types of quantifiers allowed (see §2.1.1), and (ii) they fail to explain any semantic difference between the two types of nominals as neither movement nor N ellipsis can yield a different interpretation (see §2.1.2 and §2.1.4). Derivational approaches also need to tackle a serious problem, rather difficult to explain under a movement analysis: the number difference in the noun shown between partitives (where N must be plural if countable) and indefinite nominals with a N after Q, in cases where the quantifier is singular (see ex. (20) vs. (18) in §2.1.2 above). Moreover, non-derivational approaches have no explanation for the ungrammaticality of modifiers following Q in partitives, unexpected if there was an empty N to be modified, which contrasts with the possibility of modification in nominals with an overt N following Q (see §2.1.2). Finally, some data clearly indicate that no empty N can be postulated in partitives, at least in those that crucially have no counterpart with an overt N: (a) partitives that involve quantifiers indicating fractions or subparts (see ex. (15) and (16) in §2.1.1), (b) partitives where Q is a “neuter N” such as *nada* ‘nothing’ or *algo* ‘something’ (which cannot be followed by any overt N: see ex. (6a) in §2.1 above), and (c) partitives containing personal pronouns (the question arises of

what the reference of this noun would be: see ex. (6b) in §2.1 and (17) in §2.1.1, see also ex. (i) in footnote 13).

Given the differences between partitives and nominals with a noun after Q in addition to the impossibility in the partitive structure of an empty noun, a single-noun structure for partitives appears as the only possibility. It is certainly the most adequate because: (i) the lack of N modifiers following Q in partitives and the possibility of partitives with fractions, pronouns and neuter Ns can only be explained if there is no empty noun in the structure, (ii) the different restrictions on quantifiers can be stated in selectional terms: in partitives only Qs that select a DP can appear whereas in ordinary indefinite nominals, including those with an overt N following Q such as the ones under discussion, Qs allowed are those that select a NP (this can be taken as a further argument against an empty N in partitives, which would “interfere” in the selection), (iii) there is no PP modifying a N, but the role of the prepositional element and the DP is of a different sort and is probably responsible for the particular semantics of partition and the proportional reading in partitives.

On the basis of the discussion above, the structures of the two types of nominals discussed in this paper can be represented as in (5) (repeated here as (69) for convenience):

- (69) a. *dues de* [_{DP} *les novel·les* [*que em vas recomanar*]] partitive
 b. *dues* [_{NP} *novel·les_i* [_{PP} *de les e_i que em vas recomanar*]] non-partitive

These are basic structures, which allow for differences on the status of the prepositional element and other details among the authors that defend a single name analysis for partitives (recall footnote 5 above). For the particular structure defended in this thesis, see Chapter 3 (especially §3.4.1).

2.2 The *among* construction: Catalan (*d'entre*)³⁴

In this section the *among* construction will be studied and compared to the partitive construction. Although these two constructions have certain properties in common, their differences will bring us to the conclusion that the *among* examples cannot be considered as a type of partitive contrary to what some authors have defended in the literature (e.g.

³⁴ An earlier version of section 2.2 was presented, under the same title, at the *17th Colloquium on Generative Grammar*, held at the Universitat de Girona 13-15 June 2007 (see Martí-Girbau 2007). I thank the audience for all their comments and questions.

Cardinaletti and Giusti 1992, 2006). We will concentrate on Catalan data but will provide examples in other languages when necessary.

By the ‘*among* construction’ we refer to indefinite nominals that contain a PP headed by the preposition *among* in English or the equivalent preposition in other languages: It. *fra/tra*, Sp. *entre*, Cat. *entre*, etc. Some examples are illustrated in (70):

- (70) a. moltes novel·les **d’entre** els llibres que et van deixar
 ‘many novels among the books that were lent to you’
 b. dos **entre** els teus alumnes
 ‘two among your students’

As shown in (70a), in Catalan the preposition *entre* can be preceded by the preposition *de* yielding *d’entre*. The presence of *de* is not optional, and its presence and role in the structure will shed some light on the analysis of the *entre* PP, which can be generalised to other languages.

Little attention has been paid in the literature to the *among* construction, in connection to partitives or otherwise. Interestingly, Lorenzo (1995: 215ff) describes some of the properties of the *among* construction in Spanish in comparison to ordinary partitives and concludes that they have a different structure and, therefore, cannot be identified as the same construction: for Lorenzo partitives contain a single N whereas indefinites with *among* contain two Ns, which project into their own nominal projection and are related by the preposition *among*.³⁵

This author bases his claim on the following structural differences:³⁶

³⁵ The two structures proposed by this author are schematically represented in (i):

- (i) a. Partitives: [_{NumP} QP Num⁰ [_{πP} de DP]]
 b. ‘Among’ construction: [_{NumP} QP Num⁰ [_{NP} N⁰ [_{PP} entre DP]]]

where πP in (ia) is a special partitive projection in contrast with the regular PP in (ib).

For the sake of parallelism with the partitive structure, (ib) contains a NumP and a DP, but actually the ‘among’ construction allows more variety in the upper and the lower determiner (includes examples such as *éstos entre muchos niños* ‘these ones among many children’), so the basic structure proposed by Lorenzo (1995: 225) is less explicit in order to cover all possible cases as in (ii):

- (ii) ... [_{NP} N [_{PP} entre ... [_{NP} N]]]

³⁶ Examples (71)–(75) are from Lorenzo (1995: 215–216). Some of these examples provided by Lorenzo would not be completely grammatical in Catalan, but the contrast with the corresponding partitives holds (they are definitely ungrammatical), and I take the differences listed by Lorenzo as true.

(i) There is no need of identity between the elements of the subset and the set, contrary to partitives:

- (71) a. muchos ancianos³⁷ entre estas personas
 many old-men among these people
 b. *muchos ancianos de estas personas
 many old-men of these people

(ii) There is no need of gender agreement between the quantifier and the noun, no matter if there is no(n-overt) noun preceding the preposition:

- (72) Muchos entre estas personas.
 many_m among these people_f

This property actually derives from (i) as there is the possibility of two overt nouns, which do not have to be identical, and one of them can be elliptical, raising gender disagreement in cases where the nouns have different gender as in (71) and (72). The corresponding partitive example is completely ungrammatical:

- (73) *muchos de estas personas
 many_m of these people_f

(iii) There is no restriction on the quantifier, in contrast with partitives, and different kinds of determiners are allowed in the *among* construction: see the well-formed example (74a) with the demonstrative vs. the ungrammatical partitive (74b).

- (74) a. aquellos entre estos niños
 those among these children
 b. *aquellos de estos niños
 those of these children

³⁷ In Spanish, ‘anciano’ is a masculine noun, the corresponding feminine is ‘anciana’, but in the plural, the masculine form ‘ancianos’ can refer to both old men and old people, including women. In the glosses I opted for the translation ‘old-men’ to show that this noun could be different from the other noun after the preposition, *personas*.

(iv) There is no restriction on the internal nominal, in contrast with partitives, with respect to the type of determiner allowed, and, therefore, quantitatives like *muchos* ('many') are licensed in the *among* construction:

- (75) a. *Éstos entre muchos niños.*
 these among many children
 b. **Éstos de muchos niños.*
 these of many children

Cardinaletti and Giusti (2006: §3.1) also describe some of the properties of the *among* construction, which they illustrate in Italian. They provide the examples in (76) to illustrate property (iii) and show that the *among* PP—in Italian, *tra/fra* PP—"is compatible with all kinds of DPs, including quantified DPs" contrary to the *of* PP—in Italian, *di* PP (see 77).³⁸

- (76) a. *Ho letto solo questi libri di linguistica {tra/fra} quelli che mi avevi*
 have_{1sg} read only these books of linguistics among those that me had_{2sg}
 consigliato.
 recommended
 'I have read only these books on linguistics among the ones you had
 recommended to me.'
- b. *Tutti i libri di linguistica {tra/fra} quelli che mi avevi consigliato mi sono*
 all the books of linguistics among those that me had_{2sg} recommended me are_{3pl}
 piaciuti.
 pleased
 'I liked all the books on linguistics among the ones you had recommended to
 me.'

³⁸ Cardinaletti and Giusti (1992: end note 12) had already noted that the *among* PP is compatible with a definite nominal, contrary to partitive *of* PP:

- (i) a. *i libri di linguistica tra quelli che mi hai dato tu*
 the books of linguistics among those that me have_{2sg} given you
 'the books on linguistics among the ones you had given to me'
 b. **i libri di quelli che mi hai dato tu*
 the books of those that me have_{2sg} given you
 'the books of the ones you had given to me'

They explain the contrast in (i) in selectional terms: the *of* PP is selected by Q, whereas the *among* PP is not and, therefore, can appear in all kinds of nominals. Recall that they are both considered as partitive PPs by Cardinaletti and Giusti, so they form partitive nominals.

- c. Ho letto molti libri di linguistica {tra/fra} quelli che mi avevi
 have_{1sg} read many books of linguistics among those that me had_{2sg}
 consigliato.
 recommended
 ‘I have read many books on linguistics among the ones you had recommended to
 me.’

- (77) a. * i libri di quelli che mi avevi consigliato
 the books of those that me had_{2sg} recommended
 b. * tutti i libri di quelli che mi avevi consigliato
 all the books of those that me had_{2sg} recommended
 c. Ho letto molti libri di quelli che mi avevi consigliato.
 have_{1sg} read many books of those that me had_{2sg} recommended

(76) shows that the *among* PP can appear with a demonstrative—*questi* ‘these’ in (76a)—or a universal quantifier—*tutti* ‘all’ in (76b)—as well as with an indefinite quantifier—*molti* ‘many’ in (76c). In contrast, as illustrated in (77) the *of* PP is restricted to indefinite quantifiers—see (77c).

The *among* PP is also compatible with all kinds of DPs when the PP is in sentence-initial position, where according to Cardinaletti and Giusti it can be introduced by *tra/fra* and even *di*.

- (78) a. {Tra/Fra} i libri di linguistica, ho letto quelli che mi avevi consigliato.
 among the books of linguistics have_{1sg} read those that me had_{2sg} recommended
 ‘Among the books on linguistics, I’ve read the ones you had recommended to
 me.’
 b. Di (quei) libri, ho letto solo questi.
 of those books have_{1sg} read only these
 ‘Of those books, I’ve read only these.’

Cardinaletti and Giusti consider that the differences with respect to ‘ordinary’ partitives in Italian do not indicate that they are not partitives but that the PP headed by *tra/fra* is a different type of partitive PP. The differences between partitive PPs containing *di* (‘of’) and partitive PPs containing *tra/fra* are just derived from selectional properties: the former

are selected whereas the latter are adjuncts. The optionality of the *among* PP would explain, according to Cardinaletti and Giusti, the fact that it is less restricted than the *of* PP: for these authors, an indefinite nominal always has the possibility of projecting a NP, a PP with *of* and a PP with *among*, although they are not always realised.

Here I defend a view more in the line with that of Lorenzo (1995) and consider that a nominal with an *among* PP is not a partitive, although this preposition introduces a “kind of” partitive meaning.³⁹

I base this claim on the differences noted by Lorenzo and listed above, which I take as crucial in distinguishing between the partitive structure and the structure for the nominal containing an *among* PP. As has been defended in this thesis, I claim that in the structure of partitive nominals the preposition is simply a Case marker and only one N is projected. In contrast, in the *among* construction the preposition is a lexical preposition which selects a DP, and there are two Ns projected in the structure.

That is to say, nominals containing an *among* PP are ordinary indefinite nominals, the so-called quantitatives, where the N happens to be modified by a lexical PP modifier, and that would explain the lack of the restrictions that are typically shown by partitive nominals with respect to the external determiner and the internal one as noticed by Lorenzo. The partition interpretation of the *among* construction is obtained by the lexical meaning of the preposition *among* and the presence of two noun phrases, one referring to the subset of the other.

However, a closer look at data will provide evidence that the *among* PP not only acts as an adjunct noun modifier, but it usually forms a small clause with the noun phrase. Again, I will base the analysis on Catalan data, where crucially the *entre* PP is sometimes preceded by *de*. Examples will show that the presence of *de* is not optional but required to enable the *entre* PP to function as a modifier inside the DP; when *de* is not present, the *entre* PP behaves instead as the predicate of a small clause (or as a secondary predicate), whose subject is the indefinite nominal.

We take the requirement of the Catalan *entre* PP to be preceded by *de* inside a nominal as a further difference between these nominals and partitives. Moreover, it must be noticed that nominals containing *d'entre* PP are not very common and for several speakers not completely acceptable: the insertion of *de* could be seen as a strategy that is

³⁹ Gutiérrez (2008) also follows Lorenzo (1995), reaching the same conclusion.

not entirely successful to ‘rescue’ the nominal that contains a PP headed by *entre*. However, it definitely improves it as with no *de* the result would be completely ungrammatical. When compared to partitives, again a contrast appears: the corresponding partitives are completely grammatical. Moreover, in many cases of partitive examples the equivalent nominal with preposition *entre* instead of *de* is not possible.

In other languages such as English or Italian no *de* appears to mark the distinction between a small clause predicate and a noun modifier, and examples containing *among* PPs are grammatical, but similarly to Catalan the *among* PP tends to act as an adjunct external to the DP. In the cases where the *among* PP is a noun modifier, I will claim that there is an empty *of* that licenses it, just as there is an overt *de* in Catalan.

In the next section data and arguments in favour of a small clause analysis for *entre* PP will be provided. Nominals where *entre* PP is preceded by *de* in Catalan are dealt with in section §2.2.2.

2.2.1 ‘*Entre* PP’: predicate of a small clause

The data below provides evidence in support of the claim that the *entre* PP is not inside the noun phrase but actually forms a small clause with it:

(a) The *entre* PP is not accepted in sentences where the verb selects a nominal argument rather than a predication:

- (79) a. *[*Molts joves entre aquestes persones*] han estat escollits per al concurs.
 many teenagers among these people have been selected for-the quiz-show
- b. *[*Tres novel·les entre els llibres recomanats*] són de Paul Auster.
 three novels among the books recommended are of Paul Auster
 ‘Three of the novels among the recommended books are by Paul Auster.’
- c. **El mag va enviar [els tres voluntaris entre el públic] a buscar*
 the magician sent_{1sg} the three volunteers among the audience to look-for
 més gent.
 more people
- d. **Vaig parlar amb [un noi molt simpàtic entre els qui feien cua].*
 talked_{1sg} with a guy very nice among the who did queue
 ‘I talked to a very nice guy (among the people) in the queue.’

As shown in (79), the *entre* PP cannot be part of the subject (see 79a,b), the object (see 79c) or a prepositional object (see 79d). In contrast, this PP works very well as the predicate of a small clause:

- (80) a. Hi ha [[molts joves] [entre aquestes persones]].
 there has many teenagers among these people
 ‘There are many teenagers among these people.’
- b. La professora posà [[tres novel·les de Paul Auster] [entre els llibres recomanats]].
 the teacher put three novels of Paul Auster among the books recommended
 ‘The teacher included three novels by Paul Auster among the recommended books.’
- c. El mag va fer seure [[els tres voluntaris] [entre el públic]].
 the magician made_{3sg} sit-down the three volunteers among the audience
 ‘The magician had the three volunteers sit down among the audience.’
- d. Vaig conèixer [[un noi molt simpàtic] [entre els qui feien cua]].
 met_{1sg} a guy very nice among the who did queue
 ‘I met a very nice guy among the people in the queue.’

The examples in (80) contain a predication where the predicate *entre* PP is a location. The possibility of the PP preceding the nominal or being non-adjacent is a further argument for considering it outside the nominal.

- (81) a. Hi ha *molts joves*—**m’han dit**—*entre aquestes persones*.
 b. La professora posà, *entre els llibres recomanats, tres novel·les de Paul Auster*.
 c. El mag va fer seure, *entre el públic, els tres voluntaris*.
 d. Vaig conèixer *un noi molt simpàtic* **ahir** *entre els qui feien cua*.

In (81a), the parenthetical *m’han dit* (‘I’ve been told’) and in (81d) the adverbial *ahir* (‘yesterday’) intervene with no problem between the indefinite nominal and the *entre* PP. (81b,c) show the possibility of the *entre* PP appearing before the nominal (cf. 80b,c).

(b) The *entre* PP is not part of the nominal antecedent of a clitic:

- (82) a. *[Molts joves entre aquestes persones]_i, els_i han escollit per al concurs.
 many teenagers among these people them have_{3pl} chosen for-the quiz-show
 ‘Many teenagers among these people, they have chosen them for the quiz show.’
- b. *[Tres novel·les entre els llibres recomanats]_i, ja les_i he llegides.
 three novels among the books recommended already them have_{1sg} read
 ‘Three novels among the recommended books, I have read them already.’
- c. *[Els tres voluntaris entre el públic]_i, el mag els_i va enviar a
 the three volunteers among the audience the magician them sent_{3sg} to
 buscar més gent.
 look-for more people
 ‘The three volunteers among the audience, the magician sent them in search of
 more people.’
- d. *[Amb un noi molt simpàtic entre els qui feien cua]_i, hi_i vaig parlar molt.
 with a guy very nice among the who did queue HI spoke_{1sg} a-lot
 ‘To a very nice guy among those in the queue, I spoke a lot.’

In examples like (82) containing a predication, the noun phrase and the PP are pronominalised independently in Catalan. The pronoun for the PP is *hi* whereas the indefinite nominal is pronominalised by the indefinite pronoun *en* if it is non-specific or by a definite pronoun *el*, *la*, *els*, *les* if it has a specific interpretation. See different possibilities of pronominalisation of example (80b) in (83)—where (83a)=(80b):

- (83) a. La professora posà [tres novel·les de Paul Auster]_i [entre els llibres recomanats]_j
 b. **Les_i** va posar [entre els llibres recomanats]_j.
 c. **En_k** va posar [tres *e_k* de Paul Auster]_i [entre els llibres recomanats]_j.
 e. **Hi_j** va posar [tres novel·les de Paul Auster]_i.
 f. **Les_i hi_j** va posar.
 g. **N_k’hi_j** va posar [tres *e_k* de Paul Auster].

(83b) and (83c) show the pronominalisation of the indefinite nominal *tres novel·les de Paul Auster* by a definite pronoun and the indefinite pronoun respectively whereas (83d)

(85) shows again that when the construction forces the PP to be part of the indefinite nominal, which is precisely what happens in cleft sentences, the result is ungrammatical.

2.2.2 ‘*Entre* PP’ preceded by *de*: a noun modifier

In the previous section data drew us to the conclusion that the *entre* PP in Catalan is the predicate of a small clause, and it is always external to the nominal. As suggested above, for the *entre* PP to be accepted as part of the nominal, it must be preceded by *de* in this language. Observe that the ungrammatical data showed in §2.2.1 become grammatical when *de* is added to the examples:

(a) In sentences where the verb selects a nominal argument, not a predication, the addition of *de* rescues the construction and yields a grammatical result or at least improves it remarkably⁴²—cf. (79):

- (86) a. [Molts joves **d’entre** aquestes persones] han estat escollits per al concurs.
 b. [Tres novel·les **d’entre** els llibres recomanats] són de Paul Auster.
 c. ^{??}El mag va enviar [els tres voluntaris **d’entre** el públic] a buscar més gent.
 d. [?]Vaig parlar amb [un noi molt simpàtic **d’entre** els que feien cua].

In contrast, if *de* is added to examples where the *entre* PP was a predicate as in (80), then the PP can no longer be interpreted as a predicate but only as a noun modifier. Observe (87)—cf. (80):

- (87) a. Hi ha [molts joves **d’entre** aquestes persones] *(a l’atur).
 there has many teenagers of-among these people in the-unemployment
 ‘There are many unemployed teenagers among these people.’
 b. La professora posà [tres novel·les de Paul Auster **d’entre** els llibres recomanats] *(al prestatge).
 ‘The teacher put three novels by Paul Auster among the recommended books on the shelf.’

⁴² For some Catalan speakers (86d) is completely fine and (86c) would be a bit less acceptable (‘?’).

- c. El mag va fer seure [els tres voluntaris **d'**entre el públic] (en una cadira).
 'The magician had the three volunteers from among the audience sit down on a chair.'
- d. Més tard vaig trobar ^{??}(en un bar) [un noi molt simpàtic **d'**entre els qui feien cua].
 later run_{1sg}-into in a bar a guy very nice of-among the who did queue
 'Later in a bar I run into a very nice guy I had met among the people in the queue.'

In (87a-d), the *entre* PP is the N modifier of the subject of the predication (in square brackets); the predicate is *a l'atur* ('unemployed'), *al prestatge* ('on the shelf'), *en una cadira* ('on a chair'), *en un bar* ('in a bar'), respectively. If the main predicate selects a small clause where the secondary predicate must be obligatorily realised as is the case of *posar* 'put' and also in general *haver-hi* 'there to be' or *trobar* 'run into', then the sentence would become ungrammatical without the addition of the just-mentioned secondary predicates given that the *d'entre* PP cannot function as a predicate (unlike the *entre* PP).

(b) In left dislocation contexts, the *d'entre* PP can be part of the nominal antecedent of a resumptive clitic (cf. (82)):⁴³

- (88) a. [Molts joves **d'**entre aquestes persones]_i, els_i han escollit per al concurs.
 b. [Tres novel·les **d'**entre els llibres recomanats]_i, ja les_i he llegides.
 c. [Els tres voluntaris **d'**entre el públic]_i, el mag els_i va enviar a buscar més gent.
 d. [Amb un noi molt simpàtic **d'**entre els qui feien cua]_i, hi_i vaig parlar molt.

(c) In cleft sentences, the *d'entre* PP does not yield ungrammatical results as it can function as part of the nominal (cf. (85)):

- (89) a. *Són* molts joves **d'**entre aquestes persones *que* han estat escollits.
 b. *Són* tres novel·les **d'**entre els llibres recomanats *que* són de Paul Auster.
 c. *Van ser* els tres voluntaris **d'**entre el públic *que* el mag va enviar a buscar més gent.
 d. *És* amb un noi molt simpàtic **d'**entre els qui feien cua *que* vaig parlar.

⁴³ Although for some Catalan speakers the sentences in (88) and (89) are not completely acceptable, there is a significant contrast with the clearly ungrammatical counterparts in (82) and (85), respectively.

Interestingly, the behaviour of *entre* described so far recalls a property of Catalan locative prepositions such as *sobre* ('on, above'), *sota* ('under, below'), *davant* ('in front of'), *darrere* ('behind'), etc.: they too can only be licensed as N modifiers if preceded by *de*. The following examples show that PPs headed by locative prepositions in Catalan cannot function directly as a noun modifier (see 90b,c), but the presence of the prepositional element *de* is necessary (see 90d,e):⁴⁴

- (90) a. Hi ha un diari {sobre la taula/darrere el gerro/entre les revistes/al costat del llum/al sofà/en aquest calaix/per terra}.
- 'There's a newspaper {on the table/behind the vase/among the magazines/next to the lamp/on the sofa/in this drawer/on the floor}.'

⁴⁴ Spanish locative prepositions have a similar behaviour and are usually preceded by *de* within a nominal (see Plann 1986, Bosque 1989, Pavón Lucero 1999), although in contrast with Catalan some Spanish speakers seem to admit the possibility for the preposition *de* to be absent in some cases (or do not regard its absence as ungrammatical).

Moreover, the preposition *sobre* 'on' in Spanish has a especial behaviour: it does not seem to allow being preceded by *de* though it is ungrammatical without *de* as well (i.e. **El periódico (de) sobre la mesa es de ayer* 'The newspaper on the table is from yesterday') (I thank M. Lluïsa Hernanz for this observation). The alternative would be to use the synonym *encima*, which patterns with the other locative prepositions and does admit (actually requires) *de*:

- (i) a. Hay [DP un periódico] [PP encima de la mesa]. 'There's a newspaper on the table.'
- b. [DP El periódico *(de) encima de la mesa] es de ayer. 'The newsp. on the table is from yesterday.'
- c. Dame [DP el periódico *(de) encima de la mesa]. 'Pass me the newspaper on the table.'

This reluctance of *sobre* to be preceded by *de* probably has to do with the fact that unlike other locative prepositions, *sobre* is not followed by *de*: *sobre* (**de*) la mesa vs. *encima* *(*de*) la mesa ('on the table'). Observe the contrasts in (ii), provided in Pavón Lucero (1999: 604):

- (ii) a. Hay que cortar los arbustos de {detrás de / ??tras} la casa.
It-is-necessary to-cut the bushes of behind of behind the house
'The bushes behind the house must be cut.'
- b. Se ha roto el jarrón de {encima de / ??sobre} la mesa.
SE has broken the vase of on of on the table
'The vase on the table broke.'
- c. Se lanzó desde {encima de / ??sobre} el tejado.
SE threw from on of on the roof
'He/She threw himself/herself from the top of the roof.'

In contrast with Spanish, Catalan *sobre* admits being followed by *de* in some occasions (when preceded by *a*)—see (iiia,b)—and allows a possessive complement—see (iiic)—and in that sense resembles the other locative prepositions (i.e. the synonym *damunt*, which corresponds to Spanish *encima*):

- (iii) a. El gerro era (a) {damunt /sobre} (de) la taula.
'The vase was on the table.'
- b. S'ha trencat el gerro de {damunt /sobre} (de) la taula.
'The vase on the table broke.'
- c. Ha caigut {(a) damunt / a sobre} meu.
has fallen in on in on my
'It fell on me.'

However, see the following Spanish example in (iv), quoted by Bosque (1997: 141), where *sobre* is preceded by *de* apparently with no problem:

- (iv) "El espejo de [sobre el lavabo] le devolvió su figura furtiva entre sombras" (C. Laforet, *La isla*, SFR)

- b. *El diari {sobre la taula/darrere el gerro/entre les revistes/al costat del llum/al sofà/en aquest calaix/per terra} és d'ahir.
 'The newspaper {on the table/behind the vase/among the magazines/next to the lamp/on the sofa/in this drawer/on the floor} is from yesterday.'
- c. *Dóna'm el diari {sobre la taula/darrere el gerro/entre les revistes/al costat del llum/al sofà/en aquest calaix/per terra}.
- 'Pass me the newspaper {on the table/behind the vase/among the magazines/next to the lamp/on the sofa/in this drawer/on the floor}.'
- d. El diari {**de** sobre la taula/**de** darrere el gerro/[?]**d'**entre⁴⁵ les revistes/**del** costat del llum/**del** sofà/**d'**aquest calaix/**de** terra} és d'ahir.
- e. Dóna'm el diari {**de** sobre la taula/**de** darrere el gerro/[?]**d'**entre les revistes/**del** costat del llum/**del** sofà/**d'**aquest calaix/**de** terra}.

As shown in (90d,e), strong locative prepositions are preceded by *de*, but weak prepositions (*a*, *en*, *per*) are actually replaced with *de* (probably because in Catalan sequences of two weak prepositions are avoided in general).⁴⁶ Note that 'strong' has a phonological meaning here: all these prepositions have phonological stress (they have more than one syllable). In contrast, prepositions *a*, *en*, *de*, *per* are weak (they have no stress), as clearly indicated by Catalan eastern dialects pronunciation, where non-stressed *a* or *e* are pronounced as schwa.

Similarly, Catalan adverbial complements indicating time and place require to be preceded by *de* to be allowed in deverbal nominals that are not predicative, that is to say, that refer to the result and not to the event. Observe the following examples (taken from Martí-Girbau 2002: §5.6.1):

⁴⁵ For some Catalan speakers *d'entre* seems to be completely fine in (90d,e); they make no distinction with the rest of locative prepositions. In any case, what is important is that there is a strong contrast between *d'entre* in (90d,e) and the clearly ungrammatical *entre* in (90b,c).

⁴⁶ For example, the sequence *de+a* is avoided by introducing a verbal form, such as *anar* in (ib), between the two prepositions or by reducing it to just one preposition (*de*) as in (ic):

- (i) a. *Anirem a París en comptes **d'a** Londres.
 go_{fut.1pl} to Paris instead of-to London
 b. Anirem a París en comptes **d'anar a** Londres.
 'We'll go to Paris instead of going to London.'
 c. Anirem a París en comptes **de** Londres.
 'We'll go to Paris instead of London.'

- (91) a. *Camí de Sirga* va ser traduïda per J. Willis l'any 1994 a Oxford.
 ‘*Camí de Sirga* was translated by J. Willis in 1994 in Oxford.’
- b. [La traducció **de** *Camí de Sirga* per J. Willis l'any 1994 a Oxford] va durar pocs mesos.
 ‘The translation of *Camí de Sirga* by J. Willis in 1994 in Oxford only took a few months.’
- c. M’he llegit [la traducció **de** *Camí de Sirga* **de** J. Willis **de** l’any 1994 **d’**Oxford].
 ‘I’ve read the translation of *Camí de Sirga* by J. Willis in 1994 in Oxford.’

(91a) is a passive sentence containing the verb *traduir* (‘to translate’) and its arguments and some adverbials. (91b) contains the corresponding deverbal noun *traducció* with an event reading, as indicated by the verb *durar*. Only the internal object is preceded by *de*; the rest of complements appear in the same form as in the sentence. The same would apply to other languages, as is well known.

However, in the “result” reading of the deverbal nominal all complements must appear preceded by *de* in Catalan to be able to act as noun modifiers, as can be observed in (91c). In this example, *traducció* refers to a physical object, the result of the event of translating, and it behaves as a regular noun: among other properties of common nouns, such as admitting the plural form or having the possibility of being preceded by a determiner different from the definite article, its modifiers must be preceded by the prepositional element *de*.⁴⁷

Also non-deverbal nouns involving an event such as *class*, *meeting*, *exam*, *accident*, *fire*, etc. require *de* to precede an adverbial N modifier, just like deverbal nouns with a “result” interpretation:

- (92) a. Han cancel·lat [la classe **de** demà]. vs. Demà farem [la classe].
 have_{3pl} cancelled the class of tomorrow tomorrow will-do_{1pl} the class
 ‘The class tomorrow has been cancelled.’ ‘We will do the class tomorrow.’
- b. A [l’incendi **de** l’escola] hi ha hagut ferits. vs. Hi ha hagut [un incendi] a l’escola.
 in the-fire of the-school there has had casualties there has had a fire in the-school
 ‘The fire in the school caused casualties.’ ‘There was a fire in the school.’

⁴⁷ In contrast, event deverbal nouns are more restricted: they can only appear in the singular and be preceded by a definite article as in (91b). For more information and data about deverbal nouns in Catalan, see Picallo (1991) and also Martí-Girbau (2008: §5.6.1).

However, it is worth noticing that not all prepositional N modifiers or complements in Catalan are preceded by *de*, as illustrated in (93):

- (93) a. un nen amb ulleres ('a boy with glasses')
 b. un cotxe sense rodes ('a car without wheels')
 c. un article contra la guerra ('an article against war')
 d. un gran interès per la política ('a great interest in politics')
 e. la discussió entre en Jaume i en Pere ('the argument between Jaume and Pere')

What the prepositional N modifiers in (91) and (92) have in common is that they are *referential adverbials*: locative and temporal expressions that identify places, moments and intervals (they refer to individuals). As referential expressions, they show properties common to nouns⁴⁸ and it is not surprising that they cannot modify a N directly (they are individuals, not properties) but need a functional element *de* that allows them to be a N modifier. I will claim that this *de* is a Case marker, as required in front of any nominal N modifier or complement (e.g. *la destrucció de la ciutat* 'the destruction of the city', *el cotxe del meu germà* 'my brother's car').

As an illustration of the nominal properties of this type of noun modifier, observe the following Catalan data, which show that strong locative prepositions (like nouns and in contrast with other prepositions) can be preceded and followed by other prepositions, allow possessives (see 94f,g), and some of them can even be preceded by the definite article (see (94c,e,f,g), where the preposition *a* + the article *el* appear in the contraction *al*):

- (94) a. **a** dins **del** calaix ('inside the drawer')
 b. **a** sota **de** la cadira ('below the chair')
 c. **al** darrere **del** gerro ('behind the base')
 d. **a** sobre **de** la taula ('on the table')
 e. **al** damunt **de** la taula ('on the table')
 f. (a/al) darrere **meu** ('behind me') (lit. (on (the)) behind my)
 g. al **meu** darrere ('behind me') (lit. on the my behind)

⁴⁸ See Bosque (1989: §10.3.1) and the references there for more information on prepositional referential adverbials and the properties they share with nouns.

Moreover, they not only have a status close to a N but can even in some contexts behave as actual nouns:⁴⁹

- (95) a. **el** dins del calaix ('the inside of the drawer')
 b. **el** sota de la cadira ('the bottom of the chair')
 c. **el** darrere del gerro ('the back of the vase')
 d. **el** sobre de la taula ('the top of the table')

Given this general property in Catalan according to which referential noun modifiers must be preceded by *de* like any nominal N modifier, we can explain now why an *entre* PP cannot be inside a nominal without the presence of *de*. This is not a particular behaviour of the *entre* PP, but it derives from the general property just stated. However, as seen in examples (86c,d) above and even (90c,d), the result is not always completely grammatical, and a different type of N modifier would be preferred in them: a mere DP preceded by *de* so that we can remove *entre*—see (96) and (97a)—or a relative clause, which allows keeping *entre* though not necessarily—see (97b,c). The following examples improve (86c) and (86d) above, respectively:

- (96) El mag va enviar [els tres voluntaris *del públic*] a buscar més gent.
 'The magician sent the three volunteers from the audience (lit. of the audience) in search for more people.'
- (97) a. Vaig parlar amb [un noi molt interessant *de la cua*]
 'I talked to a very interesting guy in the queue (lit. of the queue).'
- b. Vaig parlar amb [un noi molt interessant *que hi havia entre els que feien cua*].
 'I talked to a very interesting guy who was among those in the queue.'
- c. Vaig parlar amb [un noi molt interessant *que era a la cua*]
 'I talked to a very interesting guy who was in the queue.'

⁴⁹ In general, these locative prepositions allow all the possibilities in (i)—but *sota*, *sobre* and *dins* reject (id):

- (i) a. Hi ha un arbre [pp davant la casa]. (ia-d = 'There's a tree in front of the house')
 b. Hi ha un arbre [pp davant **de** la casa].
 c. Hi ha un arbre [pp **a** davant **de** la casa].
 d. Hi ha un arbre [pp **al** davant **de** la casa].
 e. [DP **El** davant **de** la casa] és molt bonic. ('The front of the house is very nice.')

The fact that *entre* is not always felicitous as a noun modifier might have to do with its mixed behaviour, which was noticed by Plann (1986: 139, end note 16) for Spanish (but the same applies to Catalan *entre*). She distinguishes between two types of locative prepositions in Spanish: those that she calls *substantives* (i.e. *encima* ‘on’, *debajo* ‘below’, *delante* ‘in front’, *detrás* ‘behind’, etc.) and pure *prepositions* (i.e. *sobre* ‘on’, *bajo* ‘below’, *ante* ‘in front’, *tras* ‘behind’, etc.). Only the former have nominal properties and can be preceded and followed by prepositions or combine with a possessive. *Entre* seems to be in between the two series as it has mixed properties: like *substantives* and unlike *prepositions*, the locative *entre* can be preceded by a true preposition as in (98) and needs to be preceded by *de* when it is a noun modifier as in (99); however, unlike *substantives*, its nominal complement is not preceded by *de* (see 100), nor can it be intransitive (see 101), and unlike *prepositions*, its nominal complement requires nominative Case as seen in (102).⁵⁰ In the data from (98) to (102), the *a* examples contain *entre*, the *b* examples illustrate the *substantives* behaviour and the *c* examples illustrate the *prepositions* behaviour:

- (98) a. Me miraba [_{PP} [_P desde] [_{PP} *entre* los árboles]]
 ‘He was looking at me from among the trees.’
 b. Me miraba desde [_{PP} *detrás* de los árboles]
 ‘He was looking at me from behind the trees.’
 c. * Me miraba desde [_{PP} *tras* los árboles]
 ‘He was looking at me from behind the trees.’
- (99) a. la casa **de** *entre* los árboles ‘the house among the trees’
 b. la casa **de** *detrás* de los árboles ‘the house behind the trees’
 c. la casa (***de**) *tras* los árboles ‘the house behind the trees’

⁵⁰ Ordinary prepositions require an oblique nominal complement, with the exception of *según* (‘according to’):

(i) según {tú y yo / *ti y mí}
 according-to you_{NOM} and I_{NOM} you_{OB} and I_{OB}

Tras has the particularity of requiring *de* when the complement is a 1st or 2nd person singular pronoun as shown in (iia), which are the only pronominal forms that show oblique case (the other forms do not vary depending on their Case):

(ii) a. tras *(de) {mí / ti}
 b. tras (*de) {él / ella / nosotros / vosotros / ellos / ellas}
 behind of him her us you_{pl} them_m them_f

- (100)a. *entre* (***de**) los árboles
 b. *detrás* *(**de**) los árboles
 c. *tras* (***de**) los árboles

- (101)a. *la casa de *entre*
 b. la casa de *detrás*
 c. *la casa de *tras*

- (102)a. *entre* {tú y yo / *ti y mí}
 between you_{NOM} and I_{NOM} you_{OB} and I_{OB}
 b. {a/ante/desde/en/hacia/hasta/por/sin/sobre} {*tú y yo / ti y mí}
 to/before/from/in/towards/until/by/without/on you_{NOM} and I_{NOM} you_{OB} and I_{OB}

Especially striking are the data in (99) and (100), which seem to imply that *entre* is at the same time a Case assigner (like an ordinary preposition) but which requires being marked with Case. In Catalan (at least in some contexts or for some speakers) *entre* cannot work directly as a noun modifier as it would be expected to given its locative meaning (it is referential); however, a Case marker *de* does not license it completely (maybe because it behaves syntactically as an ordinary preposition or it is close to one).⁵¹ However, for some speakers *d'entre* is completely fine, and, in any case, in the partitive meaning seems to work better in general than in the pure locative interpretation, so we can consider it as fitting the behaviour of a referential modifier. I will take this as true in general so that some conclusions can be drawn.

At this point, one might also ask whether the locative *entre* and the partitive *entre* are two different prepositions or just one. Here I will claim that there is only one preposition *entre* in the lexicon: the partitive or locative meaning of the *entre* PP is obtained from the meaning of the lexical preposition *entre* combined with the meaning of the N that it takes as a complement and the meaning of the N the PP modifies. If the N it modifies can be understood as a subset of the set of elements referred to by the complement of the PP, then the partition

⁵¹ Even in Spanish some examples do not work with *entre* preceded by *de*:

- (i) a. ^{??}/**Dame el periódico de entre las revistas.*
 give-me the newspaper of among the magazines
 'Give me the newspaper (which is) among the magazines.'
 b. ^{??}/**El chico de entre los futbolistas es mi hermano.*
 the boy of among the football-players is my brother
 'The boy (who is) among the football players is my brother.'

Plann's example (99a), though better than the examples in (i), is not completely acceptable for some informants.

interpretation is obtained. If not, the purely locative interpretation is obtained. This has the advantage of simplifying the lexicon and is a natural claim given that the meaning of *entre* in both constructions is basically the same.

Under the assumption that there is a single *entre*, the conclusions obtained for locative *entre* (among other locative prepositions) apply as well to the preposition *entre* with a partitive meaning, and, therefore, the presence of *de* preceding *entre* in examples like (86) (repeated here as (103) for convenience) can be taken as another argument against analysing the nominals in square brackets as partitives: the PP behaves as a noun modifier contrary to what happens in true partitives.

- (103) a. [Molts joves **d'**entre aquestes persones] han estat escollits per al concurs.
 b. [Tres novel·les **d'**entre els llibres recomanats] són de Paul Auster.
 c. ^{??}El mag va enviar [els tres voluntaris **d'**entre el públic] a buscar més gent.
 d. [?]Vaig parlar amb [un noi molt simpàtic **d'**entre els que feien cua].

Moreover, a further argument in the same direction comes from the possibility of a *d'entre* PP occurring inside a partitive nominal. Observe (104).⁵²

- (104) a. [Molts dels joves **d'**entre aquestes persones] han estat escollits.
 'Many of the teenagers among these people have been selected.'
 b. [Tres de les novel·les **d'**entre els llibres recomanats] són de Paul Auster.
 'Three of the novels among the recommended books are by Paul Auster.'
 c. [?]Vaig enviar [un dels voluntaris **d'**entre el públic] a buscar més gent.
 'I sent one of the volunteers from among the audience in search of more people.'
 d. [?]Vaig parlar amb [un dels nois **d'**entre els que feien cua].
 'I talked to one of the men among those in the queue.'

In section §2.1 it was argued that partitives are not recursive, so whenever we have a PP inside a partitive nominal, it can only be analysed as a noun modifier, as was also the case of *de* PP

⁵² For some Catalan speakers, all sentences in (104) are fine.

in §2.1.5.⁵³ Thus, in (104), the *d'entre* PPs are modifiers of the Ns *joves*, *novel·les*, *voluntaris* and *nois* respectively, inside the internal DP of the partitive nominals, as shown in (105).⁵⁴

- (105)a. [molts de [DP els joves [PP **d'**entre aquestes persones]]]
 b. [tres de [DP les novel·les [PP **d'**entre els llibres recomanats]]]
 c. [un de [DP els voluntaris [PP **d'**entre el públic]]]
 d. [un de [DP els nois [PP **d'**entre els que feien cua]]]

So far we have described how Catalan *entre* as well as other locative prepositions works, and the presence of a preceding *de* was useful in identifying the *entre* PP as an N modifier, which proves it does not form a partitive nominal. The same conclusions would apply to Spanish *entre* given the similarities with locative prepositions and their requirement of being preceded by *de* in order to function as noun modifiers. However, what happens in languages such as English and Italian, where no *de* needs to precede referential N modifiers (actually, it cannot precede them)? I will assume that these languages have a non-overt counterpart OF:⁵⁵ referential N modifiers such as place and time need a functional licenser as well because they denote individuals. So even when *among* looks like it is inside the nominal as any other N modifier, it is actually in a more complex structure, within an *OF* phrase that licenses it.

The question is why this licenser is covert in some languages and whether there is any evidence for its being covert. An in-depth discussion on these issues is beyond the scope of this thesis, but the idea would be that the more the temporal or locative element behaves like a noun, the stronger the requirement is for an overt *of*. An overt *of* seems to be triggered if the time or place adverb or preposition:

- (i) is not a weak form
- (ii) can be preceded by the definite article
- (iii) (can) take a complement preceded by *de*
- (iv) allow possessives.

⁵³ See Cardinaletti and Giusti (2006) for a different view: recall that, for them, the fact that the *di* PP and *tra/fra* PP can coexist is not an argument for analysing the latter as non-partitive.

⁵⁴ In Catalan, the preposition *de* and the definite article *el* yield the contraction *del* when they co-occur in the sequence, but in the representation in (105) the two lexical elements are given separately as they are in different positions in the structure.

⁵⁵ In the lines of Kayne (2005) for similar contrasts related to quantity words: Eng. *few* vs. Fr. *peu de*.

The more nominal properties from the list a referential modifier has, the more it will require OF to be overt. In Spanish, the locatives called ‘substantive’ by Plann have all the properties (i-iv) and require an open *de*, whereas the other series of locative prepositions lack all of them or at least (ii-iv) and they are not preceded by an overt *de*.

English and Italian referential modifiers in general lack properties (ii-iv), so as expected, they are licensed by a non-pronounced OF (or DI, respectively). However, there is some evidence in favour of the existence of this licenser both in English and Italian.

In English, the fact that temporal expressions require or allow a genitive marker points in that direction (this in turn can be taken as evidence of the Case status of the licenser for referential N modifiers). Observe the following data:

- (106) a. *the yesterday, *the today, *the tomorrow, *our yesterday, *a better tomorrow,
 *everybody’s today
 b. The class {next week / tomorrow} has been cancelled.
 c. {Next week’s / Tomorrow’s} class has been cancelled.
 d. * Give me the newspaper {last week / yesterday}.
 e. Give me {last week’s / yesterday’s} newspaper.

Although time expressions in English do not function as nouns and admit neither a determiner nor a possessive as shown in (106a), when they are N modifiers, they allow being marked with genitive if the noun involves an event such as *class* as in (106b,c) or even require this genitive marking if the noun refers to an object such as *newspaper*—see (106d,e).

Compare this with Catalan, where time expressions can behave as nouns—see the equivalent of (106a) in (107a)—and an overt *de* is always required, no matter the type of N modified—see (107b) and (107c), which correspond to (106b,c) and (106d,e) respectively:

- (107) a. l’ahir, l’avui, el demà, el nostre ahir, un demà millor, l’avui de tots
 ‘the past, the present, the future, our past, a better future, everybody’s present’
 b. Han cancel·lat la classe {*(de) la setmana que ve / *(de) demà}.
 c. Dóna’m el diari {*(de) la setmana passada / *(d’)ahir}.

Just as with Catalan overt *de*, I take the genitive marker in English time N modifiers as an overt realisation of this OF licenser.

A further piece of evidence in favour of a covert OF even in languages that do not show an overt *of* following referential N modifiers comes from Italian: as indicated by Rizzi (1988: §3.2), locative “prepositions” such as *dentro* (‘within’), *dietro* (‘behind’), *presso* (‘near’), *sopra* (‘on, above’), *su* (‘on’), *sotto* (‘under, below’) and also *contro* (‘against’) reject to be followed by *di* except when their complement is a personal pronoun:

- (108) a. Gianni ha spinto Mario contro Piero.
 ‘Gianni has pushed Mario against Piero.’
 b. Gianni ha spinto Mario contro *di* sé.
 ‘Gianni has pushed Mario against himself.’
 c. Sotto *(di) me ho visto il vuoto.
 below of me have_{1sg} seen the vacuum
 ‘I saw the void below myself.’
 d. Ho espresso molti dubbi su *(di) lui.
 have_{1sg} expressed many doubts on of him
 ‘I’ve expressed many doubts on him.’

(Rizzi 1988: §3.2, ex. 74c,d, 77, 79a)

Whereas in (108a) there is no *di* in front of *Piero* (*contro* would actually reject an overt *di* in this context), in the counterpart (108b) *di* does appear in front of a reflexive pronoun (and is obligatory). (108c) illustrates that similarly *sotto* requires an overt *di* in front of a personal pronoun (cf. no *di* would appear in front of a noun phrase such as *il tavolo* ‘the table’: i.e. *Il gatto è sotto il tavolo* ‘The cat is under the table’). (108d) shows that even locative prepositions that have only one syllable such as *su* have the same behaviour and need an overt *di* in front of a pronoun.

The need of strong pronouns to be preceded by an overt preposition *di* in contrast with nouns can be taken as a further argument in favour of the analysis defended here of *di* as a Case marker, for pronouns seem to require being more clearly marked than nouns for Case. As Posner (1996: 116) notes: “Morphological case has remained more intact in the pronominal system. From a functional point of view this is explicable if we recognise that the semantic (or theta) role of the lexical noun is fairly predictable from its inherent semantic features: for instance, an animate is more likely to be an agent or an experiencer,

and so on. Pronouns, on the other hand, convey only grammatical, not lexical, information, and thus may need to be more clearly marked for such information”.

Interestingly, *di* also appears after *tra* (‘between, among’) when the complement is a personal pronoun, but in this case *di* is optional:

(109) Stavano parlando tra (di) loro.

were_{3pl} speaking among of them

‘They were talking {to each other / among themselves}.’

(Rizzi 1988: §3.2, ex. 79b)

Although Rizzi does not mention it, the same applies to the synonymous locative preposition *fra*.⁵⁶ Note that this phenomenon in Italian is reminiscent of the Spanish behaviour of the one-syllable locative preposition *tras* (see footnote 50).⁵⁷

As a conclusion, the fact that *di* is sometimes overt even in Italian can be taken as further evidence supporting the existence of an *OF*-phrase, no matter if *of* is not overt, not only in Catalan and Spanish but also in English and Italian.

2.2.3 Conclusions

To sum up, in this section the *among* construction was analysed and compared to the partitive construction. The differences between ordinary partitive nominals and nominals containing the *among* PP (or the corresponding preposition in languages different from English) were taken as definitive for not identifying the nominal containing an *among* PP as a partitive.

As concluded in Chapter 1 and §2.1 of this chapter, partitives only have one N in the structure, and the preposition *of* acts as a Case marker; also they show a lot of

⁵⁶ I thank Laura Bruguè (p.c.) for confirming this to me.

⁵⁷ Interestingly, as reported by Par (1923: 103), in Bernat Metge’s works (14th c.) no preposition *de* appears after locative prepositions such as *devant* ‘in front’, *detràs* ‘behind’, *dejús* ‘under’, *dins* ‘in, within’ or *sobre* ‘on, above’ and, in the case of *prop* ‘near’ and *entorn* ‘around’; *de* only appears precisely preceding a personal pronoun, but not in front of a noun. This is very similar to the Italian facts described above, as mentioned by Par himself (“hauriem una coincidència ab les partícules italianes: ‘dopo, tra, senza, vero’”), although as he points out there are too few cases in Catalan to be conclusive. In any case, it is significant that in old stages of Catalan, in which weak prepositions (especially *de*) were less used than in contemporary Catalan given that the extension of prepositions after the loss of the noun case system was a gradual process (see Martí-Girbau to appear), nevertheless *de* seems to be required in front of pronouns, the only forms that have a morphological case residue in Catalan: this could be taken as further evidence of the Case nature of this prepositional element *de*, as defended in this thesis.

restrictions on the type of quantifier allowed and can only be indefinite nominals. In contrast, nominals containing the *among* PP have the possibility of an overt noun preceding the PP (indicating that the structure has two Ns). In addition, the preposition is clearly lexical, and these nominals can be both definite or indefinite, with no restrictions on the type of quantifier.

Data from Catalan provided further evidence for the noun modifier status of the *among* PP: the corresponding Catalan *entre* PP is actually external to the nominal and works as the predicate of a small clause. For the *entre* PP to be allowed inside the nominal, a prepositional element *de* must be inserted as is generally the case with referential noun modifiers (such as locative modifiers). I take that as a further argument in favour of analysing the *among* PP as an ordinary noun modifier.

CHAPTER 3. The proposal

3.0 Introduction

In Chapter 1 the properties exhibited by partitives were thoroughly described and some conclusions were reached once the different possibilities of analysis were discussed. The conclusions obtained are listed below (they are repeated from (218) in Chapter 1, §1.10):

- (1) a. Partitives have the form ‘Q + *de* + DP’ and an interpretation where a partition is denoted. There are two types of partitives: the ones that denote a subset of a set (set partitives) and the ones that denote a part of a whole (entity partitives).
- b. The quantifier in partitives has to meet certain restrictions in Catalan, not present in quantitatives: quantifiers in set partitives must have the property of denoting individuals, not collections or imprecise amounts of them, and quantifiers in entity partitives must have the property of denoting fractions or portions, not amounts. In general, partitive quantifiers have to bear a [+Spec] feature and be a phonetically strong form. This excludes weak quantificational expressions such as *un munt* (‘a pile’) or *uns deu* (‘about ten’), for example.
- c. The preposition *de* is a functional category that does not contribute to the semantics of the construction but satisfies licensing conditions that seem to be Case related.
- d. Partitives have to contain an internal DP, which can be either a definite DP or an indefinite but specific nominal projection, which also projects into a DP.
- e. The interpretation of the different types of partitives derives from the selectional relation between the quantifier and the DP.
- f. Partitives cannot be preceded by a definite determiner.
- g. From the partitive interpretation it follows that in partitives there is no internal syntactic agreement between Q and DP, but these elements must have the same

gender feature (if the Q can be inflected for gender) via semantic agreement given that they refer to individuals of the same type.

- h. Extraction from inside partitives is in general not possible in contrast with quantitatives, but the variation in the data does not provide us with strong arguments in favour of any proposal. One could attribute this difficulty of extraction to the presence of a DP projection, which can be considered as a blocking category (an island).
- i. Partitives seem to allow a great mobility of the *de DP* sequence in contrast with quantitatives and the sequence *de NP*, but again the variation found in the data on both types of nominals weakens the conclusions obtained, which seem to attribute a greater mobility of DP to its higher degree of referentiality with respect to NP.
- j. Dislocation contexts in which part of the partitive construction (i.e. *de DP*) seems to be fronted are misleading and do not provide any clue to the partitive structure because—as generally assumed in the literature—dislocated structures do not involve movement and do not correspond to the non-dislocated ones.
- k. Partitives, contrary to quantitatives, cannot be pronominalised by *ne*.

In Chapter 2 some nominals that look very similar to partitives and have actually been considered as such by some authors were described, and it was shown that they clearly pattern with quantitatives instead of partitives. Thus, indefinite nominals with an adnominal modifier introduced by *de* (e.g. *dues novel·les de les que vas comprar l'estiu passat* 'two novels of the ones you bought last summer') and the *among* construction (e.g. *moltes novel·les d'entre els llibres que et van deixar* 'many novels among the books that were lent to you') are actually instances of quantitatives. The comparison with similar indefinite nominals like those just mentioned was useful in order to further characterise the partitive construction and obtain more clues about the appropriate structure for both partitives and quantitatives.

A crucial point of this thesis is that partitives do not contain a noun following the quantifier (usually empty), but rather just a noun inside the internal DP. This claim reinforces the similarities between partitives and quantitatives in that both types of nominals contain a single noun. The difference between them has to do with the projection this noun reaches: a DP in partitives but an NP in quantitatives.

In this chapter I will present an analysis that covers all the properties listed in (1) plus the property just mentioned that partitives contain a single noun. The question about

the functional or lexical status of the quantifier and how it is structurally related to the noun will be addressed as well.

The lines of research on predicate inversion have been very inspiring for this analysis, and especially useful and relevant have been Richard Kayne's work on antisymmetry and all his studies on microsyntax. The general lines of the Minimalist Program by Noam Chomsky are assumed, especially the notion of feature valuation as the main trigger for syntax operations.

One of the main claims of my proposal is that partitives and quantitatives are more similar than they look and has often been assumed in the literature: a shared basic structure will be defended for these two types of indefinite nominals. In the next sections the main properties of this basic structure will be described: (a) it contains a single noun (see §3.1), (b) the quantifier is a lexical category, it is projected into a QP that selects the noun projection (either a NP or a DP) and the QP is generated in a low position (see §3.2), and (c) the prepositional element is just a licenser of the internal NP or DP (see §3.3). In section §3.4 the steps in the derivation to obtain a partitive and a quantitative nominal are described and as well some attention is paid to predicative QPs, which give rise to copular sentences, and secondary predicates as well as internal predication within the nominal. Finally, section §3.5 deals with nominals that have been considered as hidden partitives and discusses whether they are true partitives or not.

3.1 A single noun structure¹

As noted in the previous chapters (see especially Chapter 2, §2.1), a quite common assumption in the recent literature² is that partitives contain two nouns in contrast with quantitatives, which would contain only one: the partitive structure is basically considered as an extension of the quantitative structure to which a PP has been attached and in which the first noun (N1) is usually silent. N1 and N2 (the noun contained in the PP) are lexically identical.³ This is illustrated in (2):

¹ The main contents of this section were presented at the *XXIX Incontro di Grammatica Generativa*, 13-15 February 2003, Urbino (Italy), under the title "Partitives: one or two nouns?" and were published in the proceedings (see Martí-Girbau 2003).

² Followed by several authors since Jackendoff (1977) and Milner (1978): see Bonet and Solà (1986), Hernanz and Brucart (1987), Valois (1991), Cardinaletti and Giusti (1992; 2006), Brucart (1997, 2008), Sleeman (1996), Doetjes (1997), Vos (1999), Kester and Sleeman (2002), among others.

³ See, for example, the *lexical non-distinctness requirement* by Cardinaletti and Giusti (2006: §3.3.4).

- | | | | | |
|-----|----|--|-------------------------|--------------|
| (2) | a. | tres nens _{N1} | ‘three children’ | quantitative |
| | b. | tres [e] _{N1} dels nens _{N2} | ‘three of the children’ | partitive |

In the literature several arguments have been presented that apparently support this assumption, some of which have already been mentioned and discussed previously in this thesis. The aim here is to list and revise all of the arguments presented in the literature for a partitive structure containing two nouns, in order to show that they provide no (strong) evidence for the presence of an empty noun in partitives. Even in those cases where the explanation based on an empty noun looks plausible, an alternative will be provided to indicate that there is no need to postulate an empty category to account for the data. Moreover, several further arguments will also be presented against analysing partitives as containing two nouns, which will lead us to the conclusion that a partitive structure containing a single noun, as is defended here, appears to be the only option.

3.1.1 Revision of the arguments for a partitive structure with two nouns

Different arguments have been provided in the literature in favour of postulating two Ns in partitives, which are listed below:

- I. Denotation of two sets of elements in partitives, as the quantitative element quantifies a subset of the set denoted by the noun.
- II. Ambiguity of relative clauses, which can be understood as modifying the bigger set or the subset.
- III. Form of the quantifier typically found in contexts of nominal ellipsis (as shown by Italian and Spanish data).
- IV. Possibility of an overt noun immediately following the quantifier.
- V. Cliticisation by *ne* (in Italian, French and Catalan).

The only argument not mentioned so far is the third one, to which more attention will be devoted. The rest will be briefly described and discussed, and reference to the relevant section in Chapter 2 will be made.

Note that only arguments IV and V are purely syntactic, the others being mainly semantically based, as is the case of I and II, or morpho-phonological as in III. Although the syntactic ones are more solid arguments, in Chapter 2 (§2.1) good evidence was

provided that proved they actually correspond to a different type of nominal, non-partitive, for which these arguments become automatically invalidated for partitives. The other arguments, weaker from a formal perspective, can be easily refuted as will be shown below.

Next all the arguments for a partitive structure with two nouns listed above will be revised.

I. Denotation of two sets

Against the first argument, based on the denotation of two sets, it can be pointed out that the only difference with respect to the interpretation of quantitatives is actually that in partitives Q quantifies over a contextualised set of elements as indicated by the definite determiner. This has already been argued by Ladusaw (1982) and Kupferman (1999), whom I follow.

In Ladusaw (1982: 233)'s words: "There is every reason to believe that determiners⁴ do denote the same functions in the two cases. The NP *three books* should denote the family of sets that contain at least three books; *three of those books* should denote that family of sets which contain at least three books that are contextually indicated. The contribution of the determiner is the same in each case; the difference lies only in the set being 'quantified over'".

In the same line, Kupferman (1999: 43) attributes the different interpretation of partitives and quantitatives to the presence of the definite article in the former, which contextualises the set Q quantifies over, and claims that the structural differences between the two types of nominals must be minimal: "Les différences entre les compléments des tournures partitives comprenant des quantificateurs et des tournures quantitatives se réduisent à un contraste essentiel: les premiers dénotent des ensembles fermés marqués morphologiquement par un déterminant, les seconds réfèrent à des ensembles ouverts et ne sont pas marqués par un déterminant. Cela signifierait que les différences proprement structurales seraient minimales entre les deux sortes de tournures".⁵

⁴ The term 'determiners' in this quotation refer to quantifiers such as *three*, as illustrated in the examples given in the next sentence.

⁵ 'Differences between complements in partitives containing quantifiers and complements in quantitatives are limited to an essential contrast: the former denote closed sets morphologically marked by a determiner, the latter denote open sets and are not marked by a determiner. This would mean that structural differences between the two types of constructions would be minimal.'

Ladusaw's and Kupferman's approach to partitive interpretation is structurally realised in a language like Faroese, where partitives can be construed in two ways, as illustrated by the examples in (3) from Lockwood (1977: 114):⁶

- (3) a. einum av hesum dreingjunum
 one of these children_{dat}
 b. tvær ærnar
 two lambs_{def}
 'two of the lambs'

(3a) is the ordinary partitive structure with Q followed by a prepositional element, a definite determiner and the noun. (3b) is an alternative structure in which Q is just followed by a noun marked for definiteness.⁷ Both are to be considered as examples of the partitive construction.

Moreover, denoting a subset of a contextualised set does not necessarily imply that the structure of partitives contains two nouns. The same effect can be obtained through other strategies, either pragmatically or discursively—see (4a)—or with noun modification—see (4b,c) (recall Chapter 1, §1.1.1, ex. 22):

- (4) a. Many children and parents came in. *Three children...* (= 'Three of the children')
 b. *Three children in the class...* (= 'Three of the children in the class group')
 c. *Many books of my private library...* (= 'Many of the books of my library')

In (4) the nominals in italics have the form of quantitatives but are interpreted very similarly to partitives: they describe the same situation as the corresponding partitives but have a different structure.⁸

⁶ Quoted in Lorenzo (1995: 226).

⁷ According to Lorenzo (1995: 226-227), (3b) does not correspond to a structure such as *the two lambs* as that type of construction is not possible if there is another element specifying the definiteness character of the phrase (see (ia) vs. (ib), from Lockwood 1977: 124).

(i) a. *tvær mínar ærnar
 two my lambs_{def}
 b. tvær ærnar mínar
 two lambs_{def} my
 'two of my lambs'

⁸ Recall that some authors have considered examples like (4a) as 'covered partitives', with a structure overt partitives have but where parts of it are non-overt (see Gutiérrez (2008) for a recent example). See §3.5.1 below for the arguments against such an analysis.

Finally, it is worth noticing the existence of the *among* construction, which denotes a partition as well, but differs syntactically from partitives (see argument V below and recall Chapter 2, §2.2):⁹

- (5) a. Three among the children in the class...
- b. Many books among those I've got at home...

II. Ambiguity of relative clauses

The second argument based on the ambiguity of relative clauses, which can be understood as modifying the bigger set or the subset, is related to the first one. The example in (2b), *tres dels nens* 'three of the children', presupposes the existence of more than three children (at least four), from whom the quantifier picks out a subset of three. So, two sets are denoted: the set of all the children and the subset of three children. Observe the sentences below (they correspond to example (163) from Chapter 1, §1.7.1, repeated here for convenience):

- (6) a. Three of the children in the party, who were playing with a balloon, started fighting.
- b. Three children in the party, who were playing with a balloon, started fighting.

As noted before, the sentence in (6a), in which a partitive nominal is modified by a relative clause, is ambiguous: it can mean that (i) all the children were playing with a balloon but only three of them started fighting, or (ii) only three children in the party were playing with a balloon and they started fighting. In other words, the antecedent of the relative clause can be either all the children in the party (the bigger set) or three of them (the subset). In contrast, the sentence in (6b), in which a quantitative nominal is modified by the relative clause, is unambiguous and has only reading (ii).

With respect to this second argument, it was claimed in Chapter 1, §1.7.1, that there is no need to postulate two nouns to account for the ambiguity of relative clauses in partitives, no matter which analysis of relative clauses is assumed: the idea is that the antecedent of the relative clause in partitives can be either the internal DP or the whole nominal construction. This is possible in partitives thanks to the presence of the internal definite determiner but not

⁹ See Cardinaletti and Giusti (1992, 2006) for a description of the properties of the *among* construction and an analysis of it as a type of partitive construction, where the preposition *among* and the material following it is optional (in contrast with ordinary partitives, with preposition *of*, where the "PP" is not an adjunct but is selected by Q).

in quantitatives, which have no internal determiner; in the latter, only the whole nominal can serve as the antecedent of a relative clause.

In this thesis Kayne (1994)'s DP hypothesis is assumed. In (7) the structure of relative clauses in Kayne's framework is represented: this author assumes a raising analysis, according to which the relative clause is a complement of D as in (7a) and the antecedent raises from inside the relative clause to Spec CP—see (7b).

- (7) a. [_{DP} D° CP]
 b. the [_{CP} [_{NP} picture_j] [that [_{IP} Bill saw [_e]_j]]] (Kayne 1994: 94)

The examples in (8) show the number of Ds where a relative clause, in Kayne's framework, could be attached. In partitives there are two determiners that can license a relative clause: the upper one—I assume that nominals are all DPs—and the lower one. That is not the case in quantitatives, which only have the upper Determiner.

- (8) a. [_{DP} three of [_{DP} the children]] partitive
 b. [_{DP} three children] quantitative

III. Form of the quantifier

The third argument is based on the form of the quantifier, which in Italian and Spanish is the one typically found in contexts of nominal ellipsis. French data is also interesting.

Let us first describe the data. Whereas in quantitatives the form of the quantifier is *un* both in Spanish and Italian, in partitives *uno* appears, which is the same form the quantifier adopts when followed by a covert noun, as examples (9) and (10) illustrate:

Italian:

- (9) a. **un** libro lunghissimo 'a very long book' quantitative
 b. **uno** [_e]_N lunghissimo 'a very long one' N ellipsis
 c. **uno** dei tuoi libri 'one of your books' partitive

Spanish:

- (10) a. **un** problema grave 'a serious problem' quantitative
 b. **uno** [_e]_N grave 'a serious one' N ellipsis
 c. **uno** de tus problemas 'one of your problems' partitive

More examples of quantifiers showing the same contrast are: It. *alcun* / *alcuno* ('some'), *nessun* / *nessuno* ('no, none'); Sp. *algún* / *alguno* ('some'), *ningún* / *ninguno* ('no, none').

A similar argument has been provided for French, where—as noted by Milner (1978)—in partitives the quantifier has the form of a pronoun. The following pairs are obtained: *quelques* / *quelques-uns* ('some') and *chaque* / *chacun* ('each'). The same is true in Italian, as pointed out by Cardinaletti and Giusti (2006: §2.1.3, ex. 30):

- (11) a. ogni/qualche ragazzo vs. *ognun/*qualcun ragazzo 'each/some boy'
 b. *ogni/*qualche di loro vs. ognuno/qualcuno di loro 'each/some of them'

In the same line, in French the first element can be the pronoun *celui*, or the interrogative *lequel* (as noticed by Cardinaletti and Giusti 2006: §2.1.3, ex. 32):

- (12) a. celui des livres de Zola que j'ai lu
 the-one of-the books of Zola that I-have read
 'the one of Zola's books which I have read'
 b. Lequel de ces livres avez-vous lu?
 'Which of these books have you read?'

However, what is important to notice with respect to this third argument is that the variation in the form of the quantifier is not always associated to the presence or not of an empty category, which immediately weakens the argument for an empty noun based on the form of the quantifier. Observe (13):

- (13) a. **uno** studente 'a student'
 b. **hombre alguno** vs. **algún** hombre 'some man'
 c. **un libro cualquiera** vs. **cualquier** libro 'any book'

In Italian the form *uno* can appear in front of overt nouns (see 13a). In Spanish, forms such as *alguno* (vs. *algún*) or *cualquiera* (vs. *cualquier*) co-occur with overt nouns as well, although they must be postnominal (see 13b,c).

Given these data, a morpho-phonological type of account appears as more adequate than a syntactic account based on structures involving ellipsis. In the latter, the forms *un*, *algun*,

cualquier are considered as the basic ones and in contexts of ellipsis would be reinforced as *uno*, *alguno*, *cualquiera*. The morpho-phonological account I suggest takes the reversed perspective:¹⁰ I claim that the basic forms are *uno*, *alguno*, *cualquiera* and that the others (*un*, *algun*, *cualquier*) are truncated forms restricted to certain positions: the prenominal position, normally adjacent to the noun although all the prenominal elements can be affected as well.¹¹ In this account the presence of the full forms *uno*, *alguno*, *cualquiera* does not imply any special structure since they are the basic forms (they only imply that the conditions for them to be truncated have not been met).

This morpho-phonological account is independently supported given that truncation in prenominal position also affects adjectives, so the truncation of quantifiers/determiners can be seen as part of a more general phenomenon that applies to all material preceding the noun:¹²

- | | | | | |
|---------|---------------------------|-----|----------------------------|-----------------------------|
| (14) a. | un buon libro | vs. | un libro buono | ‘a good book’ |
| b. | un bel quaderno | vs. | un quaderno bello | ‘a beautiful exercise book’ |
| c. | un buen hombre | vs. | un hombre bueno | ‘a good man’ |
| d. | un mal día | vs. | un día malo | ‘a bad day’ |
| e. | el primer capítulo | vs. | el capítulo primero | ‘the first chapter’ |
| f. | el tercer volumen | vs. | el volumen tercero | ‘the third volume’ |

Interestingly, in Italian no truncation takes place when the noun starts with *st-* or *sp-* (i.e. *studente* or *spettacolo*, respectively) as illustrated in (15):

- | | | |
|---------|----------------------------|--------------------|
| (15) a. | un buono studente | ‘a good student’ |
| b. | un bello spettacolo | ‘a beautiful show’ |

¹⁰ Interestingly, the *DRAE* considers *alguno* and *ninguno* as the basic masculine forms. Moreover, in the entry of *ninguno*, *-na*, it is explicitly stated that “El masculino sufre apócope antepuesto al sustantivo” (‘The masculine form is truncated in front of a noun’). This is not mentioned in the entry of *alguno*, but the examples there show that it applies to this indefinite quantifier as well.

¹¹ As has been noticed in morpho-phonological works (see Mascaró 1996), the prenominal position is a very unstable one: allomorphs appear in that position and not in others. The reasons for that instability might be related to prosodic properties.

¹² As was pointed out to me by the audience in the *XXIX Incontro di Grammatica Generativa* (2003, Urbino), an alternative account of these examples would be in terms of movement: when the noun moves up over the adjective (to the left of it in the sequence), the adjective gets some nominal morphology that it does not get if the noun stays lower. However, if that were the case, the Italian examples in (13a) and (15) would become unexplained as in them the presence of the final *-o* in the quantifier or adjective cannot be due to N movement but rather correlates to phonological reasons.

Despite being prenominal, the adjectives *buono* and *bello* in (15) have the full form because the noun they modify starts with *st-* or *sp-*, and the same applies to the quantifier *uno* in (13a) above. So in Italian, truncation applies in prenominal position as in Spanish but with an extra condition: that the noun in Italian does not start with *st-* or *sp-*. I take this condition as further evidence of the morpho-phonological type of account, given that it has to do with the pronunciation of words in the final sequence of a sentence.

In this line of reasoning, I claim that partitives contain the basic form *uno*, *alguno*, etc. of the quantifier in Italian and Spanish because in the partitive construction the quantifier, even if prenominal, is not adjacent to the noun but to a preposition in the final sequence and in that situation no truncation takes place.

Support for this account comes from Catalan, where there is evidence that the frontier between constituents might be relevant for morpho-phonological phenomena. Observe (16):

- | | | |
|---------|---|--|
| (16) a. | aquest noi | ‘this boy’ |
| b. | aquest home | ‘this man’ |
| c. | aquest altre noi | ‘this other boy’ |
| d. | [_{DP} Aquest] [_{VP} il·lustra contes] | ‘This one illustrates children books.’ |
| e. | [_{DP} Aquest] [_{VP} és alt] | ‘This one is tall.’ |
| f. | [_{DP} aquest [_{PP} amb ulleres]] | ‘this one with glasses’ |

In most Eastern Catalan dialects, the demonstrative *aquest* has a silent *s* when it precedes nouns beginning with a consonant, but this *s* is pronounced if the following noun begins with a vowel—see (16a) vs. (16b)—or also in a case like (16c). This phenomenon does not apply if the next word is a verb (see 16d,e), or even inside the DP if the adjacent word is a preposition (see 16f). This seems to suggest that what matters here is the constituent border: it does not apply between DP and VP or even inside the DP across a PP frontier. Although as suggested in this thesis the prepositional element in partitives is not a lexical preposition and, therefore, does not project into a PP, it has its own projection intervening in the final sequence between Q and the internal DP, so the same type of explanation can apply.

At this point it is worth mentioning that in Catalan, although no contrasts appear of the sort *un* vs. *uno* as in Spanish and Italian, there is the alternation *cada* vs. *cadascun*, *cadascuna* or *cada un*, *cada una*. *Cada* is allowed in the partitive construction only if

followed by *un*, *una* or if it appears in the fused form *cadascun*, *cadascuna*, as was noted already in Chapter 1, footnote 44 (the examples are repeated here for convenience):

- | | |
|--|--|
| <p>(17) a. cada *(un) dels articles
each one_m of-the articles
b. cada *(una) de les noies
each one_f of the girls</p> | <p>(18) a. cadascun dels articles
each-one_m of-the articles
b. cadascuna de les noies
each-one_f of the girls</p> |
|--|--|

Conversely, in quantitatives *cada* on its own is the only form admitted if the noun is overt, as shown below:¹³

- | | |
|---|---|
| <p>(19) a. cada (*un) article
b. cada (*una) noia</p> | <p>(20) a. *cadascun article
b. *cadascuna noia</p> |
|---|---|

In this case the account based on basic forms versus truncated forms does not seem to apply, but in a way the contrast *cada* vs. *cada(sc)un*, *cada(sc)una* is not so different. A plausible alternative to the proposals that claim that the presence of *un/una* in partitives is evidence for an empty noun following the quantifier would be to consider them as a kind of overt inflection, as partitives seem to require: the gender would be overtly expressed through *un/una* given that *cada* is an invariable form and cannot be inflected for gender. The existence of the fused forms *cadascun* and *cadascuna* points to this line of reasoning, which is the one I adopt. Notice that these longer forms are very similar to the forms *un / una*, *algun / alguna*, etc. in Catalan, so analogy might be involved in this process.

In Spanish *cada* behaves exactly as the equivalent word in Catalan as illustrated in (21) and (22) below, so the same explanation would apply (and similarly in French, with *chaque* vs. *chacun/chacune* and *quelque* vs. *quelqu'un/quelqu'une* or *quelques* vs. *quelques-uns/quelques-unes*). Observe the following Spanish data:

- | | |
|--|-------------------|
| <p>(21) a. cada *(uno) de los artículos
b. cada *(una) de las chicas</p> | <p>partitives</p> |
|--|-------------------|

¹³ If the noun is elliptical, then the behaviour of quantitatives is the same as partitives show:

(i) a. cada *(un) b. cada *(una)	(ii) a. cadascun b. cadascuna
---	--

- [illegible]

Italian is interesting in that it has two words for *each*: an invariable one, *ogni* (which behaves exactly like *cada* as expected), and a variable one, *ciascun(o)/ciascuna*. The latter patterns with *un(o)*, *alcun(o)*, etc. (see (9) above). Observe the following examples:

- | | | | | | |
|------|----|-------------------------|-----|-------------------------|---------------|
| (23) | a. | ognuno degli articoli | vs. | *ogni degli articoli | partitives |
| | b. | ognuna delle ragazze | vs. | *ogni delle ragazze | |
| (24) | a. | ogni articolo | vs. | *ognuno articolo | quantitatives |
| | b. | ogni ragazza | vs. | *ognuna ragazza | |
| (25) | a. | ciascuno degli articoli | vs. | *ciascun degli articoli | partitives |
| | b. | ciascun articolo | vs. | *ciascuno articolo | quantitatives |

The existence of the two forms might suggest that even in the *each* cases one could claim a truncation account, especially given the fused forms *ognuno/ognuna* (and remember the Catalan *cadascun/cadascuna*). The forms with *un(o)/una* would be the basic ones, and the form *cada* or *ogni* or *ciascun* would be the truncated ones. In any case, my point was to show that the different forms that the quantifiers can take is a more complex matter than usually presented in the literature and, crucially, that it is not necessarily connected to ellipsis.

To finish this section, just let me point out that a similar account would apply to *lequel* in French:¹⁴ the shorter form *quel* (which is the one that appears in quantitatives followed by a singular masculine noun: e.g. *quel livre* ‘what book’) needs to be reinforced with overt gender and number marking when it appears in partitive nominals. Although this masculine form *quel* differs from the corresponding feminine form in the singular *quelle* and the plural forms *quels* and *quelles* in written language, they all have the same pronunciation [kɛl], so the definite article must be attached to them in order to distinguish

¹⁴ Here the examples of *celui* will not be discussed as they do not seem to be an instance of the partitive construction and demonstratives are outside the scope of this thesis.

between the two genders in the singular (*lequel* vs. *laquelle*) and between these singular forms and the plural ones (*lesquels* / *lesquelles*).¹⁵

IV. An overt noun following Q

The argument on the possibility of an overt noun immediately following the quantifier is based on examples such as the ones in (26).¹⁶

- (26) a. Ho letto molti **libri** di quelli che mi avevi consigliato.
 ‘I’ve read many books of those you had recommended to me.’
 b. Ho letto molti **libri** dei **libri** della biblioteca.
 ‘I’ve read many books of the books in the library.’

With respect to this fourth argument, I claim that examples with an overt noun following Q are not true partitives, as supported by the following evidence: unlike partitives, examples with an overt noun following the quantifier allow Q or the first N to be modified—see (27a,b) vs. (28a,b)—and license types of Q impossible in true partitives—see (27c) vs. (28c).

- (27) a. Ja he llegit **uns** deu llibres dels que m’havies recomanat.
 ‘I already read about ten books of those you had recommended to me.’
 b. He llegit molts llibres **interessants** dels que m’havies recomanat.
 ‘I read many interesting books of those you had recommended to me.’
 c. He llegit **un munt de** llibres dels que m’havies recomanat.
 ‘I read a lot of books of those you had recommended to me.’

 (28) a. *Ja he llegit **uns** deu dels llibres que m’havies recomanat.
 b. *He llegit molts **interessants** dels llibres que m’havies recomanat.
 c. *He llegit **un munt** dels llibres que m’havies recomanat.

¹⁵ This is not the case in Catalan, where the equivalent interrogative element has four clearly distinguished inflected forms *quin*_{m.sg}-*quina*_{f.sg}-*quins*_{m.pl}-*quines*_{f.pl}, which are licensed in partitives as well as in quantitatives.

¹⁶ Taken from Cardinaletti and Giusti (2006: §3.1), which correspond to their examples (96a) and (105a) respectively. Other authors have provided similar examples for other languages.

The PPs in (27) are a kind of predication of the noun, which can be paraphrased by a relative clause with *be*:¹⁷

(29) Ja he llegit uns deu llibres **que són** dels que m’havies recomanat.

‘I read about ten books which are of those you had recommended to me (which belong to that group of books).’

The PP modifying an overt N like that of (27) often gets a “kind” reading although in examples like (27) that is not possible due to the past tense and the first and second person pronouns. However, if we change it to allow a generic reading, then the “kind” interpretation easily appears:

(30) a. Ja he llegit uns deu llibres **dels que s’acostumen a recomanar a primer**.

‘I read about ten books of those that are usually recommended in the first year.’

b. Ja he llegit uns deu llibres **dels (que es consideren) de lectura recomanada**.

‘I read about ten books of those (that are considered) of recommended reading.’

The reader is referred to Chapter 2, §2.1, for more data and extensive discussion.

V. Cliticisation by *ne*

The clitic *ne* that appears in the quantitative construction in Italian, French and Catalan realising the noun¹⁸ (see 31a) also seems to appear in partitives: observe example (31b), where *ne* co-occurs with *dei tuoi* (what Cardinaletti and Giusti call ‘the partitive PP’). This is taken to provide evidence for an empty noun in partitives, in parallel with quantitatives.

¹⁷ See Cardinaletti and Giusti (2006: §3.1) for a discussion on how to analyse this PP and their arguments for not considering it as a complement of N (because it is predicative) or as an adjunct—an optional partitive PP such as *among*—(because it is more restrictive). Recall they claim that the optional partitive PP (with preposition *tra/fra* ‘among’ in Italian) can be introduced by *di* (‘of’) only if fronted in Italian.

A possibility of analysis of the examples with an overt N following Q would be to consider them as an instantiation of the *among* construction and extend the cases where this “optional partitive” can contain the preposition *di* to the position adjacent to the noun, but only in quantitatives.

¹⁸ Not only the noun but also its projection as well, which will be an N’, NP or DP depending on the analysis. The word *noun* appears for reasons of simplicity, given example (31a).

Cardinaletti and Giusti (1992: fn. 11, 2006: §3.3.4) regard the ungrammaticality of examples like (33a) as a violation of principle C of binding theory, since the pronominal *ne* binds an R-expression (i.e. *i tuoi libri*). This is not the case in (34) since *quelli*—according to these authors—is a pronoun, not an R-expression.

(34) a. (talking about books)

Ne_i ho letti molti t_i [di quelli che mi hai dato tu]

NE have_{1sg} read many of those that to-me have_{2sg} given you

‘I’ve read many of those you have given to me.’

(Cardinaletti and Giusti 1992: 131, ex. 38)

b. *Ne ho letti molti di quelli (che mi hai consigliato).*

NE have_{1sg} read many of those that to-me have_{2sg} recommended

‘I’ve read many of those you have recommended me.’

(Cardinaletti and Giusti 2006: ex. 141a)

Cardinaletti and Giusti (2006) include personal pronouns among the possibilities and give the following example (= to their example 141c):

(35) *Ne ho visti molti di LORO, non di vuoi.*

NE have_{1sg} seen many of them not of you_{pl}

‘I’ve seen many of them, not of you.’

However, when one has a closer look at how personal pronouns behave, this account does not seem to work very well. In Catalan, the coexistence of overt personal pronouns and the clitic *ne* is not possible contrary to what we would expect if the explanation in terms of binding is correct:

(36) a. **N’han seleccionat moltes d’elles.*

NE-have_{3pl} selected many_f of-them_f

‘They have selected many of them.’

b. **En visitaré dos de vosaltres.*

NE visit_{1sgFut} two of you

‘I’ll visit two of you.’

Just as in Catalan even the corresponding Italian examples in (36) would not work very well (Giuliana Giusti, p.c.). In the well-formed example (35) above it is probably the contrastive focus on the pronoun that saves the sentence (although in Catalan focus would not have the same effect, it would improve the degree of acceptability).

The reason for the ungrammaticality of the examples in (36) is that they contain no empty N as they are true partitives, so the clitic *ne* is, therefore, not licensed. In other words, there exist no equivalent sentences with an overt noun following the quantifier contrary to example (34). Actually, standard assumptions about NP structures lead us to assume that the example in (34) contains not a pronoun but rather a demonstrative followed by an empty noun, which is coindexed with the noun following the quantifier, as shown in (37):

- (37) Ho letti molti libri_i di quelli [e_i]_N (che mi hai consigliato).
 have_{1sg} read many books of those that to-me have_{2sg} recommended
 ‘I’ve read many of those you have recommended me.’

Compare (37) to (38), where the clitic *ne* has been replaced with an overt noun, yielding ungrammaticality:

- (38) a. *Han seleccionat moltes noies d’elles.
 have_{3pl} selected many girls of them
 b. *Visitaré dos nois de vosaltres.
 visit_{1sgFut} two boys of you

Interestingly, the examples in (36) improve with no clitic *ne* (and obviously with no overt noun), though the resulting sentences are not completely felicitous, at least in Catalan:¹⁹

¹⁹ Here a conflict might arise between the need of strong pronouns to be doubled by clitics in object position in Catalan—see (i)—and the impossibility of these clitics in partitives: clitics would refer to the whole set like the strong pronouns, but in partitives they should denote the subset—see (ii) (= example (39) above but with clitics added).

(i) a. Finalment *(les_i) han seleccionat a elles_i.
 finally them have_{3pl} selected to them
 ‘Finally they have selected them.’
 (ii) a. ??Finalment (*les) han seleccionat moltes d’elles.
 ‘They have selected many of them.’

b. Avui *(us) visitaré a vosaltres.
 today you visit_{1sgFut} to you
 ‘I’ll visit you today.’
 b. ??Avui (*us) visitaré dos de vosaltres.
 ‘I’ll visit two of you today.’

- (39) a. ??Han seleccionat moltes d'elles. b. ??Visitaré dos de vosaltres.
 'They have selected many of them.' 'I'll visit two of you.'

Examples improve remarkably when the partitive is within a PP or in subject position, as shown by (40a,b) respectively:

- (40) a. ?He parlat amb moltes d'elles.
 'I talked to many of them.'
 b. Dos de vosaltres podeu llegir un poema.
 'Two of you can read a poem.'

Similarly, partitives with an elliptical noun are licensed in all positions except the object position.²⁰ Compare (41a) to (41b,c):

- (41) a. ??He llegit [_{obj} una de les primeres *e* que va escriure]. (*e*=novel·les)
 'I read one of the first ones (s)he wrote.' (ones=novels)
 b. [_{subj} Una de les primeres *e* que va escriure] ha estat traduïda a moltes llengües.
 'One of the first ones he wrote has been translated into many languages.'
 c. Hi ha una pel·lícula basada [_{pp} en [una de les primeres *e* que va escriure]].
 'There is a film based on one of the first ones he wrote.'

Though I have no definitive explanation for the unacceptable examples (39) and (41a), which must be related to the way indefinite objects are licensed, I have shown in this section that the presence of the clitic *ne* cannot be taken as evidence for the existence of an empty noun in partitives (recall the examples in (32)). Our conclusion is that partitives can

²⁰ Here the problem seems to be that the elliptical noun is at the same time within a DP (the embedded DP) but also within an indefinite nominal, and the licensing conditions clash: definite objects allow elliptical nouns—see (ia)—whereas a clitic *en* is required in indefinite objects—see (ib). Notice that coordination in object position solves the conflict as the elliptical noun is licensed through co reference with the overt noun—see (ic,d):

- (i) a. He llegit [les primeres *e* que va escriure]. 'I read the first ones (s)he wrote.'
 b. N_i'he llegit [una *e_i]. 'I read one (of them).'*
- c. He llegit [dues novel·les_i de George Orwell i una *e_i de Marc Twain].
 'I read two novels by George Orwel and one by Marc Twain.'*
- d. He llegit [dues de les seves darreres novel·les_i i una de les primeres *e_i que va escriure].
 'I read two of their last novels and one of the first (s)he wrote.'*

No conflict arises in contexts where no clitic is required as a licenser, as in subject position or in PPs.

never be pronominalised with the clitic *ne*, so whenever a clitic *ne* is associated with an indefinite nominal, it is not a true partitive. Why partitives with an empty noun are not acceptable in object position seems an independent question, which needs further investigation.

3.1.2 Some further arguments against a partitive structure with two nouns

Apart from the weakness of the arguments in favour of a two N structure having been shown, there is further evidence that prove that partitives do not behave syntactically as if they had an empty noun following Q:

1. No noun modifiers can appear between Q and the prepositional element
2. No noun can be overtly realised nor interpreted when the embedded DP contains a pronoun.
3. No indefinite pronoun can replace the quantifier

Following, these three arguments are presented.

1. Impossible modification of N_1 , contrary to what would be expected.

If the quantifier in partitives were really followed by a noun as is the case in quantitatives, this noun (no matter if it is empty) should allow modifiers like any ordinary noun, but data clearly show that no modifiers of any sort are licensed in partitives in that position—recall example (28b) above. This is also pointed out by Kupferman (1999: 50), who illustrates it in French:

- (42) *Trois grandes de ces fenêtres étaient sales.
 three big of these windows were dirty

This contrasts with the behaviour of quantitatives, which allow noun modification when the noun is non-overt. Observe the Spanish data in (43) and (44), where the well-formed *a* examples (quantitatives) contrast with the ungrammatical *b* examples (partitives):

(talking about films)

- (43) a. Ayer vi una [e_N] muy interesante.
 ‘Yesterday I saw a very interesting one.’
 b. *Ayer vi una muy interesante de las películas que me habías recomendado.
 yesterday saw_{1sg} a very interesting of the films that to-me had_{2sg} recommended

- (44) a. Ayer vi una [e_N] de terror.
 ‘Yesterday I saw a horror one.’
 b. *Ayer vi una de terror de las películas que me habías recomendado.
 yesterday saw_{1sg} a of horror of the films that to-me had_{2sg} recommended

The same contrast is found in other languages such as French or Catalan.

The ungrammaticality of examples like the ones above alone invalidates any analysis of partitives that propose an empty noun in the structure. However, there are further arguments against a partitive structure with two nouns.

2. Impossible realisation (or even interpretation) of N_1 when partitives contain pronouns.

When the partitive contains a personal pronoun, it is not clear how an empty noun would be interpreted at all. Observe the examples in (45) (already seen in Chapter 1, §1.1.2.3, fn. 27):

- (45) a. Uno [e] di noi pensa che...
 one of us thinks that
 b. Molti [e] di noi pensano che...
 many of us think that...

These examples are provided by Cardinaletti and Giusti (2006) when discussing agreement phenomena. According to these authors, the fact that the partitive nominal agrees in 3rd person with the verb is an argument in favour of an empty noun in the structure, but they do not address the question of how this empty noun would be interpreted nor explain why the overt realisation of ‘[e]’ in these cases would yield ungrammaticality²¹ (recall that these authors take the existence of examples with an overt noun following the quantifier as support for their analysis of an empty noun in partitives, so we would expect an overt noun to be possible here as well contrary to fact).

²¹ It is illustrated in (i) (recall Catalan examples in (38) above as well):

- (i) a. *Un ragazzo di noi pensa che...
 a boy of us thinks that
 b. *Molti ragazzi di noi pensano che...
 many boys of us think that

Moreover, in partitives denoting parts of wholes (even in cases where the whole is an amount of individuals and the part corresponds to a subset of it like in (46b)), it seems even harder to justify an empty noun in the structure. One would expect them to have the same structure attributed to partitives denoting subsets of sets, but in the literature that proposes a partitive structure with two nouns, they are not discussed nor are they treated differently (see Chapter 1, §1.1.2.2, fn. 26).

- (46) a. la meitat de la farina
 ‘half of the flour’
 b. un terç dels estudiants
 ‘one third of the students’
 c. una part dels nens
 ‘part of the children’

In any case, although examples like (45a) are found in the literature and an empty noun is claimed in them, this noun can never be overt nor can one think of a possible interpretation for it, which casts severe doubts on its existence at all.

3. *Impossibility of pronouns replacing Q + N_i, contrary to what would be expected.*

If in partitives there were an empty noun following the quantifier and *algun dels treballadors* corresponded to *algun treballador dels treballadors* with the first noun elliptical, then the ungrammaticality of (47a) yielded by *algú* is surprising as such a pronoun can replace the corresponding indefinite quantifier *algun* + the noun. Compare it to the well-formedness of *algú* in quantitatives (see 47b).

- | | | | | | |
|---------|-------|--------------------------|-----|-------------------------|---------------|
| (47) a. | *algú | dels treballadors | vs. | algun dels treballadors | partitives |
| | | someone of-the employees | | some of-the employees | |
| b. | algú | | vs. | algun treballador | quantitatives |

One could appeal to some extra condition that precluded this replacement in partitives, but that would be an ad hoc explanation. In contrast, the ungrammaticality of *algú* automatically

follows if no empty noun is claimed in the structure: *algú* is not licensed because it is a pronoun, not a quantifier.²²

Interestingly, as opposed to true partitives, it is worth mentioning here that the *among* construction does behave as containing two nouns in the structure as claimed: it always allows the first noun to be realised or modified and admits a pronoun replacing ‘Q + N1’. This can easily be checked if, in the previous examples, *of* (or the corresponding *de*, *di*) is replaced by *among* (or the corresponding *entre*, *tra/fra*). This leads us to the conclusion that the *among* construction contains two nouns and it is different from the partitive construction, which only contains one (see Chapter 2, §2.2, for more information on the *among* construction).²³ I take this different behaviour of the *among* construction as further evidence against claiming an empty noun in partitives: although both types of nominals convey the notion of partition, they have different structures, and only the *among* construction contains two nouns.

Finally, one last, but not less important, remark is that a proposal of a single noun in partitives is preferable from a theoretical point of view because it automatically explains the ungrammatical examples in (33, 42-47), and it is much simpler than proposing two nouns in the structure. Indeed, it has the advantage that there is no need for an extra condition to ensure that the NP²⁴ following Q and the DP following the prepositional element *de*—or *di*, *of*, etc.—are lexically non-distinct (a device that cannot be dispensed with in any analyses that propose two nouns in partitives). Moreover, a single noun analysis of the partitive construction does not require the proposal of an extended projection for partitives (with the addition of a PP to the structure of Q+NP) but stresses the parallelism between partitives and non-partitives by suggesting a similar structure where the Q only has one argument, which can be a NP or a DP.

²² Notice that the same would apply to the pronoun *ningú* ‘no one, nobody’ vs. *cap* ‘no(ne)’:

(i) a.	* <i>ningú dels treballadors</i>	vs.	<i>cap dels treballadors</i>	partitives
	no-one of-the employees		none of-the employees	
b.	<i>ningú</i>	vs.	<i>cap treballador</i>	quantitatives

²³ It is not clear whether the non-distinctness requirement proposed by Cardinaletti and Giusti (1992, 2006) could explain the ungrammaticality of examples 42-47, or how the contrast between these examples and the grammatical ones with *among* would be explained in their theory.

²⁴ DP for Cardinaletti and Giusti (2006).

3.1.3 Conclusions

In this section it has been shown, on the basis of both strong empirical evidence and theoretical reasons, that an analysis of partitives with a single-noun in the structure as the one defended in this thesis is far superior to any analysis claiming a double-noun structure.

In the next sections, other aspects of the partitive structure and the syntactic behaviour displayed by partitives will be dealt with.

3.2 The quantifier selects the noun, projected into a DP

In Chapter 1—recall §1.1.2.3 and especially §1.2—we reached the conclusion that in the partitive construction the quantifier selects the internal DP whereas in quantitatives it selects an NP. The partitive interpretation obtains when the quantifier quantifies over a contextualised set or whole, so its argument must be a DP projection. If the argument is an NP, the interpretation is not partitive but quantitative as expected.²⁵ Recall that I assume that the prepositional element is not a lexical preposition but a licenser (i.e. a Case marker) so that Q selects DP or NP directly. Observe the following examples (= (29) and (30) in Ch. 1, §1.1.2.3):

(48) *partitives*

- a. three of [_{DP} my friends]
- b. many of [_{DP} those books]
- c. a group of [_{DP} those tourists]
- d. a piece of [_{DP} this cake]
- e. a glass of [_{DP} the red wine]

(49) *quantitatives*

- a. three [_{NP} friends of mine]
- b. many [_{NP} books]
- c. a group of [_{NP} tourists]
- d. a piece of [_{NP} cake]
- e. a glass of [_{NP} red wine]

The quantifiers in (48) and (49) are the same, the only difference being whether they select a DP or an NP (I leave aside here the issue of the presence or not of the preposition, which is not relevant to the point). The internal DP forces the partitive interpretation in (48) whereas the absence of an internal D gives a quantitative interpretation—see (49), where the quantifiers select an NP.

We also saw that two types of partitives can be distinguished: *entity partitives*—which are headed by quantifiers that select entities as in (48d,e)—and *set partitives*—which are headed by quantifiers that select sets of entities as in (48a,b,c). In English, quantifiers such as

²⁵ However, see Cardinaletti and Giusti (2006), who consider that Q always selects a DP.

half or *much* are entity partitives as in (50) below whereas quantifiers such as *one* and *many* are set partitives—see (51) below. So the type of quantifier determines the type of partitive relation: the part-whole or the subset-set relation.²⁶ The examples below are the previous examples (36) and (37) in Chapter 1, §1.2, repeated here for convenience:

(50) *entity partitives*

- a. half of the population
- b. half of a cookie
- c. much of the water
- d. *one of the population
- e. *one of a cookie
- f. *one of the water

(51) *set partitives*

- a. one of the linguists
- b. many of the cats
- c. *much of the linguists
- d. *much of the cats

Moreover, Catalan shows restrictions on the quantifiers that enter the partitive construction, so only a subgroup of quantifiers can select a DP as illustrated in examples from (52) to (56); in contrast, the quantitative version of the ungrammatical *b* examples would be felicitous:²⁷

(52) *set partitives*

- a. bastants dels articles
a-lot of-the articles
- b. *força dels articles
a-lot of-the articles

(53) *set partitives*

- a. deu dels conferenciantes
ten of-the speakers
- b. ?*una desena dels conferenciantes
a ten of-the speakers
'about ten of the speakers'
- c. *uns deu dels conferenciantes
about ten of-the speakers

²⁶ Though some quantifiers can take arguments of both types—e.g. English *some* and *most*—and in that case the type of partitive construction will be determined by the nature of the DP: whether it is an entity (a singular countable noun or a mass noun) as in (ia) or a set (plural countable noun) as in (ib).

(i) a. *some of the {cake / water}* entity partitive
b. *some of the linguists* set partitive

Recall that a DP containing a plural countable noun can be an entity as well, not just a set, but it will behave like an entity only with quantifiers that specialise in selecting entities, such as fractions: *a third of the linguists*.

²⁷ Recall discussion in Chapter 1, §1.2.1, from which the examples are taken.

(54) *set partitives*

- a. molts dels polítics
many of-the politicians
- b. *una pila dels polítics
a pile of-the politicians

(55) *entity partitives*

- a. un tros d'aquest pastís
a piece of-this cake
- b. ?*molt d'aquest pastís
much of-this cake

(56) *entity partitives*

- a. una gran part de l'aigua
one big part of the-water
- b. ??molta de l'aigua
much of the-water

The common property required in partitive quantifiers in Catalan is specificity: quantifiers reject a weak interpretation, such as describing an imprecise amount or number of something, but must denote a particular subset of a set or a part or portion of a whole (or at least a defined number of individuals or a delimited part or portion). The *b* examples are excluded because precisely those quantifiers or quantitative expressions cannot have a specific reading and are vague. In contrast, no restrictions apply to quantifiers in the quantitative construction, they can be both specific or not, so that is why all of the quantifiers in examples (52) to (56) are allowed.

From all of this, we conclude that there is a selectional relationship between the quantifier and the DP in partitives. At this point, the questions listed in (57) arise:

- (57) a. What is the nature of this selection? Is Q a functional category or a lexical category?
- b. How is this relationship syntactically established: under head-complement or under Spec-head? Or is there another possibility?
- c. Is the relationship between Q and DP established in a low position in the structure or Q is generated in a high position in the tree above DP?

The answers to these questions, which are defended in this thesis are the following ones:

- (58) a. Q is not functional but lexical.
- b. The selectional relationship holds between QP and DP (and not Q and DP), so syntactically they are not in head-complement nor Spec-head relation, but an extra

functional projection FP is needed to provide two positions for maximal projections: a complement position (QP) and a specifier position (DP).

- c. QP is generated very low in the structure, so its high final position is derived through movement.

In general, the claims in (58) are novel in the literature, so in the next sections they will be carefully argued and justified. Other answers to the questions in (57) given by syntacticians will be briefly discussed and revised as well for the sake of completeness.

3.2.1 Q is a lexical category

It is often assumed that quantifiers are functional categories just as are determiners such as articles and demonstratives (since Löbel 1989). The reasons for considering quantifiers as functional categories are mainly based on their role as licensors of the nominal projection: nouns (or NPs) are predicates (they are intensional elements) which can only function as arguments in the sentence if preceded by a determiner-like element: an article, a demonstrative or a quantifier. This is so because articles and demonstratives specify the reference of the noun: “The noun provides a predicate, and the determiner picks out a particular member of that predicate’s extension” (Abney 1987: 77). Similarly, quantifiers narrow the noun reference by picking out a number of individuals or some amount of the extension denoted by the noun and so allow it to be an argument (for it becomes extensional). In Brucart’s (2008: §7.1) words: “els *quantificadors*..., tot i que no identifiquen el referent, atribueixen valor extensional al SN a l’expressar el nombre d’individus designats (quan el nom és comptable...) o bé el grau de magnitud (quan no és comptable...)”.²⁸ Plural number in itself has been argued to act as a licensor of this type as well, given that bare plurals (but not bare singular countable nouns) are able to work as arguments. In this sense, quantifiers are usually generated in a high position in the nominal structure, as part of the functional material above the lexical projection of NP, in general projected in their own QP.

However, there are reasons to question that quantifiers are functional. In effect, recently it has been claimed that quantifiers are lexical categories given that they have selectional properties (see, for example, Cardinaletti and Giusti 2006). According to these

²⁸ ‘Despite *quantifiers* not identifying the referent, they attribute an extensional value to the NP by expressing the number of individuals denoted (when the noun is countable) or the degree of quantity (in the case of a mass noun).’

authors, existential Qs are diadic elements that select two complements: a quantitative DP and a partitive PP.²⁹ But there are more obvious reasons for considering quantifiers as lexical categories, which will be discussed below.

Let us see whether quantifiers have the properties that are in general attributed to functional categories, which are listed in (59) (Abney 1987: 64f):

- (59) a. They constitute closed classes.
 b. They are generally phonologically and morphologically dependent, and stressless. Often they are clitics or affixes, and sometimes even phonologically null.
 b. They permit only one complement, which is in general not an argument.
 c. They are usually inseparable from their complement.
 d. They lack descriptive content. Their semantic contribution is second-order, regulating or contributing to the interpretation of their complement. They mark grammatical or relational features, rather than picking out a class of objects.

a. The immediate answer to (59a) is that quantifiers cannot be considered a closed class given that cardinals are infinite. More interesting is the fact that some adjectives can ‘become’ quantifiers in the right environment (recall adjectives such as *diversos* ‘several’, *diferents* lit. ‘different’ (=‘several’) or *nombrosos* ‘numerous’ discussed in Chapter 1, §1.2.1) —see (60a)— or even some nouns can behave as quantifiers if their meaning contains the idea of quantity such as *infinitat* (‘infinity’) —see (60b)— or in Spanish *cantidad* (‘quantity’) —see (60c):³⁰

- (60) a. {*Diversos/Diferents/Nombrosos*} alumnes han aconseguir una beca.
 several several numerous students have_{3pl} obtained a scholarship

²⁹ The structure they propose is in (i), where FP and AgrQP are the functional projections above QP to which Q and DP move yielding the final sequence Q DP PP:

(i) [_{FP} [_{AgrQP} [_{QP} PP [_{Q'} Q DP]]]]

See Cardinaletti and Giusti (2006: §3.3) for a justification of this structure and derivation and for the selectional properties and structure of other types of quantifiers (distributive and universal).

³⁰ The Catalan counterpart *quantitat* behaves more like an ordinary noun in that it needs to be preceded by the indefinite article, and also it usually requires a modifier such as *gran* ‘big’ or *petita* ‘little’ that qualifies the size of the amount:

(i) Hi havia una gran quantitat de gent pertot arreu.
 there had_{3sg} a big quantity of people everywhere
 ‘There were lots of people everywhere.’

- b. S'han rebut *infinitat* de queixes.
SE-have received infinity of complaints
'A great many complaints were received.'
- c. Había *cantidad* de gente por todas partes.
had_{3sg} quantity of people by all parts
'There were lots of people everywhere.'

Moreover, quantitative expressions can easily be created with almost any noun that can have the meaning of a container, giving rise to examples of the so-called pseudopartitive construction, even with a noun such as *autobús* 'bus' (see Chapter 1, §1.6.2.3):³¹

- (61) a. {Ha/Han} arribat *un munt* de turistes alemanys.
has/have_{3pl} arrived a pile of tourists German
'A lot of German tourists have arrived.'
- b. Ha arribat *un autobús* de turistes alemanys.
has arrived a bus of tourists German
'A bus (full of) German tourists has arrived.'

In examples like (61b) I consider that the whole expression *un autobús* works as a quantifier like the expression *un munt* ('a lot') or the single word *molts* ('many').³²

Languages can be very creative and allow the use as quantitative expressions of sequences like *un mar* lit. 'a sea', *una muntanya* 'a mountain', or even *una bogeria* lit. 'a madness', *una*

³¹ More common examples would be those with measure nouns created from drink or food containers such as *bottle*, *cup*, *plate*, *box*, etc. (e.g. *We drank a bottle of wine*, *I had two cups of coffee*, *We ate two plates of pasta*, *I ate a box of chocolates*). Also productive as measure nouns are those referring to a collection such as *bunch*, *pile*, etc., usually used as quantifiers to denote a large amount (e.g. *A bunch of kids were playing on the street*, *I have got piles of work to do*).

³² However, notice that the quantitative meaning of *un autobús* is harder to get in certain contexts, whereas expressions such as *un munt* are lexicalised as a quantifier:

- (i) a. En aquella botiga de la Rambla va entrar-hi ^{??}(tot) un autobús de turistes alemanys.
'A (whole) bus of German tourists went in that shop in the Rambla.'
- b. Al restaurant hi havia dos autobusos de turistes alemanys.
'In the restaurant there were two buses of German tourists.'

In (ia), without the use of *tot* (which forces the quantitative interpretation of *un autobús*), the unmarked reading is that an actual bus entered the shop (it was an accident, it went out of control). Similarly (ib) seems to imply that there are two actual buses inside the restaurant, which is pragmatically odd.

Interestingly, English has compounds with the word *load* overtly indicating "the total amount of sth that sth can carry or contain: *a busload of tourists*, *They ordered three truckloads of sand*" (OALD, *load*).

bestiesa lit. ‘a silly thing’ or *una misèria* ‘a misery’, *un pensament* ‘a thought’, *un pessic* ‘a pinch’, the only requirement being that they appear in the right configuration and that some idea of quantity can be conveyed through them (which can be a large amount as in (62a,b,c), so large as to be crazy in the case of *bogeria* and *bestiesa*,³³ or a very little amount as in (62d,e,f)):

- (62) a. *Un mar de gent* caminava cap a la sortida.
 a sea of people walked towards the exit
 ‘Lots of people walked towards the exit.’
- b. Aquesta decisió generarà *una muntanya* de problemes.
 this decision generate_{fut.3sg} a mountain of problems
 ‘This decision will generate an awful lot of problems.’
- c. Al concert hi va anar {*una bestiesa* / *una bogeria*} de gent.
 to-the concert there went_{3sg} a silly-thing a madness of people
 ‘Loads of people were present at the concert.’
- d. Pel cotxe vell, ens van donar *una misèria* de diners.
 for-the car old us gave_{3pl} a misery of money
 ‘For the old car we got a pittance.’
- e. Afegeix *un pensament* de sal a la sopa.
 add a thought of salt in the soup
 ‘Add a pinch of salt to the soup.’
- f. Podem decorar el plat amb *un pessic* de pebre vermell.
 can_{1pl} decorate the dish with a pinch of pepper red
 ‘We can decorate the dish with a pinch of paprika.’

So the conclusion is that quantifiers are not a closed class.

b. With respect to the second property in (59b), there is no doubt that quantifiers do not fulfil it. Unlike the definite article or any kind of inflection, to give a couple of examples of true functional categories, quantifiers are clearly not phonologically nor morphologically

³³ Recall discussion in Chapter 1, §1.6.2.3, on *bogeria* and *bestiesa* among other similar nouns.

dependent, nor stressless. Moreover, they are also not affixes,³⁴ but, on the contrary, they can undergo derivative morphological processes themselves and become nouns and as well as other categories such as adjectives or adverbs. This ability is an undoubted reflection of their lexical status, which is shown mainly by cardinals (observe 63a-c),³⁵ but not only by cardinals (see examples 63d,e).

(63) a.	una <i>desena</i> d'estudiants	vs.	<i>deu</i> estudiants
	a ten _N of-students		ten students
	'(about) ten students'		'ten students'
b.	un <i>centenar</i> de cartes	vs.	<i>cent</i> cartes
	a hundred _N of letters		hundred letters
	'{(about) a hundred/lots of} letters'		'a hundred letters'
c.	un <i>miler</i> de manifestants	vs.	<i>mil</i> manifestants
	a thousand _N of demonstrators		thousand demonstrators
	'(about) a thousand demonstrators'		'a thousand demonstrators'
d.	(una) <i>multitud</i> de problemes	vs.	<i>molts</i> problemes
	a crowd of problems		many problems
	'a lot of problems'		'many problems'
e.	la <i>totalitat</i> dels veïns	vs.	<i>tots</i> els veïns
	the totality of-the neighbours		all the neighbours
	'all the neighbours'		'all the neighbours'

Cardinals in Catalan³⁶ can productively become nouns by the addition of the affix *-ena* (in the case of powers of ten:³⁷ *desena*, *vintena*, *trentena*, etc., which usually have the approximate meaning of 'about ten', 'about twenty', 'about thirty', etc. respectively though they can also

³⁴ Although that is not the case in Romance or in the Germanic languages, the definite article is an affix in some languages (see Romanian or Greek among others), but as far as I have observed, there are no languages where quantifiers are affixes, and, actually, these elements usually pattern with adjectives.

³⁵ For examples in other languages, see Kayne (2006). This author interestingly suggests that in some languages (e.g. English, Romanian vs. French), these nominal affixes can be unpronounced—as will be seen in §3.2.2.1 below, ex. (78).

³⁶ And similarly in other Romance languages: e.g. (10) Sp. *diez* > *decena*, It. *dieci* > *decina*, Fr. *dix* > *dizaine*; (100) Sp. *cien* > *centenar*, It. *cento* > *centinaio*, Fr. *cent* > *centaine*; (1000) Sp. *mil* > *millar*, It. *mille* > *migliaio*, Fr. *mille* > *millier*.

³⁷ Apart from powers of ten, the suffix *-ena* in Catalan can be added to *dotze* 'twelve' and *quinze* 'fifteen', yielding *dotzena* 'dozen' and *quinzena*, respectively. The same applies to other Romance languages: (12) Sp.

mean a set of exactly the number in question: see (63a)) or by the addition of the affixes *-enar* or *-er* in the case of *cent* and *mil* respectively as illustrated in (63b,c), which again usually convey the idea of approximately that number or can be even vaguer and be equivalent to ‘lots of’. *Multitud* is lexically related to *molt* though the derivation took place in Latin,³⁸ but from *poc* (‘little’) two nouns can be derived in Catalan (*poquesa* and *poquedat*, which are synonyms: they mean ‘littleness’), though they cannot function as quantifiers in quantitative expressions in contrast with *multitud* (see 63d). The last example (63e) shows that a noun can be derived from *tot*, which actually comes from the adjective *total*: the derivation would be *tot* > *total* > *totalitat*. Note that from the adjective many other categories can be derived, not just a noun: an adverb *totalment*, a verb *totalitza*—and from this the noun *totalització*, and the adjectives *totalitzador* (which can also be a noun) and *totalitzable*—and another adjective *totalitari*—and from this the correspondent adverb *totalitàriament* but also the noun *totalitarisme* and the adjective *totalitarista*.

The fact that quantifiers *molt* and *poc* admit the superlative suffix *-íssim* in Catalan (but also in Spanish and Italian) or that English *few* admits the comparative and the superlative suffixes *-er* and *-est* is further evidence of the lexical status of quantifiers such as these affixes usually attaching to adjectives (Cat. *alt* ‘high’ – *altíssim* ‘very high’, *trist* ‘sad’ – *tristíssim* ‘very sad’; Eng. *high* – *higher* – *highest*, *sad* – *sadder* – *saddest*).

- (64) a. He llegit *moltíssims* informes sobre el tema.
 have_{1sg} read many_{superlative.m.pl} reports on the subject
 ‘I’ve read a great many reports on the subject.’
 b. Ara aprenen llatí *poquíssims* estudiants.
 now learnt_{3pl} Latin few_{superlative.m.pl} students
 ‘Very few students learn Latin now.’
 c. There seem to be *fewer* tourists around this year.
 d. I seem to be the one with *fewest* problems.

c. The third property (59c) does not tell much about the functional or lexical status of a category given that some lexical categories can have a single complement, so we will leave it

doce > *docena*, It. *dodici* > *dozzina*, Fr. *douze* > *douzaine*; (15) Sp. *quince* > *quincena*, It. *quindici* > *quindicina*, Fr. *quinze* > *quinzaine*.

³⁸ *Multitud* was taken from Latin (*multitūdo*) at a later stage, and that is why it keeps the original vowel *u*, in contrast with the vowel *o* exhibited by the word *molt*, which comes from the Latin word *mūltu* and underwent the ordinary vowel evolution that took place in Catalan (Ū > O).

aside. However, before turning to the fourth property, it is worth noting that most indefinite quantifiers can work as predicates³⁹ and so take the noun as their subject in certain configurations:

- (65) a. Els llibres en català publicats enguany són {molts / pocs}.
 the books in Catalan published this-year are many few
 b. Els meus amics més propers són tres.
 the my friends more close are three
 ‘My close friends are three.’

Interestingly, recall that Cardinaletti and Giusti (2006) claim that a subset of quantifiers are actually adjectives and function as noun modifiers:⁴⁰ they refer to those following a lexical D such as *three* in *the three students* or *many* in *those many books*. These authors claim that *three* and *many* in those configurations are not quantifiers but adjectives, so they are generated in the specifier of a functional projection in the nominal structure like any other AP though they appear in the highest position after D. That would be another case where the quantitative element behaves as a predicate. According to Cardinaletti and Giusti, these quantitative adjectives contrast with true quantifiers, which are usually generated as heads that project into a QP and select the noun.⁴¹ The two types of quantitative elements are claimed to have a different syntactic behaviour which justifies considering them as belonging to two different categories (Qs and As), both lexical.⁴² Here it will be defended that there is no need

³⁹ See Giusti (1993: §3.3.1) for similar examples in Italian. However, Contreras (1992: 31) claims that “la función predicativa no debe confundirse con la de complemento del verbo *ser*”. In other words, being the complement of *be* is not a sufficient condition for being a predicate: for him, *cinco* (‘five’), *esos* (‘those’) and *varios* (‘several’) are not predicates, as opposed to *muchos* (‘many’) and *pocos* (‘few’).

(i) a. Los libros son {cinco / esos / varios}.
 the books are five / those / several
 b. Los libros son {muchos / pocos}.
 the books are many / few

I do not take as definitive his criteria for identification of predicative function (see footnote 81 below) and consider that all the examples in (i) are cases where the quantifier or the demonstrative are predicates (see the analysis in §3.4.2.1 below).

⁴⁰ This was first suggested by Giusti (1993), for whom the contrast between the two types of quantitative elements was bigger given that she considered quantifiers as functional categories (vs. adjectives, which are uncontroversially lexical categories).

⁴¹ The two different structures proposed by Cardinaletti and Giusti (2006) are represented in (i):

(i) a. [DP [D the] [FP [QAP many] F’ ... [DP children]]] *many* = adjective
 b. [FP [A_{grQP} [QP [Q many] [DP children]]] *many* = quantifier

⁴² Though note that the semantic interpretation of the quantifier is the same in both cases, which is surprising if they are generated in different positions and are different categories. In Cardinaletti and Giusti (2006:

to make such a category distinction which overloads the lexicon unnecessarily with double categories for cardinals and weak quantifiers such as *many*, *few*, etc.: my claim is that all quantifiers or quantity expressions are generated in the same position in the structure and that the syntactic differences described by Cardinaletti and Giusti can basically be derived from the different position where the quantifier ends up in the structure, as will be shown later (see §3.2.2.6).

Only lexical categories can be predicates and take arguments, so here is another piece of evidence that quantifiers are not functional. However, notice that there is an indefinite quantifier that cannot be a predicate nor undergoes derivative processes, which is *algun* ‘some’ (or the equivalent in other languages: Sp. *algún*, It. *alcun*, Fr. *quelque*). That is probably because it does not contain the notion of quantity and seems to be a mixed element between an indefinite article and a quantifier.⁴³ I leave the question open at this stage as to whether *algun* should be treated differently.

Finally, recall the possibility of some adjectives functioning as quantifiers: this is the case of *nombros* (‘numerous’), *diferent* (‘various’) and *divers* (‘several, various’). They can act as predicative adjectives (as shown in 66a,b, 67a and 68a) or as quantifiers (see 66c, 67b and 68b,c):

- (66) a. una família nombrosa
 a family numerous
 ‘a large family’
 b. Els avantatges d’aquest sistema són massa nombrosos per esmentar-los.
 ‘The advantages of this system are too numerous to mention.’
 c. en nombroses ocasions
 ‘on numerous occasions’
- (67) a. Tenen caràcters molt diferents.
 have_{3pl} characters very different
 ‘They have very different characters.’
 b. per diferents raons
 for various reasons

§2.3.3)’s words: “What is striking is that the syntactic behaviour directly depends on the categorial status of the element, not on its semantic value”.

⁴³ Similarly, the distributive quantifier *cada* ‘every, each’ cannot be a predicate nor admit any affixes.

- (68) a. persones d'origen divers
 people of-origin different
 'people from different backgrounds'
 b. en diverses ocasions
 on several occasions
 c. diversos aspectes
 various aspects

d. As for the fourth property, again quantifiers do not behave as functional categories as they can easily be separated from their complement (or argument): they can appear on their own either in the predicate contexts —recall ex. (65) above— or as the answer to a question or in elliptical noun contexts or they can be separated from the complement, especially when the complement is a clitic. All these possibilities are illustrated below for Catalan, though the English equivalents serve as examples as well:

- (69) a. —Quantes novel·les has comprat? —*Tres / Moltes*.
 '—How many novels did you buy? —Three / Many.'
 b. La majoria de turistes han anat a l'excursió, però dos *e* s'han quedat a l'hotel.
 'Most tourists went on the trip but two (of them) stayed at the hotel.'
 c. De novel·les, n'he comprades {*tres / moltes*}.
 of novels NE-have_{1sg} bought three many
 'Novels, I bought {three / many}.'
 d. Les novel·les de Paul Auster, les tinc *totes*.
 the novels of Paul Auster them have_{1sg} all
 'Novels by Paul Auster, I have them all.'

e. In regard to the last property, it depends on how the 'descriptive' content is defined, but in comparison to clear functional categories such as the article and inflection, quantifiers have more semantic content which can often be interpreted as a property of the noun, although that is not the main role of the quantifier.

To sum up, quantifiers are not a closed class; they are not phonologically nor morphologically dependent but are stressed and can be separated from the noun; they can

undergo derivative processes (nouns are created from quantifiers such as Catalan *dotzena* ‘dozen’ < *dotze* ‘twelve’, *miler* < *mil* ‘one thousand’, *multitud* < *molt* ‘many’, *totalitat* < *tot* ‘all’, etc.); they can in general be predicates and they have more descriptive content than the clearly functional categories such as articles or inflection, which have just grammatical content. From all this I conclude that they are lexical categories.⁴⁴

3.2.2 A maximal projection QP selects DP

So far we have reached the conclusion that quantifiers are lexical and select a noun projection, which is a DP in the partitive construction. Apart from selectional differences among quantifiers (in partitives, some quantifiers select entities, others select sets of elements, and some can select both types of arguments), we have observed that not all quantifiers can select a DP in Catalan: in this language, partitives are quite more restricted than quantitatives. The question that now arises is whether it depends on the quantifier itself or on the whole QP projection: is it the quantifier as a head which selects the DP (or NP in quantitatives) and later the Q projection can be extended with the addition of a specifier, or first does the Q project its specifier and then enters into a selectional relation with the noun projection? The data studied in the next subsections seem to suggest that it is the latter.⁴⁵

⁴⁴ An alternative worth mentioning would be to consider them as semi-lexical categories, both to reflect their lexical character with respect to all the points just mentioned but at the same time their determiner like behaviour, which is more typical of functional categories such as the article. An analysis as semi-lexical (or semi-functional) categories has been suggested for quantifying nouns in pseudopartitives such as *cup* in *a cup of tea*, as was mentioned in Chapter 1, §1.6.2.2. (see Alexiadou 2003; Alexiadou, Haegeman and Stavrou 2003, 2007; Stickney 2004), so perhaps this analysis could be extended to quantifiers in general. I will not pursue this idea here. The reader is referred to Corver and Riemsdijk (2001) for more details on semi-lexical categories in general.

⁴⁵ See also Doetjes and Rooryck (2003), who claim that the whole quantifying expression—i.e. *une foule* (lit. a crowd, ‘a lot’) in (i)—forms a constituent based on coordination data like the following:

- (i) a. Une foule de fautes et d’erreurs stylistiques.
‘A large amount of mistakes and stylistic errors.’
- b. *Une foule de fautes et masse d’erreurs stylistiques.
‘A large amount of mistakes and loads of stylistic errors.’

(Doetjes and Rooryck 2003: 282, ex. 14)

Hulk and Tellier (2000: 63) claim as well that the whole quantifying expression forms a constituent in cases like (iib)—where “N2 triggers external (plural) agreement” and “the determiner preceding N1 is not in D⁰ but rather occupies an embedded position along with N1”. However, when the agreement is singular as in (iib) they suggest that the indefinite article “is presumably under D⁰” as “N1 triggers external (singular) agreement and it is the head of the construction”.

- (ii) a. Une montagne de photographies anciennes a été détruite cette nuit-là.

- b. Une montagne de photographies anciennes ont été détruites cette nuit-là.

Recall we assume the same structure for both (iia) and (iib) (see the discussion in Chapter 1, §1.6.2).

Here we have got the reverse picture: a more complex quantifier expression is allowed in partitives as in (72a) but not the simple quantifier *cents* in the plural form as in (72b) vs. (72c). If (72a) is derived from (72b) by merging the cardinal *dos* into the ‘Q + DP’ *cents dels vots*, the ungrammaticality of (72b) is unexpected in Catalan if the quantifier as a head selects the noun projection. However, it all depends on how the multiplicative cardinal is analysed and what its source is, and crucially whether the *cents* in (72b) is the same as in (72a). According to Ionin and Matushansky (2004), cardinals are all nouns, and they select each other as complements, so the structure of (73a) would be as in (74):⁴⁸

(74) [_{NP} dos [_{NP} cents [_{NP} vots]]]

They base their analysis on the ability of cardinals as Case assigners in several languages, but it is not clear how they would explain the difference between (73b) and (73c) in Catalan or similarly in English. As Kayne (2006) points out, the division in (74) seems to be wrong as the ‘cardinal + noun’ does not behave as a constituent; Thus, he proposes a division as in (75) instead where there is a constituent that corresponds to the multiplicative cardinal:

(75) [[dos-cents] vots]

Kayne provides some examples of topicalisation and ellipsis as evidence supporting (75) over (74):

(76) a. ??Linguistics books they have three hundred.

b. *Hundred linguistics books they have three.

(Kayne 2006: ex. 116, 117)

(77) a. They have three hundred linguistics books and we have three hundred, too.

b. *They have three hundred linguistics books and we have three, too.

(Kayne 2006: ex. 119, 120)

(70b-g), which forces a quantity interpretation of the cardinal (not specific), so there would be no need to postulate that the selection is carried out by the whole QP.

⁴⁸ They do not deal with partitives, so I am not sure how the structure of (72a) would be for these authors, but I would assume that the constituency for them would be similar: [dos [cents [dels vots]]].

The parallelism Kayne makes with multiplicative approximatives (such as *hundreds of thousands of books*)⁴⁹ serves as further evidence in that respect as well, but I will not go into details here. However, it is interesting to note that this author claims a non-overt nominal suffix in both cases, which he represents in numerals by NFSX and in approximatives by –AINE (the French equivalent to the Catalan suffix –*ena*: see (63a) above), as shown below:

- (78) a. [three [hundred NFSX]] books
 b. [hundred –AINE –s [of thousand –AINE –s]] of books

According to Kayne, cardinals always take nouns as in the simple case *three books*, so in multiplicative numerals the numeral base must be combined with a nominal affix (visible or not).

Catalan data (and the same applies to Spanish) show, however, that in multiplicative numerals the numeral base does not seem to be a noun—at least in these languages—given that it agrees with the noun in number and gender, when possible:

- | | |
|--|---|
| <p>(79) a. dos-cents llibres
 two_m hundred_{m,pl} books_{m,pl}
 b. dues-centes fotos
 two_f hundred_{f,pl} photos_{f,pl}
 c. cent {llibres / fotos}
 hundred_{inv} books_{m,pl} photos_{f,pl}
 d. cents de {llibres / fotos}
 hundreds_{pl} of books_{m,pl} photos_{f,pl}</p> | <p>(80) a. dos mil llibres
 two_m thousand_{inv} books_{m,pl}
 b. dues mil fotos
 two_f thousand_{inv} photos_{f,pl}
 c. mil {llibres / fotos}
 thousand_{inv} books_{m,pl} photos_{f,pl}
 d. mils de {llibres / fotos}
 thousands_{pl} of books_{m,pl} photos_{f,pl}</p> |
|--|---|

(79a,b) show that both *dos* and *cent* agree in gender and number with the noun when they appear in multiplicative numerals, from which I conclude that *cent* is not a noun contrary to Kayne's conclusion.⁵⁰ On its own, *cent* is invariable when it is equivalent to *one hundred* (see 79c), and although there is no visible agreement, the lack of plural inflection and no presence of *de* 'of' suggest that in this case *cent* is an adjective as well. The plural form *cents* in (79d) is equivalent to *centenars*: it contains the notion of an approximate number and even of a high

⁴⁹ This author suggests a similar analysis for them: [[*hundreds of thousands*] of books].

⁵⁰ The cardinal *dos* always agrees in gender and number with the following noun: *dos llibres* vs. *dues fotos* (though in some Catalan dialects *dos* is both used for masculine and feminine as in Spanish).

⁵¹ An alternative account in analyses where Q is a head selecting a noun phrase would be to consider these multiple cardinal expressions as compounds and generate them as Q heads. However, agreement facts makes that proposal implausible: the members of a cardinal that can be inflected agree with the following noun in gender and number, as illustrated in examples (79) and (80). For more data and discussion on agreement facts in multiple cardinals, see examples in (182) below, in §3.3.2.

quarter’, *una part* ‘a part’, etc.). What is interesting is that although both types of quantity expressions contain a noun and require *de* to be realised, they behave as a unit like multiplicative numerals.

The following subsection deals with lexicalised quantity expressions and subsection §3.2.2.3 is devoted to fractions.

3.2.2.2 *Lexicalised quantity expressions*

Being lexicalised expressions, they are in general fixed: the noun cannot be inflected for number (it is always singular), the determiner cannot vary nor is any kind of noun modifier admitted, apart from the intensifier *bo* ‘good’ in the case of a subset of expressions (among those mentioned: *una pila*, *un munt* or *una colla*). This is illustrated in the examples below:⁵²

- (82) a. Té una pila de {problemes / d’amics}.
 has a pile of problems of-friends
 ‘(S)he has loads of problems / friends.’
- b. *Té unes piles de {problemes / d’amics}.
 has a_{pl} piles of problems of-friends
- c. *Té dues piles de problemes.
 has two piles of problems
- d. *Té una {gran / única} pila d’amics.
 has a big single pile of-friends
- e. *Té una pila {petita / mitjana} d’amics.
 has a pile little medium of-friends
 ‘(S)he has a {little/medium} pile of friends.’
- f. Té una bona pila de {problemes / d’amics}.
 has a good pile of problems of-friends

(82a) is just the simple case of *una pila* as a quantificational expression. The ungrammatical examples show that the noun *pila* cannot be pluralised nor quantified —see (82b,c)— nor modified in general —see (82d,e). An exception is the adjective *bo* in its intensifier meaning (equivalent to ‘large’ or ‘at least’), as illustrated in (82f). Observe the data in (83):

⁵² See also footnote 97 in Chapter 1, §1.6.2.1.

this quantitative meaning, it is not surprising that *bo* is licensed in quantitative expressions such as *una pila*, *un munt*, etc. as mentioned above. However, *bo* is not allowed in expressions such as *una barbaritat*, *una infinitat* or *la mar*, probably due to the notion of extreme degree of a scale these expressions convey that make them non-gradable. This contrast between the two types of quantitative expressions and their different possibilities of modification by *bo* is exactly like the different behaviour of gradable adjectives such as *dolent* ‘bad’ or *bonic* ‘pretty’, which can be intensified by *molt* ‘very’ (yielding *molt dolent* or *molt bonic*), and elative adjectives such as *pèssim* ‘dreadful’ or *preciós* ‘lovely’, which are non-gradable given that they denote a property in high degree and do not allow *molt*—**molt pèssim*, **molt preciós*.

The examples in (82) contrast with those in (84), where *pila* has its literal meaning and refers to an object.⁵⁵ In this case *pila* behaves as an ordinary noun and admits being pluralised and quantified—see (84b,c)—and modified by any type of adjective—see (84d,e). It is interesting to note that the use of *bona* ‘good’ in (84f) forces a reading of *a pile* as a quantity expression, meaning ‘loads’: the books on the table are many, but there is no indication about how they are arranged (they can be in several piles, or just spread on the table, etc.).

- (84) a. Hi ha una pila de llibres damunt la taula.
 ‘There’s a pile of books on the table.’
 b. Hi ha unes piles de llibres damunt la taula.
 ‘There are some piles of books on the table.’
 c. Hi ha dues piles de llibres damunt la taula: una de diccionaris i una altra de novel·les.
 ‘There are two piles of books on the table: one of dictionaries and the other of novels.’
 d. Hi ha una {gran / única} pila de llibres damunt la taula.
 ‘There’s a {big / single} pile of books on the table.’
 e. Hi ha una pila {petita / mitjana} de llibres damunt la taula.
 ‘There’s a {little / medium} pile of books on the table.’
 f. Hi ha una bona pila de llibres damunt la taula.
 ‘There are a lot of books on the table.’

⁵⁵ Though the example (84a) also admits the quantitative reading ‘loads of books’, just like with (82a).

Another piece of evidence that they are lexicalised expressions and, therefore, fixed and opaque is that besides quantifying nouns, they can quantify verbs as well as adjectives and adverbs, so they are seen as a synonym of *molt* ‘many, much, very’,⁵⁶ and thus appear in all the contexts where *molt* is used. This is illustrated in the examples below:⁵⁷

- (85) a. Van fer *la mar* de coses.
 ‘They did *loads* of things.’
 b. Estava *la mar* de content.
 ‘(S)he was *very* happy.’
 c. Els nens es portaven *la mar* de bé.
 ‘The kids behaved *very* well.’
 d. Aquell noi m’agrada *la mar*.
 ‘I like that guy *very much*.’
 e. Treballa *la mar*.
 ‘(S)he works *a lot*.’

Moreover, despite the presence of a definite article in the quantity expression *la mar* (lit. the sea) or in the Spanish expression *la tira* (lit. the strip), the whole nominal is not definite nor specific but rather behaves as an indefinite nominal, as noticed by Vos (1999: 285). Observe the contrast between (86a) and (86b,c):

⁵⁶ Notice that in Catalan *molt* can be used to quantify nouns, verbs and also adjectives and adverbs. In this sense it is like Italian but different from other languages, where two or three different words are used depending on whether what is quantified is a noun or a verb vs. an adjective or an adverb: e.g. Spanish (*mucho* vs. *mu*y), French (*beaucoup* vs. *très*) or English (*many*, *much* vs. *very*).

⁵⁷ Some expressions work better than others; in general they are all fine when they modify verbs, but in combination with adverbs and especially adjectives they are not always completely acceptable:

- (i) a. Van fer {una pila / un munt / una barbaritat / una colla} de coses
 b. Estava {*una pila / ?un munt / ?una barbaritat / *una colla} de content.
 c. Els nens es portaven {*una pila / ?un munt / una barbaritat / *una colla} de bé.
 d. Treballa {una pila / un munt / una barbaritat / *una colla}.

This variation is probably due to a different degree of grammaticalisation of these expressions in connection with the fact that these nouns keep part of their original meaning when they are used as quantifiers or even as adverbs. For example, in the case of *colla*, which is always infelicitous except with nouns, the reason could be that *una colla* is less grammaticalised than the remaining expressions and keeps part of the lexical information of the noun, which literally means ‘gang’, so that it must quantify over individuals. The fact that *una colla* selects only countable nouns can be taken as evidence for that:

- (ii) Van fer {una pila / un munt / una barbaritat / *una colla} de feina.
 ‘They did a lot of work.’

As *feina* is a mass noun, *una colla* is not licensed in contrast with the other quantitative expressions.

- (86) a. *Hay la silla en la habitación. (Vos 1999: 285, ex. 39a)
 ‘There is the chair in the room.’
 b. Hay la mar de problemas. (Vos 1999: 285, ex. 39b)
 ‘There are a lot of problems.’
 c. Hay la tira de guías turísticas en esta librería.
 ‘There are lots of tourist guides in this bookshop.’

Definite nominals such as *la silla* (‘the chair’) are rejected in the existential construction as (86a) illustrates (the examples in (86) are in Spanish because in Catalan the definiteness effect would not apply here⁵⁸ and also *la tira* is a Spanish expression). In contrast, (86b,c) are perfectly fine despite the presence of *la*, which suggests that the definite article is not located on the top D⁰ but is internal to the quantificational expression and is somewhat frozen to the noun *mar* and *tira*.⁵⁹

Since they are fixed expressions, we expect them to behave as units and so they do, as shown by the following data on topicalisation and ellipsis:⁶⁰

- (87) a. De problemes, la Joana en té una pila.
 of problems the Joana NE has a pile
 b. *De pila/piles de problemes, la Joana en té una.
 of pile/piles of problems the Joana NE has one
- (88) a. La Joana té una pila de problemes i jo també en tinc una pila.
 the Joana has a pile of problems and I too NE have a pile

⁵⁸ The definiteness effect is much more restricted in Catalan: it only applies to a subgroup of definite nominals, namely to personal pronouns, as shown by the well-formedness of (ia-c) (cf. id) (see, for example, Brucart 2008: §7.2.4.1):

- | | |
|--|---|
| (i) a. A l’habitació hi ha la cadira.
‘In the room there is the chair.’ | c. A casa hi ha la Maria.
‘At home there is Mary.’ |
| b. Hi ha la policia al pati.
‘There are the police in the courtyard.’ | d. *A l’habitació hi ha ell.
‘In the room there is him.’ |

⁵⁹ However, see Vos (1999), for whom the article (both definite and indefinite) in these lexicalised expressions is located in D⁰ like an ordinary article, the only difference being that it is a default article, and that is why it does not contribute to the definiteness or indefiniteness of the whole nominal.

⁶⁰ In the object reading, the *b* examples would be well-formed, as expected if *pila* is an ordinary noun:

- (i) a. De {pila / piles} de llibres, damunt la taula n’hi ha una.
 of pile / piles of books on the table NE-there has one
 ‘Piles of books, there’s one on the table.’
 b. Hi ha una pila de llibres damunt la taula i també n’hi ha una a terra
 there has a pile of books on the table and too NE-there has one on floor
 ‘There’s a pile of books on the table, and there’s one as well on the floor.’

- b. *La Joana té una pila de problemes i jo també en tinc una.
 the Joana has a pile of problems and I too NE have one

The conclusion is that lexicalised expressions such as *una pila*, etc. select the noun argument as a whole.

3.2.2.3 Fractions

Although fractions allow more flexibility in that the noun can be singular or plural and the cardinal can vary and in some cases noun modifiers are licensed, interestingly they behave as a unit with respect to topicalisation and noun ellipsis, in the same way that multiplicative cardinals and lexicalised quantity expressions do.

The following data show that fractions in Catalan, like ordinary nouns, can be inflected for number and be plural or singular, and also allow quantification.

- (89) a. Només {un terç / dos terços} dels estudiants es van presentar a l'examen.
 only one third two thirds of-the students took the-exam
 b. Només {una tercera part / dues terceres parts} dels estudiants van fer l'examen.
 only a third part two third parts of-the students took the-exam
 'Only {one third /two thirds} of the students took the exam.'

(89b) is equivalent to (89a), as fractions in Catalan can be expressed through the combination of the word *part* with the relevant ordinal: i.e. *terç* = *tercera part*. Actually, in Catalan the use of 'ordinal + *part*' with a fraction meaning is very common and productive, with the exception of *meitat* 'half', which has no corresponding *segona part* 'second part'.⁶¹

However, in contrast with cardinals followed by a noun, the sequence 'cardinal + fraction' cannot be separated: observe its behaviour with respect to topicalisation in (90) and ellipsis in (91).

- (90) a. Dels estudiants, només dos terços es van presentar a l'examen.
 of-the students only two thirds took the-exam

⁶¹ Of course, *segona part* is fine with *part* as an 'ordinary' noun (denoting an object): *A la segona part de la novel·la el protagonista mor* ('In the second half of the novel the main character dies.')

- b. *De terços del estudiants, només dos es van presentar a l'examen.
 of thirds of-the students only two took the-exam

- (91) a. Enguany s'han llicenciat dos terços dels estudiants i l'any passat també ho van fer dos terços.
 'This year two thirds of the students graduated, and last year two thirds did so as well.'
- b. *Enguany s'han llicenciat dos terços dels estudiants i l'any passat també ho van fer dos.
 'This year two thirds of the students graduated, and last year two did as well.'

Fraction words do not admit any modification, probably due to their lexical properties (they indicate a fixed portion, which can neither be graded nor qualified). In contrast, the word *part* works like an ordinary noun, with the only difference being that it can appear without a determiner, both on its own or when preceded by the adjective *gran* or *bo*, as indicated by the brackets in (92a). If modified by other adjectives, the determiner is needed like it is with any countable noun: observe (92b,c).

- (92) a. Actualment (una) (gran / bona) part de la població viu en la pobresa.
 at-present a big good part of the population lives in the poverty
- b. Actualment *(una) petita part de la població viu en la pobresa.
 at-present a small part of the population lives in the poverty
- c. Actualment *(una) part {considerable / important} de la població viu en la pobresa.
 'At present {a considerable / an important} part of the population lives in poverty.'

Again, the topicalisation and the ellipsis tests indicate that the QP behaves as a unit, even in those cases where *part* seems to be closer to an ordinary noun as in examples (92b,c) above:

- (93) a. De la població mundial, actualment *una part important* viu en la pobresa.
 of the population world at-present a part important lives in the poverty
 'Of the world population, *an important part* lives in poverty at present.'
- b. *De part important de la població mundial, actualment *una* viu en la pobresa.
 of part important of the population world at-present a lives in the poverty

- c. *De part de la població mundial, actualment *una d'important* viu en la pobresa.
 of part of the population world at-present a of-important lives in the poverty
 'Part of the population, at present *an important one* lives in poverty'
- (94) a. L'any passat una petita part dels vols van sortir amb retard i enguany també hi han sortit només *una petita part*.
 'Last year only a small part of the flights were delayed, and this year also only *a small part* were.'
- b. *L'any passat una petita part dels vols van sortir amb retard i enguany també hi han sortit només *una*.
 'Last year only a small part of the flights were delayed and this year also only *one* was.'

As discussed previously in Chapter 1, §1.5.3, the fraction *meitat* does not allow the same flexibility as other fractions, and it is always preceded by the definite article in Catalan (though in other languages such as English no article is needed)—see (95a). The noun *majoria* and also the noun *part* when modified by the adjective *major* require an article as well, which in this case can be either the definite article or the indefinite article, with no difference in meaning—see (95b,c). In Chapter 1 we reached the conclusion that the article in these cases is spurious and plays no semantic role but just acts as a licenser of the noun.

- (95) a. la meitat de la novel·la
 the half of the novel
 'half the novel'
- b. {una/la} major part {del temps / de l'electorat / dels polítics}
 a the big part of-the time of the-electorate of-the politicians
 'most time' / 'most of the electorate' / 'most politicians'
- c. {una/la} gran majoria de la gent
 a the large majority of the people
 '{a/the} large majority of people'

The question that now arises is whether this spurious article is located in the top D° (assuming the nominal is a DP, as I do in partitives) or is part of the QP projection, as was suggested for

expressions such as *la mar* or *la tira* and for *una barbaritat*, *un munt*, etc. as well. The fact that partitives are never preceded by the definite nor the indefinite article in Catalan can be taken as an indication that the articles in (95) are inside the QP, which acts as a whole selecting the internal DP. Also if the article is generated inside the QP in these cases, it patterns with the general hypothesis that is defended in this thesis: partitives always have a DP projection on the top and the QP moves to its specifier given its [+Spec] feature. If a lexical article is merged in D, then the wrong order will be derived after QP has moved as the quantificational expression would precede the article:

- (96) a. [_{DP} meitat [_D la [_{NumP} [_{Num} [_{FP} de la novel·la]]]]
 b. [_{DP} major part [_D la [_{NumP} [_{Num} [_{FP} del temps]]]]
 c. [_{DP} major part [_D una [_{NumP} [_{Num} [_{FP} del temps]]]]

Moreover, the DP would be doubly filled, and this is precluded by the *Principle of economy of lexical insertion* (see 123 below).

To solve the problem in (96), it could be claimed that in these cases the QP does not move to Spec DP but to a lower position and the right order would be obtained and no violation of the *Principle of economy of lexical insertion* would take place, but it is not clear why the movement here would be shorter. I assume for parallelism that examples like (95) pattern with the rest of partitives.⁶²

3.2.2.4 Basic structure

So far it has been argued that it is the QP as a whole that selects the DP in partitives (or the NP in quantitatives). If that is correct, from the syntactic point of view it has important consequences on the basic structure where the relationship between QP and DP (or NP) is

⁶² It is worth noting here that *la meitat* behaves like *la mar* and *la tira* in that the article does not cause any definiteness effect if the expression appears in a quantitative nominal (recall ex. (86) above):

(i) En el Reino Unido hay *la mitad de parados* que en España.
 in the kingdom united has the half of unemployed than in Spain

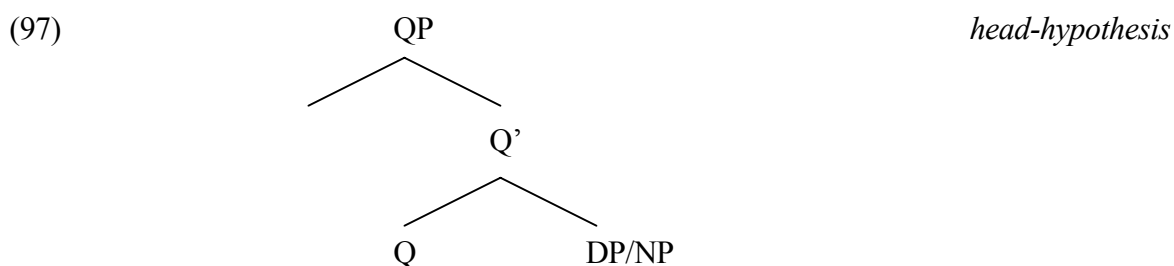
‘The number of unemployed in the UK is half the number of unemployed in Spain.’

In (i) *la mitad de parados* is an indefinite nominal, despite the presence of a definite article *la*. Obviously, in a partitive nominal we do get a definiteness effect, but that is because partitives are specific in general, not because of the definite article in *la mitad*:

(ii) a. *Había *la mitad de los alumnos* en el bar.
 had_{3sg} the half of the students in the canteen
 ‘There were half the students in the canteen.’

b. *La mitad de los alumnos* estaban en el bar.
 the half of the students were in the canteen
 ‘Half the students were in the canteen.’

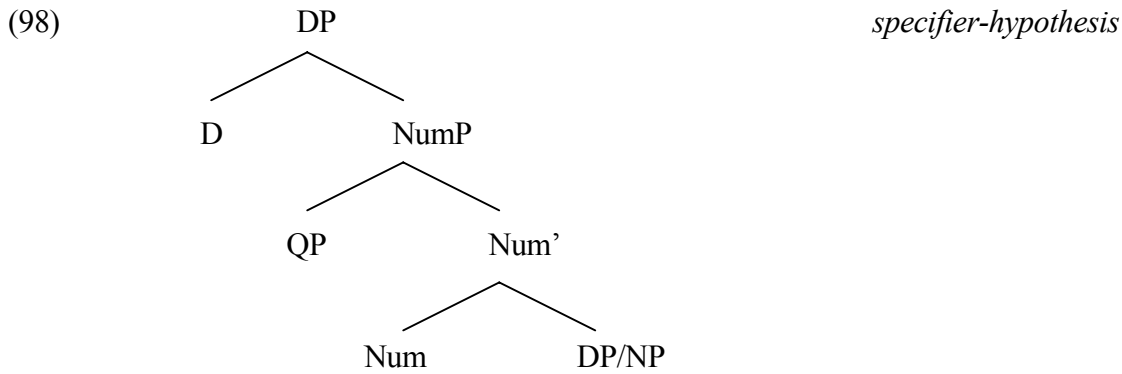
established. In the literature two main configurations have been proposed where QPs can appear, one with Q as a head selecting DP or NP and another where QP is a kind of prenominal modifier of the NP, and neither of these seems to be adequate as they do not reflect the selectional requirement by the maximal projection QP. On one hand the quite common analysis of indefinite nominals⁶³ where a head Q selects a noun projection and later projects into a QP is ruled out since in this analysis the whole QP does not select the DP or NP (I will call this the ‘head-hypothesis’, which is represented in 97). Moreover, this type of analysis does not provide enough room for quantificational expressions. This problem would not be solved by just adding extra functional or semi-functional projections in order to cover all the data, as the extended structure would fail to reflect the constituency of the whole quantificational expression.



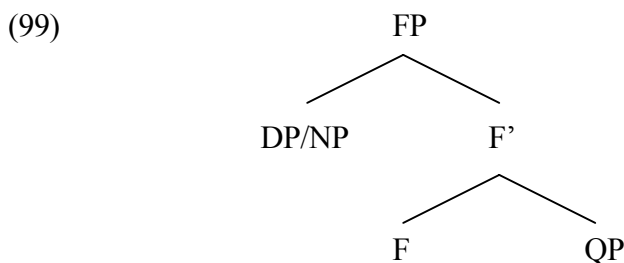
On the other hand, generating QP in the specifier of a functional projection of the nominal, above the NP, is likewise not a possibility (I will call this the ‘specifier-hypothesis’, which is represented in 98) as that would not capture the fact that quantifiers select the noun argument, as is defended in this thesis, but would treat QP as a prenominal modifier in parallel with prenominal adjectives.⁶⁴ Moreover, this analysis would face serious difficulties in explaining the presence of the prepositional element *de*.

⁶³ See Cardinaletti and Giusti (2006) and Gutiérrez (2008), among many others.

⁶⁴ This was how quantifiers were analysed in the early years of Generative Grammar. Before functional categories were proposed, QPs were generated in the specifier of NP like determiners, and later they were generated as the specifier of the higher functional projection above NP, as in Abney (1987). Since Löbel (1989), quantifiers have in general been treated as functional heads that select NP and project into QP in parallel with the DP. At present, the analysis of QP as a kind of prenominal modifier in Spec of NumP or the highest functional projection below DP is reserved to the so-called *quantitative adjectives*: those quantifiers preceded by a definite article such as *three* or *many* in *the {three/many} novels that I read this summer* (that commonly analysed as prenominal adjectives). Recall §3.2.1c above.



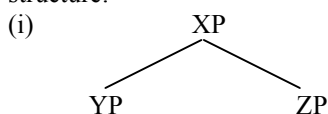
The structure that is proposed in this thesis has the advantage that it both offers a position for a maximal projection QP and also reflects the selectional relationship with the noun projection (DP or NP). It is inspired by Kayne's DP analysis proposed in 1994 and by the more recent 'predicate inversion' analysis developed mainly by Den Dikken (1998, 2006).⁶⁵ The main idea is that a DP or an NP is selected by a maximal lexical projection (in our case a QP) in the lowest functional projection of the nominal, which we will name as FP. The DP or NP is generated as the Spec of FP, and the QP is generated as the complement of F. This is represented in (99):



This is a typical clausal configuration, representing a predication relationship where the DP/NP is the subject and the constituent located in the complement position of this functional projection is usually the predicate.⁶⁶ Indeed all the cases analysed by Kayne (1994) and by

⁶⁵ See also Benis et al. (1998), and especially Corver (1998) and subsequent work.

⁶⁶ See Moro (2000) for an interesting alternative analysis of small clauses, with a starting symmetric structure:



where XP stands for S(mall) C(lause), YP would be the subject (DP) and ZP would be the predicate (AP, PP...). This author assumes a weak version of Kayne's (1994) Antisymmetry (only overt terminal nodes need to be in an antisymmetric configuration so that they can be ordered in the final sequence) and proposes a theory of *Dynamic Antisymmetry*, in which movement is derived from phrase structure: displacement is triggered to neutralise points of symmetry (given the necessity to put words into linear order).

Den Dikken (2006) are predicational. (100) presents some of the nominals studied by Kayne with the structure this author assigns to them:⁶⁷

- | | | |
|----------|--|----------------------------|
| (100) a. | [D/PP [two pictures] _i [of [_{IP} John ['s [e] _i]]] | (Kayne 1994: 86, ex. 3) |
| b. | la [D/PP [_{NP} voiture] _i [de [_{IP} Jean [I° [e] _i ...]]] | (Kayne 1994: 103, ex. 84) |
| c. | the [_{CP} [_{NP} picture] _i [that [_{IP} Bill saw [e] _i ...]]] | (Kayne 1994: 103, ex. 85) |
| d. | the [D/PP [_{AP} yellow] _i [D/P [_{IP} book [I° [e] _i ...]]] | (Kayne 1994: 101, ex. 72) |
| e. | that [D/PP [_{NP} idiot] _i [of [_{IP} a doctor I° [e] _i ...]]] | (Kayne 1994: 106, ex. 110) |

(100a) and (100b) are nominals where a relation of possession is expressed. The basic predication contains a subject which is the possessor—*John* in (100a) and *Jean* in (100b)—and a predicate which is the possessed object—*two pictures* in (100a) and *voiture* in (100b). In English, the relation of possession is mediated by *'s*, which is the head of the projection that contains the predication. In French, there is no overt correlate of that element, as can be observed in (100b). In both examples, the possessed NP raises to the specifier of the higher projection, the head of which is realised as *of* and *de* respectively.

Kayne considers the possessive structure (100b) to be similar to a relative clause structure, with *de* corresponding to *that* (see 100c). He assumes a raising analysis of this construction, according to which the relative clause is a complement of D—[_{DP} D° CP]—and the antecedent raises from inside the relative clause to Spec CP.

In the example (100d), there is another type of predication, in which the predicate is an adjective: *yellow*. The structure assigned is similar: in the lowest projection is a subject (*book*) and its predicate (*yellow*). As in the previous nominals, the predicate raises to the specifier of the immediately higher projection. The difference is that in this case no preposition or complementiser is realised: adjective constructions are similar to reduced relatives.

Finally, the cases of qualitative predication also fall under Kayne's DP analysis: the predicate *idiot* raises to Spec D/PP.

I will not explore Moro's approach in this thesis, where I assume a strong version of Antisymmetry in line with Kayne (the Linear Correspondence Axiom holds at all levels of representation, so the phrase structure, not just terminal nodes, needs to satisfy it). Although the QP movement past the embedded DP or NP could be accounted for in Moro's theory, it is unclear how subsequent movement of the QP could be derived once antisymmetry is reached nor how the differences between specific and non-specific nominals or the distribution of *de* would be explained.

⁶⁷ Note that D/PP is the equivalent of CP in the nominal domain, which is usually lexically realised as *of* except for the relative clauses, where *that* appears.

In all of Kayne's examples the predicate is generated as the complement of IP, and it raises to Spec D/PP. The head of D/PP is overtly realised to satisfy the Case requirements of the subject in IP. Notice that the definite article is external to the predication, but the quantifier is within the subject in IP.

In the nominal domain, Den Dikken (2006) focuses on qualitative binominal Noun Phrases (QBNP) and distinguishes between comparative QBNPs and attributive QBNPs, and not only from the semantic point of view (the type of predication relationship is different) since he claims that they have a different structure. The two types of QBNP are illustrated in (101):

- (101) a. a jewel of a village comparative QBNP
 b. an idiot of a doctor attributive QBNP

In (101a) the village is compared to a jewel, whereas in (101b) the doctor is considered an idiot. These differences correspond to a different structure and derivation according to Den Dikken, but for the moment let us focus on their similarities. In both examples the first noun phrase ascribes a property to the noun phrase that follows it, so there is a predication relationship between them: *jewel* and *idiot* are predicates and *a village* and *a doctor* their subjects. For Den Dikken *of* has nothing to do with Case but is a nominal copula (corresponds to the verb *be* in a sentence), which serves as a relator or linker of the two members of the predication. Den Dikken distinguishes between two types of predication structures, one in which the predicate is generated as the complement of a functional projection (RP) —as in Kayne's structures— and another where the predicate is generated as the specifier of this functional projection. Observe the structures below:

- (102) a. $[_{RP} [_{XP} \text{SUBJECT}] [_{R'} \text{RELATOR} [_{YP} \text{PREDICATE}]]]$ predicate-complement structure
 b. $[_{RP} [_{XP} \text{PREDICATE}] [_{R'} \text{RELATOR} [_{YP} \text{SUBJECT}]]]$ predicate-specifier structure

The relator can be overtly realised or not, and it does not correspond to a single lexical element (it can be *of* but also *as*, etc.). Only the 'predicate-complement structure' may serve as input to predicate inversion in syntax, for which an extra projection is needed, FP, which is headed by a linker:

- (103) $[_{FP} [_{YP} \text{PREDICATE}]_j [_{F'} \text{LINKER+RELATOR}_i [_{RP} [_{XP} \text{SUBJECT}] [_{R'} t_i \ t_j]]]]]$

The relator raises to the linker, and the extension of the phase allows the predicate to raise to the specifier of the new projection FP. The small clause external head F^0 is lexicalised by a linker: the nominal copula *of*. Going back to the examples in (101), their structures illustrate the two types of predication just described: (101a) has a predicate-complement structure whereas (101b) has a predicate-specifier structure. Observe (104):

- (104) a. $[_{NumP} a [_{FP} [_{YP} jewel]_j [_{F'} [_{L+Ri} of] [_{RP} [_{XP} a village] [_{R'} t_i t_j]]]]]$
 b. $[_{NumP} an [_{RP} [_{YP} idiot] [_{R'} of [_{XP} a doctor]]]]]$

Notice that, for Den Dikken, in a nominal like *an idiot of a doctor* there is no predicate inversion, contrary to Kayne: compare (100e) above with (104b). Another difference with respect to Kayne is that Den Dikken considers the indefinite article and quantifiers to be always external to the predication like the definite article or a demonstrative.

Although predication is the usual relationship between two maximal categories as in all the examples just described, here it will be claimed that this is not the only possibility. The lowest functional projection, which I name FP, can be understood as a frame to accommodate two maximal projections that are semantically related (one selects the other). It is the nature of the lexical constituents that come into relation in FP and the type of semantic relation they have that qualifies the configuration: it can be predication —as in the ‘predicate inversion’ examples or even with no predicate inversion according to Den Dikken— or it can also be quantificational, as is the case in partitives (and quantitatives).

The structure suggested in (99) for partitives and quantitatives does not produce the right order, so just as in the ‘predicate inversion’ cases, here it will be postulated that the QP moves leftwards to a higher position and the presence of the prepositional element is related to this movement operation (although here it will not be claimed that *de* is a link or nominal copula as in the ‘predicate inversion’ analyses, but its presence will be attributed to Case requirements more in the line of Kayne 1994).

It is worth noting at this point that in the literature there are some proposals (Doetjes and Rooryck 2003; Corver 1998, 2001, 2009) that extend the predicate inversion analysis as such to pseudopartitives based on the parallelism between the qualitative construction—e.g. *a jewel of a village*, *an idiot of a doctor*—and the pseudopartitive construction—e.g. *a lot of books*, *a pile of books*. That is to say, here the quantifier expressions are analysed as predicates

that undergo predicate displacement when generated in a low position in the structure. Let us briefly describe these proposals.

Doetjes and Rooryck (2003) distinguish between two types of pseudopartitives in French based on different agreement patterns: what they call ‘pure degree’ type—see (105a), in which the verb agrees with the quantified noun *livres* ‘books’ in the plural—and ‘comparative’ type—see (105b), in which the verb agrees with the quantifying noun *montagne* ‘mountain’ in the singular.

(105) a. *Beaucoup de livres* { *est tombé / sont tombés }.

a-lot_{sg} of books_{pl} is_{sg} fallen_{sg} are_{pl} fallen_{pl}

‘A lot of books have fallen.’

b. *Une montagne de livres* { est tombée / *sont tombés }.

a mountain_{f.sg} of books_{m.pl} is_{sg} fallen_{f.sg} are_{pl} fallen_{m.pl}

‘A big pile of books has fallen.’

These authors notice that the different behaviour of the two kinds of pseudopartitives with respect to agreement is parallel to that displayed by qualitative nominals studied by Hulk and Tellier (1999, 2000)—illustrated in (106a) and (106b), respectively.

(106) a. *Ton phénomène de fille* est { *distrain / distraite }.

your phenomenon_m of daughter_f is absent-minded_m absent-minded_f

‘Your phenomenon of a daughter is absent-minded.’

b. *Ce bijou d’église romane* est { reconstruit/*reconstruite }.

this jewel_m of-church_f Roman was rebuilt_m rebuilt_f

‘This jewel of a Roman church was rebuilt.’

In both (105) and (106), the nominals consist of a sequence ‘Det N1 de NP2’. According to Doetjes and Rooryck, the difference in agreement between the *a* examples and the *b* examples correlates with the interpretive nature of N1: when N1 has completely lost its original lexical meaning and indicates a quantity of high degree (i.e. *beaucoup*) or expresses high/low degree of quality (i.e. *phénomène*), external agreement takes place with NP2 (i.e. *livres* and *fille* in 105a and 106a resp.); in contrast, when N1 retains part of its lexical meaning and its relation with the NP2 can be paraphrased in terms of comparison (i.e. *montagne*—the quantity of books is such that it resembles a mountain—and *bijou*—the quality of the church is such that

it resembles a jewel), then external agreement takes place with N1 (i.e. *montagne* and *bijou* in 105b and 106b resp.).

Doetjes and Rooryck suggest a different structure to account for the different agreement pattern. The ‘comparative’ type has a predication structure with predicate inversion, in which the quantifying/qualifying element is the predicate, the quantified/qualified noun is the subject and *de* is a relative clause marker (a nominal complementiser in the line of Kayne 1994)⁶⁸—as represented in (107). In contrast, the ‘pure degree’ type has a non-predicational structure: here *de* is D^0 , the quantifying/qualifying element is generated in the specifier of an (adverbial) functional projection expressing Evaluation in the sense of Cinque (1999) that takes DP as a complement, and the quantified/qualified noun is the NP complement of DP—see the representation in (108):

- (107) a. [CP [DP *une montagne*] **de** [SC [NP *livres*] $t_{une\ montagne}$] *comparative quantification*
 b. [CP [DP *ce bijou*] **de** [SC [NP *église romane*] $t_{ce\ bijou}$] *comparative qualification*
- (108) a. [EvalP *beaucoup* Eval⁰ [DP ____ **de** [NP *livres*]]] *pure degree quantification*
 b. [EvalP *ce phénomène* Eval⁰ [DP ____ **de** [NP *filles*]]] *pure degree qualification*

This proposal is interesting in that it highlights and captures similarities between qualitative nominals and pseudopartitive nominals, but it raises several questions. In regard to the comparative type, it is not clear why the determiner appears as part of the raised predicate as the comparison does not seem to include this determiner, but the article or the demonstrative applies instead to the whole nominal (as claimed by Den Dikken 2006 or Kayne 1994): for example, in (107b), the church is not like ‘this’ jewel but like a jewel in general and *ce* actually applies to ‘church’; a paraphrase of the whole nominal could be: ‘this church, which is like a jewel’. In any case, would not a top DP projection be needed (or at least a NumP) for the sequence to be a nominal and be able to serve as an argument? As it appears in (107) it is a small clause, and as such we would expect it to behave as a predicate, contrary to fact.

With respect to the pure degree type, the structure headed by an EvalP does not seem to be well justified for nominals as an extension of DP, and it is not clear whether examples of APs with a high degree modifier would be analysed as EvalP as well: i.e. *Vous êtes très*

⁶⁸ However, unlike Kayne 1994, notice that Doetjes and Rooryck analyse the determiner (article, demonstrative) as part of the quantifier/qualifier (cf. Kayne structures in (100) above).

aimable ‘You are very kind’ or even *Aimable, il est beaucoup* ‘Kind, he is very’.⁶⁹ If so, how would selectional properties apply if both nominal phrases and adjectival phrases were the same syntactic projection EvalP? Moreover, although an analysis of *de* as a D^0 is not new (see Kayne 1994), it was related to a predication structure and predicate inversion (where *de* is a kind of nominal complementiser). In contrast, in the structure in (108) it has the status of an ordinary determiner, but, in fact, it does not have its syntactic properties as it cannot work on its own: nominals as *de fille* (lit. of girl) or *de livres* (lit. of books) are ungrammatical as equivalents of *une fille* (a girl) and *des livres* (a_{pl} books). Even if one could consider them as a form of the so-called partitive article in French, that analysis could not be extended to many other languages that lack this kind of article and have bare nominals instead, such as Catalan or English. In any case, it is unclear whether this analysis as EvalP would be extended to other indefinite quantifiers (those that have no overt *of*) and also partitives, which Doetjes and Rooryck do not mention. For example, would other quantifiers such as *plusieurs* ‘many’ or numerals, despite not being followed by *de*, have a similar structure as *beaucoup* or a different one? And what about quantifiers followed by *de* but that do not indicate a high degree, such as *peu* ‘few, little’ or even *assez* ‘enough, quite a few, quite a lot’. All the quantifiers mentioned seem to have the same semantic and syntactic role in the nominal, whether they are followed by *de* or not. Even the difference concerning the realisation of *de* is not clearcut both crosslinguistically (e.g. the Dutch counterpart of English or French pseudopartitives has no overt *of*) and within languages, at least in a language such as Catalan, where *de* can be realised with most quantifiers in the proper context, even with agreeing quantifiers (see §3.3.2 below).

Corver in his turn also extends the predicate displacement analysis of qualitative constructions to quantitatives containing *of*: indefinite nominals in English and French containing measure nouns (see Corver 1998) and measure phrases (see Corver 2009)—as illustrated in (109)—and also cardinals in Romanian, both bare (see Corver 2001) and with approximative modifiers (see Corver and Zwarts 2006)—as illustrated in (110):

- | | | | |
|----------|---------|------------------------------|-----------------|
| (109) a. | Eng. | a <i>bottle</i> of water | measure nouns |
| | a’ Fr. | une <i>bouteille</i> d’eau | |
| | b. Eng. | two <i>weeks</i> of vacation | measure phrases |

⁶⁹ Examples taken from *Le Petit Robert*, entries *aimable* and *beaucoup* resp. Interestingly, in the latter it is noted that in old French *beaucoup* was used to modify adjectives: *Leur savoir à la France est beaucoup nécessaire* (Molière) (lit. Their wisdom/knowledge to France is very necessary ‘France needs their wisdom/knowledge’). In modern French *très* is used instead, as illustrated in the first example, and *beaucoup* is restricted to cases of fronted adjectives, where it appears stranded, as shown in the second example given.

- c. $[_{FP} [_{PP} \text{sub douăzeci}]_j [_{F'} F+X_i (=de) [_{XP} \text{oameni} [_{X'} t_i t_j]]]]$ (FP=NumP)

Under the assumption of Chomsky's (2001) *Uniformity Principle*,⁷³ Corver and Zwarts claim that the predicate inversion analysis applies as well to languages where no overt *of* appears in the same type of nominal, e.g. English or Dutch cardinals: *(around) 20 children*, *(rond de) 20 kinderen*: the derivation and structure would be the same with the only difference being that *of* would be silent (represented by OF in capitals in the structures below).

- (113) a. $[_{FP} [_{PP} (\text{around}) 20]_j [_{F'} [_{F+X_i} \text{OF}] [_{XP} [_{NP} \text{children}] [_{X'} t_i t_j]]]]]]$ (FP=NumP)
 b. $[_{FP} [_{PP} (\text{rond de}) 20]_j [_{F'} [_{F+X_i} \text{OF}] [_{XP} [_{NP} \text{kinderen}] [_{X'} t_i t_j]]]]]]$ (FP=NumP)

However, to account for the lack of overt *of* in Dutch indefinite nominals with a concrete measure noun like (111a), e.g. *een fles water*, lit. a bottle water, Corver (1998, 2003) claims that the pattern in this language is similar to that of a construct state and suggests in this case a predicate inversion analysis involving predicate head movement (i.e. measure N incorporation) instead of phrasal movement (NP raising): this would block the realisation of *of* given that the noun ends up in F^0 as represented in (114a) below.⁷⁴ For examples with an abstract measure phrase like (111b) in Dutch, which show no overt *of* either (e.g. *hoeveel dagen bedenktijd*, lit. how-many days time-of-reflection), Corver (2003) claims that the predicate inversion is a phrasal movement, but of the A'-type, and proposes the structure in (114b), where the predicate raises to Spec DP.⁷⁵

- (114) a. $[_{DP} \text{een} [_{FP} [_{F'} [[F+X_i]+fles]_j [_{XP} \text{water} [_{X'} t_i [_{NP} [_{N} t_j]]]]]]]]]]$ (Corver 1998: 243)
 b. $[_{DP} \text{hoeveel dagen}_i [_{D'} D^0 [_{XP} \text{bedenktijd} [_{X'} X^0 t_i]]]]]]$ (Corver 2003: 15)

Although this predicate displacement analysis is interesting in that it captures well some syntactic properties of indefinite nominals containing measure expressions and cardinals that pattern with the behaviour of qualitative nominals (namely, a phrasal status of the quantifier

⁷³ The *Uniformity Principle* states that "In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances" (Chomsky 2001: 2).

⁷⁴ In Dutch "container" readings, the initial structure would be as in English (see (i) in the note 70), but the predicate noun would adjoin to P before this complex P+N would incorporate into the complex head $[F+X]$.

⁷⁵ See Corver (2003) for the argumentation and more details on the types of movement that can take place within Dutch nominals.

element and a low origin in the nominal structure), it is not clear that these quantificational expressions are predicates when they appear within nominals: their ability to function as predicates in a sentence as shown in (115) or even within a nominal as *three* in *the three languages* does not mean that they are always predicates.

- (115) a. I believe that the right amount is *three cups*. (Corver 1998: 224)
 b. We are *seven*. (Corver and Zwarts 2006: 11)
 c. *We went a hundred*, mother, and came home *forty-four*. (Corver and Zwarts 2006: 11)

For measure nouns, one piece of evidence for their predicate status comes from examples like (115a),⁷⁶ but it is not clear whether *three cups* is the nominal predicate in these configurations: at least in Catalan it behaves as the syntactic subject, as indicated by its behaviour with respect to agreement and pronominalisation. Observe (116):

- (116) a. Crec que la quantitat correcta {*és/són} tres tasses.
 believe_{1sg} that the amount right is are three cups
 b. *Crec que la quantitat correcta ho són. (where *ho* = *tres tasses*)

(116a) shows that the verb agrees with the plural measure phrase *tres tasses*, not with the singular nominal *la quantitat correcta*. Moreover, if *three cups* were the predicate, it should be pronominalised by *ho* as expected for a nominal predicate, but (116b) shows that is not the case. In contrast, *la quantitat correcta* allows pronominalisation by *ho* (notice that subjects in Catalan can never be pronominalised by *ho*), which is an indication that it is the predicate: e.g. *Tres tasses ho són* (where *ho* = *la quantitat correcta*).⁷⁷

With respect to cardinals, their function as secondary predicates seems to be quite restricted as it is not easy to find sentences in which they would work (even a sentence like (115c) becomes less acceptable with a lexical subject: i.e. *?The soldiers left a hundred and came back home forty-four*). Also the fact that (115c) contains unaccusative verbs, such as *go* and *come*, raises the question as to whether the cardinals are not really part of their internal

⁷⁶ See Corver (1998, 2009) for more arguments.

⁷⁷ This type of data needs further investigation than possible here as, strikingly, with *tres tasses* in preverbal position the verb tends to agree in the singular, maybe because it is understood as ‘an amount of three cups’:

(i) a. Tres tasses {és/?són} la quantitat correcta.
 b. Tres tasses ho és/?són.

argument, which would surface as a postverbal subject in Catalan: the equivalent of (115c) *Vam marxar cent, mare, i vam tornar quaranta-quatre* is very similar to *Van marxar cent soldats i només en van tornar quaranta-quatre* (lit. left_{3pl} a-hundred soldiers and only NE came-back forty-four, ‘A hundred soldiers left and only forty-four of them came back’), where *cent soldats* is the postverbal subject agreeing with the verb *van marxar* and similarly for the other member of the coordination, where the noun has been pronominalised by *ne*, and only the quantifier appears in its basic position (*quaranta-quatre*).⁷⁸

Even though in all the sentences in (115) the quantifier expressions are predicates, it does not necessarily imply that they have the same role in the nominal domain, and it seems that a distinction is needed within nominals between quantifiers that have a quantificational relation with the noun (e.g. *three* in the nominal *three kids*) and quantifiers that behave as predicates (e.g. *three* in the nominal *the three kids*), for not all quantifiers can function as predicates both within nominals or in a sentence—an example is Catalan *alguns* ‘some’ (**els alguns nens* ‘the some kids’, **Els nens són alguns* ‘The kids are some’). Also, if quantifiers were always predicates we would expect them: (a) not to be licensed in bare nominals in subject position in languages like Catalan (just like other predicates cannot be), but they are (see 117), and (b) to accept being preceded by other predicates, but they do not (compare *three nice kids* vs. **nice three kids*).

- (117) {Els nens/Uns nens/Tres nens/Molts nens/*Nens/*Simpàtics nens} juguen al carrer.
 {the kids / a_{pl} kids /three kids/many kids / kids / nice kids} are-playing in-the street

Moreover, as was noted for Doetjes and Rooryck’s proposal, Corver and Zwarts’ analysis covers a subgroup of indefinite nominals, and it is not clear whether it could be extended to the rest of quantitatives, whether they have an overt *of* or not. With respect to partitives,

⁷⁸ Corver and Zwarts (2006: 11) offer two other examples of cardinals as secondary predicates which do not involve an unaccusative verb:

- (i) a. There were two turn-up beds in the room, and *we* slept *three* in a bed.
 b. Can *you* lie *three* in a bed?

Again the equivalent intransitive verbs in Catalan allow a postverbal subject and pronominalisation with *ne*:

- (ii) a. Van dormir tres nens en un llit.
 slept_{3pl} three children in a bed
 b. En van dormir tres en un llit.
 NE slept_{3pl} three in a bed

Also, the possibility of a sentence like (iii) seems to indicate that the cardinal *three* is not a predicate but a subject, in this case of a small clause where the PP *in a bed* would be the predicate (and the same would apply to the cardinal *two* and the PP *on the floor*):

- (iii) We slept [three in a bed] and [two on the floor].

Corver suggests they are a different construction, but unfortunately he does not give any indication on how partitives could be analysed.⁷⁹ In any case, it seems that an analysis of the quantifier as a predicate would be difficult to maintain for partitives.

In contrast, the proposal defended in this thesis tries to capture the syntax of indefinite nominals containing quantifiers as mirroring that of predication structures but not automatically analysing quantifiers as predicates; furthermore, it generalises the structure to all types of indefinite nominals (quantitatives including pseudopartitives and—crucially—also partitives) and provides a more justified account for the prepositional element *of* based on Case reasons (recall the arguments and data from Chapter 1, §1.3).

3.2.2.5 Predicative QPs

When the complement of FP is a QP, the relation established with the DP in Spec FP will in principle be quantificational. However, in certain cases it can be predication as well. This section will deal with predicative QPs. Observe (118):

- (118) a. [FP [DP *els alumnes de primer*] [QP *molts*]]
 b. *molts dels alumnes de primer*
 c. *Els alumnes de primer són molts.*

The examples in (118b) and (118c) have the same source (118a), but in the former, *molts* has a quantificational relationship with *els alumnes de primer*, so nominal functional projections are merged above FP and a partitive DP is obtained whereas in the latter *molts* is a property which qualifies the size of *els alumnes de primer*, so a copular verb and TP are merged above FP (and probably also CP), resulting in a sentence. Not all quantifiers or QPs can have a predicate status and be attributed as a property to a noun or nominal projection: cardinals and most indefinite quantifiers can (such as *molts* ‘many’, *pocs* ‘few’, *massa* ‘too many’, *bastants* ‘quite a lot’, etc.), but quantifiers such as *algun(s)* ‘some’ or *cap* ‘no’ cannot:

Notice also that *three* or *two* cannot be understood as a property that applies to the subject *we* as they denote part of it (cf. a secondary predicate, that applies to the whole extension of the subject).

⁷⁹ Corver (1998: 233) explicitly states that “Although, for reasons of space, we cannot discuss the syntax of partitive constructions here, we believe this construction type should be distinguished from the pseudopartitive one”.

- (119) a. *Els alumnes de primer són alguns.
 ‘First year students are some.’
 b. *Els alumnes de primer no són cap.
 ‘First year students are no(ne).’

One could claim that in the case of quantifiers that can function as predicates we actually have lexical items of two categories, quantifier and adjective, whereas in the latter case *alguns* and *cap* are only quantifiers and cannot be adjectives, as suggested by Cardinaletti and Giusti (2006: §2.3.3). But I think there is no need to make a claim for double categories; it is enough to say that some quantifiers have the lexical property of being able to function as predicates, and that is indeed the case if they appear in the right configuration. This ability seems to derive from their semantic content: quantifiers that denote an exact number (like cardinals) or have a “degree” interpretation (signal a point in a scale), that is to say, that denote quantities, are the ones that can be predicates as in (118c). A quantifier like *algun* (in all its forms) does not denote any quantity nor number whilst *cap* does but in a negative way, i.e. the quantity indicated is zero, so none of these quantifiers can be used as a property ascribed to any element; they always act as quantifiers in nominal expressions for which a sentence parallel to (118c) would not be generated. Recall that *alguns* is closer to a functional category in that it does not enter any derivational process nor has much semantic content (and similarly for *cap*), in contrast with quantifiers such as cardinals and indefinite quantifiers like *molt*. So the impossibility of *alguns* and *cap* to be a predicate is expected given their lexical characterisation (both semantic and morphological).⁸⁰

⁸⁰ Notice that it is quite difficult for quantifiers to have a predication behaviour with mass nouns, as shown by the contrasts in (i)—cf. the well-formedness in (ii):

- (i) a. ^{??}/*La paciència que té és {molta/poca/un munt} vs. La paciència que té és {molt gran/[?]petita/infinita}
 the patience that has is much/little/a lot the patience that has is very big / little / infinite
 b. ^{??}/*Aquí l’aigua és {molta/poca/un munt}. vs. Aquí l’aigua és {abundant/escassa}.
 here the-water is much/little/a lot here the-water is abundant/scarce
- (ii) a. Té {molta/poca/un munt de} paciència.
 ‘(S)he has {much/little/a lot of} patience’.
 b. Aquí hi ha {molta/poca/un munt d’} aigua.
 ‘Here there is {much/little/a lot of} water.’

It is not clear why mass nouns should be more resistant to predicative quantifiers than countable nouns. Perhaps it has to do with the fact that with mass nouns, common adjectives such as *gran* ‘big’ or *petit* ‘little’ and their synonyms tell us about the amount of substance these mass nouns denote and an adjective is a preferable alternative; with countable nouns, however, that is not the case, so we need to use quantifiers as predicates (there are also adjectives such as *nombrós* ‘numerous’ and *escàs* ‘scarce’, but they are rather formal and do not always work).

However, observe the next example from Catalan TV news, where *molta* ‘much’ predicates from *neu* ‘snow’:

It is worth pointing out at this point that although quantifiers can be predicates in some cases, that is not their main or usual role. Moreover, in their predicative use quantifiers show severe restrictions in comparison to ordinary adjectives: as shown in (120) quantifiers can be predicates in copular sentences (see (120a) and also (118c) above), but they are usually banned in other predicative environments such as secondary predicate configurations (see 120b) and even from predicative adjective positions inside nominals (see 120c).

(120) a. Els recursos de què disposem enguany són *molt pocs*.

‘The resources we have this year are *very few*.’

b. *{Trobo / Considero} els recursos de què disposem enguany *molt pocs*.

‘I {find / consider} the resources we have this year *very few*.’

c. *Els recursos *tan pocs* de què disposem enguany no seran suficients per cobrir totes les despeses.

‘The *very few* resources we have this year won’t be enough to cover all the expenses.’

The conclusion is that quantifiers cannot be brought into line with adjectives, interestingly not even with those that have a quantificational flavour such as *nombrosos* ‘numerous’ or *escassos* ‘little’, which in certain configurations can work as quantifiers. This is an argument against analyses that consider quantifiers as ordinary adjectives. Observe the well-formed examples in (121), which are like those in (120) but with an AP instead of a QP:

(121) a. Els recursos de què disposem enguany són *molt escassos*.

‘The resources we have this year are *very few*.’

b. {Trobo / Considero} els recursos de què disposem enguany *molt escassos*.

‘I {find / consider} the resources we have this year *very few*.’

c. Els recursos *tan escassos* de què disposem enguany no seran suficients per cobrir totes les despeses.

‘The *so few* resources we have this year won’t be enough to cover all the expenses.’

-
- (ii) La neu que hi havia a les estacions d’esquí, que ja era molta, s’ha incrementat amb el
 the snow that there had in the resorts of-ski that already was much SE-has increased with the
 temporal de neu. (Telenotícies migdia, TV3, 10/03/2010)
 storm of snow
 ‘The snow already present in the ski resorts, which was a lot, has increased after the snow storm.’

(121) shows that an adjective can be a predicate in all possible predicative contexts, contrary to quantifiers, which are restricted to the predicate position in copular sentences. Even in copular sentences, not all the quantifiers can be coordinated with an ordinary adjective as shown by Contreras (1992),⁸¹ which again indicates that quantifiers have a resistance to becoming predicative or are not like ordinary predicates:

- (122) a. Els recursos d'enguany són pocs però suficients.
 the resources of-this-year are few but sufficient
- b. Els problemes d'aquesta empresa són molts i greus.
 the problems of-this company are many and serious
- c. *Els becaris del departament són cinc i brillants.
 the grant-holders of-the department are five and brilliant
- d. *Els meus amics més íntims són tres però fantàstics.
 the my friends more close are three but fantastic
 'My closest friends are three but fantastic.'

To sum up, quantifiers can in certain conditions work as predicates and in that sense they resemble adjectives, but both categories must be kept separated as their syntactic behaviour is different. More explicitly, it was shown that quantifiers that function as predicates have many restrictions and there are empirical reasons against assimilating them to adjectives.⁸² For an analysis of predicative quantifiers, see §3.4.2 below.

⁸¹ This author illustrates this in Spanish and concludes that only quantifiers like *pocos* 'few' and *muchos* 'many' are real predicates because they can be coordinated with adjectives—see (iia). In contrast, cardinals and a quantifier such as *varios* 'several', although they can be the predicate of the verb *be* as well as shown in (i), do not allow coordination with an adjective—see (iib). So, according to Contreras, this means they are not predicates.

(i) Los libros son {pocos/cinco/varios}. 'The books are {few/five/several}.'
 (ii) a. Los libros son pocos y viejos. 'The books are few and old.'
 b. *Los libros son {cinco/varios} y viejos. 'The books are {five/several} and old.'

I agree with his data but not with his conclusions and claim that the possibility for a quantifier being in the predicate position of a copular sentence as in (i) is enough to be considered as a predicate, which includes both indefinite quantifiers and cardinals.

⁸² See Lehrer (1987) for a study of English quantifiers according to their historical sources: adjectives (i.e. *little, few, many, much*) and nouns (i.e. *a number, a lot, lots, a good deal, a couple*). These items belong to the quantifier class (a category different from adjectives and nouns), but given their sources "it is not surprising, therefore, that some of the members have retained remnants of their earlier category membership" (Lehrer 1987: 104). This author assumes Carlson's (1978) claim that in Old English 'pre-quantifiers' (i.e. the antecedents of the Modern English quantifiers) were actually adjectives, and they are not reanalysed as a new and distinct category of 'quantifiers', due to various diachronic changes, until the end of the sixteenth century. Lehrer (1987: 102) suggests that once the quantifier category has been formed, new items can move

3.2.2.6 Quantifiers preceded by a definite determiner

If, as concluded in the preceding section, quantifiers are different from adjectives, how are the quantifiers preceded by a definite determiner to be analysed? Recall that a common assumption⁸³ in the literature since Giusti (1993)—see also Cardinaletti and Giusti (2006)—is that in nominals like *the three men* or *those many books*, the quantifiers *three* and *many* are not Qs but As: they are to be assimilated to prenominal adjectives, in a specifier position of the highest functional category below DP.

Here it will be claimed instead that *three* and *many* are generated in the same position that they have in *three men* and *many books*, and that the only difference is that they raise to a lower functional projection, the one immediately below DP, and an article is merged into D⁰. In the case of the demonstrative, there are reasons to believe it is generated lower in the structure and that it raises to Spec DP (see Brugè 2002), but no matter if its final position is derived or is the basic one, it is located in DP, so QP does not move further.

I assume the principle proposed by Dimitrova-Vulchanova and Giusti (1998)—see also Giusti (2002: 70)—under a disjoint version, so DP cannot be doubly filled (in parallel to the doubly filled Comp Filter). In other words, either (123a) or (123b) applies, but not both at the same time:⁸⁴

(123) Principle of economy of lexical insertion

A functional projection must be licensed at all levels of representation by

- a. Making the specifier visible.
- b. Making the head visible.

The derivation proposed here is as follows: both *the three men* and *three men* originate as an FP with *three* in its complement position and *men* in the specifier position, and *three* raises up in the structure to Spec NumP. In the former an article is merged into D⁰ so the quantifier

into the category even if they are not adjectives initially: this is the case of quantificational expressions with a noun source such as *a number*, *a lot*, *a bunch*, *dozen*, *hundred*, etc.

⁸³ A recent exception is Gutiérrez (2008), who considers them to be quantifiers in both configurations. See also Sánchez López (1993) and Zamparelli (1996).

⁸⁴ According to these authors, this principle of economy of insertion can also have a conjoint version, where both (123a) and (123b) must apply, in which case it accounts for verb-second structures and doubly filled Comp languages.

cannot move further than Spec NumP—see (124a)—whereas in the latter no article is merged in D^0 and the quantifier raises to Spec DP—see (124b):⁸⁵

- (124) a. [DP [D the [NumP [QP three]_i [Num' [FP [NP men] [F' t_i]]]]]]
 b. [DP [QP three]_i [D [NumP t_i [Num' [FP [NP men] [F' t_i]]]]]]

According to (123) the DP needs to have either its specifier or its head visible, but not both.

As has been mentioned before, Cardinaletti and Giusti (2006)—see also previously Giusti (1993: §3.3)—claim that *three* is an adjective in *the three men* but a quantifier in *three men* and suggest that these two nominal expressions have a different structure to reflect their different syntactic behaviour: as an adjective it sits in a specifier position of a nominal functional projection like an ordinary AP whereas as a quantifier it is a head that selects the noun projection.⁸⁶ Despite these categorial and syntactic differences, these authors admit there does not seem to be any semantic difference between the two instances of *three*.⁸⁷

Though the arguments Cardinaletti and Giusti provide to distinguish between two categories, Q and A, in strong quantifiers are convincing, in the case of indefinite quantifiers they are not so strong, as will be demonstrated immediately. Moreover, some arguments against analysing *three* as an adjective in *the three men* will be presented as well, so my conclusion will be that *three* has the same status (it is a Q) both in *three men* and *the three men* as suggested above in (124) (see §3.4.3.3 below for more details of the analysis).

Here I will not go into the arguments concerning strong quantifiers, which indeed seem to be quantifiers or adjectives depending on the language (see data from German, Dutch and Romanian in Cardinaletti and Giusti 2006: §2.3.3).⁸⁸ However, when we turn to

⁸⁵ We will see later that QP does not raise to Spec DP in all instances of *three men*, only in those that have a specific interpretation, provided an article or demonstrative has not been merged in D^0 (which would preclude the QP movement into DP). If the nominal is non-specific, it will be claimed that QP does not raise further than Spec NumP. See §3.4 below.

⁸⁶ Recall the two different structures proposed by Cardinaletti and Giusti (2006), repeated here for convenience:

(i) a. [DP [D the] [FP [QAP many] F' ... [DP children]]] *many* = adjective
 b. [FP [AgrQP [QP [Q many] [DP children]]] *many* = quantifier

⁸⁷ See footnote 42.

⁸⁸ Though for German I agree that *all* is a quantifier but *ganz* is an adjective (both meaning 'all' in examples like *Alle Kinder sind da* or *Die ganzen Kinder sind da* 'All the children are there'), it is most questionable that in the case of *beide* 'both' or *viele* 'many' the mere possibility of being preceded by a definite determiner with the consequent change of inflection implies they are adjectives: *beide Kinder* vs. *die beiden Kinder*, *viele Kinder* vs. *die vielen Kinder*. For German it is inadequate to associate inflection to a particular category (determiner or quantifier versus adjective) as Cardinaletti and Giusti do: what data show is that in nominals the first word usually takes the so-called 'strong' inflection—be it a determiner, a quantifier or an adjective—whilst the following elements—be they a quantifier or an adjective—take the so-called 'weak'

indefinite quantifiers, the picture is not so clear and these authors do not provide much data but more theoretical arguments which are too dependent on the particular way nominals are analysed in their work.

According to these authors, quantitative adjectives have the following properties which quantifiers preceded by an article share (Cardinaletti and Giusti 2006: §2.3.3, 87):

(125) *A diagnostics for quantity adjectives:*

- a. Quantity adjectives are preceded by a determiner (in languages that have a definite article).
- b. Quantity adjectives cannot occur with a pronoun.
- c. Quantity adjectives do not allow extraction of the part of the DP that does not contain it.

inflection. Observe the following examples, where the strong inflection is *-er* and the weak inflection is *-e* in the singular whereas it is *-e* and *-en* respectively in the plural:

- (i) a. {**der** / **dieser** / **jeder** / **mancher**} **junge** Man
 the_{sg} this each some young man
- b. {**der** / **dieser**} **gute** Wein
 the_{sg} this good wine
- c. **guter** Wein
 good wine
- (ii) a. {**die** / **diese** / **alle** / **beide** / **manche**} **jungen** Männer
 the_{pl} these all both some young men
- b. {**die** / **diese**} **vielen** **jungen** Männer
 the_{pl} these many young men
- c. {**gute** / **junge**} Männer
 good young men

An exception is the masculine and neuter singular forms of the indefinite article, the possessive, and the negative form *kein*, which end invariably in *-ein*, and so forces the following word to have strong inflection, despite its being an adjective:

- (iii) a. {**ein** / **mein** / **kein**} **guter** Wein
 a my no good wine_m
- b. {**ein** / **mein** / **kein**} **altes** Auto
 a my no old car_n

Interestingly, the adjectives that follow cardinals take the strong form as well probably because cardinals are invariable (though if the nominal is preceded by a determiner, this is the one which takes the strong inflection and then the adjective has weak inflection as expected):

- (iv) a. **zwei** **kleine** Kinder
 two little kids
- b. **die** **zwei** **kleinen** Kinder
 the two little kids

Similarly, some indefinite quantifiers such as *viel* and *wenig* seem to have a defective inflection in the plural, as a following adjective needs to take the strong inflection:

- (v) {**viele** / **wenige**} **kleine** Kinder
 many few little kids

It is obvious from German data that it cannot be concluded that adjectives taking the strong inflection as in (ic), (iic), (iii) and (v) are actually quantifiers or determiners, so similarly from the fact that the quantifier takes the weak inflection in (iib), it does not follow that it is an adjective.

- d. Quantity adjectives cannot appear in discontinuous position (in languages in which adjectives likewise cannot do so).
- e. Quantity adjectives do not select a partitive PP.

Apart from (125b) (which is not relevant for examples like *the three men* we are interested in now), all the properties in (125) can be explained by the fact that it is precisely a determiner that precedes the quantifier and hence the nominal is a definite DP. So from the data discussed in Cardinaletti and Giusti (2006) the conclusion that quantifiers preceded by an article are actually adjectives does not necessarily obtain.⁸⁹

Here I will not go through all the discussion and data but will revise the four arguments Giusti (1993: §3.3) provides in favour of analysing quantifiers as adjectives when preceded by a determiner, on which Cardinaletti and Giusti (2006)'s argumentation is partially based. Giusti's (1993) arguments are described below (all the examples are taken from her work):

a. Quantifiers that can be preceded by a determiner in Italian are *molti*, *pochi*, *parechi*, *troppi* and numerals, which are also those that can be the predicate in copular sentences as shown in (126), like other adjectives—see (127)—and unlike true quantifiers—see (128).

- (126) a. *i {molti / parecchi / venti} ragazzi che conosco*
 'the {many / several / twenty} kids that I know'
 b. *I ragazzi che conosco sono {molti / parecchi / venti}.*
 'The kids that I know are {many / several / twenty}.'

- (127) a. *i bei ragazzi che conosco*
 'the beautiful kids that I know'
 b. *I ragazzi che conosco sono belli.*
 'The kids that I know are beautiful.'

⁸⁹ An exception might be the Bosnian-Croatian-Serbian data on the contrast between the behaviour of *mnogo* and *mnoge* (both mean 'many'): only the former is followed with a genitive noun and allows a genitive pronoun or genitive clitic. The latter, on the other hand, agrees in ϕ -features with the noun (which gets the accusative Case from the verb), and no genitive pronoun nor genitive clitic is licensed. However, this fact does not necessarily imply the latter is an adjective. It could just be an agreeing quantifier in contrast with the former, which looks more nominal (the different case in the noun is reminiscent of the examples with cardinals in Russian, in which the noun sometimes had the external Case instead of the genitive Case).

- (128) a. *gli {alcuni / entrambi} ragazzi che conosco
 ‘the {some / both} kids that I know’
 b. *I ragazzi que conosco sono {alcuni / entrambi}.
 ‘The kids that I know are {some / both}.’

b. Quantifiers preceded by a determiner cannot select a partitive PP as would be expected if they were true quantifiers, so the conclusion according to Giusti is that they are noun modifiers. Compare (129b) with (129d):

- (129) a. Conosco molti amici di Maria. (‘I know many friends of Maria.’)
 b. Conosco molti degli amici di Maria. (‘I know many of the friends of Maria.’)
 c. Conosco i molti amici di Maria. (‘I know the many friends of Maria.’)
 d. *Conosco i molti degli amici di Maria. (‘I know the many of the friends of M.’)

Moreover, when quantifiers are preceded by a determiner, the NP cannot be pronominalised by *ne*, which indicates that these quantifiers are actually noun modifiers (not heads that select the NP like true quantifiers):

- (130) a. Ne ho visti molti.
 NE have_{1sg} seen many
 ‘I have seen many of them.’
 b. *Ne ho visti i molti.
 NE have_{1sg} seen the many
 ‘I have seen the many of them.’

c. Quantifiers preceded by a determiner, like true quantifiers, do not trigger ambiguity when combined with negation but have only one reading, a different one:

- (131) Non ho letto molti libri di Doris Lessing. (‘I haven’t read many books by D. L.’)

Two readings: a. I’ve read few books by D. L.

b. There are many books by D. L. that I haven’t read.

- (132) Non ho letto i molti libri di Doris Lessing. (‘I haven’t read the many books by D.L.’)

One reading: I haven’t read the books by D. L., which are many.

d. In English, quantifiers preceded by a determiner do not license noun ellipsis—see (133a)—just like adjectives—see (133b,d). This is not the case with quantifiers that are not preceded by a determiner—see (133c):

- (133) a. *I had already met the many you introduced to me last night.
 b. *I had already met the nice you introduced to me last night.
 c. I have already met many.
 d. *I have already met (the) nice.

Based on Sánchez López's (1993: §2.3.2.2) revision of Giusti's argumentation, Gutiérrez (2008: Ch. 4, §6.1) shows that all four of these arguments can be refuted as none of them is conclusive.

With respect to the first argument, it is clear that the possibility of appearing as the predicate in a copular sentence does not imply that these quantifiers are adjectives given that other categories, like PPs for example, can be predicates in such sentences as well.

The second argument is too dependent on Giusti's particular analysis of partitives, so the ungrammaticality of partitives preceded by a definite article can receive a different explanation in terms of the high or low position of the quantifier, with no need to associate it to a different category (quantifier versus adjective) as Giusti does. In our case, for example, it is easily derived by the need of the quantifier in partitives to raise to the DP, which precludes the appearance of any overt determiner.⁹⁰

As for the third argument, the reason for the different behaviour with respect to negation is just what is expected in a definite DP in contrast with an indefinite nominal, so again it does not necessarily imply any categorial difference of quantifier versus adjective. In Sánchez López's thesis and in Gutiérrez's thesis as well, the indefinite nominal is a QP whereas the definite nominal has a DP projection above the QP which would explain the different behaviour with respect to negation. In my analysis, the difference would be on the type of DP: a definite one, with lexical material in it, versus an indefinite one, which would be empty. In any case, no matter what the particular analysis is, what is important is

⁹⁰ In Gutiérrez (2008), the two positions are not derived: quantifiers in partitives are generated above DP, so the impossibility of being preceded by an article automatically follows whereas quantifiers with a weak interpretation are generated below DP, which explains the possibility of being preceded by an article.

that there is no need to appeal to a different category for the quantificational element to account for the data.

With respect to the fourth argument, Gutiérrez provides Spanish data showing that, unlike English, in Spanish an elliptical noun is licensed with quantifiers preceded by a determiner, in contrast with prenominal adjectives, interestingly even those adjectives with a quantificational meaning such as *abundante* ‘abundant’ and *escaso* ‘scarce’, which are very close in meaning to a quantifier:⁹¹

- (134) a. los tres e que has traído
 the_{pl} three that have_{2sg} brought
 ‘the three you’ve brought’
 b. *los bonitos e que has traído
 the_{pl} beautiful_{pl} that have_{2sg} brought
 ‘the beautiful ones you’ve brought’
 c. los muchos e que me dijiste
 the_{pl} many that me told_{2sg}
 ‘the many ones you told me’
 d. *los abundantes e que me dijiste
 the_{pl} abundant_{pl} that me told_{2sg}
 ‘the abundant ones you told me’
 e. estos pocos e que ves
 these few that see_{2sg}
 ‘these few ones you see’
 f. *estos escasos e que ves
 these scarce that see_{2sg}
 ‘these few ones you see’

⁹¹ The contrast between quantifiers and adjectives with respect to noun ellipsis had been noted already by Contreras (1992):

- (i) Los muchos estudiantes que ingresan y los pocos [] que se gradúan.
 the many students that enter_{3pl} and the few that graduate_{3pl}
 (ii) a. *Un gran pensador francés y un gran [] inglés.
 a great thinker French and a great English
 b. *El duro invierno de Chile y el duro [] del Canadá.
 the hard winter of Chile and the hard of-the Canada

Despite these data, Contreras does not abandon the idea that these quantifiers are adjectives when preceded by a determiner (he claims they are in a predicate position) though he is forced to say that they are quantifiers when they allow noun ellipsis as in (i), so his proposal is neither very clear nor convincing.

However, Gutiérrez does not provide any account of the English examples. A deeper look at data reveals that even in English a contrast is found between quantifiers when preceded by a determiner and adjectives. First of all it must be noticed that, although not common, examples like (133a) are actually well-formed⁹² contrary to what is claimed by Giusti (1993): they are attested in the British National Corpus, both with an overt relative pronoun and without one, the former being more common than the latter.⁹³ Moreover, a further contrast clearly distinguishes quantifiers and adjectives: unlike quantifiers, adjectives preceded by a determiner license noun ellipsis if the pronominal *ones* is inserted, as illustrated in (135).

- (135) a. *I had already met the many *ones* you introduced to me last night.
 b. I had already met the nice *ones* you introduced to me last night.

To finish this discussion on quantifiers preceded by a determiner, it is important to note that they are more restricted than generally assumed, which I take as a further argument against analysing them as ordinary adjectives: at least in Catalan, quantifiers that allow a preceding determiner are only a small subgroup of the quantifiers that can be a predicate in copular sentences (cf. first argument in Giusti 1993), as illustrated by the following examples.

⁹² I thank Derek Zinger for pointing that to me. The same contrast would obtain with an overt relative pronoun, as the following examples show (they are like (133a,b) but with the insertion of *that/who*):

- (i) a. I had already met the many {*that/who*} you introduced to me last night.
 b. *I had already met the nice {*that/who*} you introduced to me last night.

⁹³ As an illustration, some of the examples from the BNC are:

- (i) a. Tomorrow would be a business presentation, no different from *the many she had already attended for other campaigns*. [HAS 2961]
 b. For most of us the intervening year has added another milestone to *the many we have already passed*. [KAP 594]
 c. Ahead of them was a little church not unlike *the many they had passed on the long route-march from Etaples to the front*. [K8T 1116]

More common are the examples with an overt relative pronoun (the following ones were chosen among 6 instances with overt *that* and 34 with overt *who*):

- (ii) a. Vegetation is composed of the few plants that survive and grow: to explain that vegetation it may be more important to study *the many that die*. [CMA 283]
 b. In practice this aura of professionalism has worked to the exclusion of *the many who have no such education and training*. [CFD 156]

It is worth noting that the number of examples in the BNC with *few* instead of *many* is even higher: 24 instances of the sequence *the few that* and 79 instances of the sequence *the few who*. I also did the search with the cardinal *three* and obtained 8 instances of *the three that* and 13 instances of *the three who*. Again with non-overt relative pronoun the number of instances in all cases decreases.

- (136) a. Els exercicis que tinc de deures són {tres/molts/pocs/diversos/bastants
the exercises that have_{1sg} for homework are three/many/few/several/quite-a-lot
/força /uns quants/massa/més}.
quite-a-lot/a few/too-many/more
- b. M'ajudes a fer els {tres/molts/pocs/diversos/? bastants /*força */uns quants/*massa/
*més} exercicis que tinc de deures?
'Can you please help me do the {three/many/few/several/quite a lot of/too
many/more} exercises I have got for homework?'

Moreover, it is important to note that all examples with quantifiers preceded by a determiner except cardinals require the presence of a noun modifier, usually a relative clause, for the nominal to be felicitous. This condition, not always mentioned in the literature, is illustrated in (137).⁹⁴

- (137) M'ajudes a fer els {tres/*molts/*pocs/*diversos/*bastants /*força */uns quants/*massa/
*més} exercicis?

This is very reminiscent of the behaviour proper names have with respect to their ability to combine with a definite determiner: they only admit being preceded by a definite determiner if modified (**the Paris* vs. *the Paris {I know/of my youth}*). There is quite a lot of consensus in the literature since Kayne (1994) that these examples have the structure D CP, in which D selects a CP and the noun raises from within the clause to SpecCP. Hence, the structure in the examples with weak quantifiers preceded by a definite determiner is probably the same, where the 'quantifier + noun' has raised from inside the relative clause. Observe the structure in (138a), which derives from (138b) by raising the object *molts exercicis* to Spec CP:

⁹⁴ Even when mentioned, it is presented as a pure descriptive statement, which gets no account in the analyses. As an illustration, see Leonetti (1999: 812), who states for Spanish that "En el caso de los indefinidos *poco* y *mucho* hay que señalar que la aparición del artículo lleva emparejada la de algún modificador restrictivo, normalmente una oración de relativo; no son aceptables secuencias como **la poca paciencia* o **los muchos kilómetros*" ('In the case of indefinites *poco* 'few, little' and *mucho* 'many, much' it must be pointed out that the appearance of the article requires the appearance of a restrictive modifier, usually a relative clause; sequences such as **la poca paciencia* 'the little patience' or **los muchos kilómetros* 'the many kilometers' are not acceptable') (cf. *la poca paciencia que tiene* 'the little patience (s)he has', *los muchos kilómetros que recorrieron* 'the many kilometers they covered'). Exactly the same applies to Catalan, as we have seen.

- (138) a. [_{DP} els [_{CP} molts exercicis_i [_C que [_{IP} *pro* tinc *e_i* de deures]]]]
 b. [_{DP} els [_{CP} [_C que [_{IP} *pro* tinc molts exercicis de deures]]]]

If we are on the right track, this leaves us with a single case in which a quantifier preceded by a determiner could be analysed as an adjective in the structure: when the quantifier is a cardinal. If this is the case, it seems implausible to consider precisely cardinals as adjectives as opposed to other quantifiers given that cardinals are the quantifiers which have less in common with adjectives: contrary to quantifiers such as *molts* ('many') and *pocs* ('few'), most cardinals have no gender nor number inflection, do not admit the superlative suffix *-íssim* and are not gradable, and are hard to be considered as properties (recall Contreras (1992)'s distinction in footnote 39, who only considers as real predicates the quantifiers *many* and *few*, in contrast with cardinals). Hence, the natural conclusion seems to be that cardinals are not adjectives in the configuration 'D + cardinal + N', especially if the better candidates to be considered adjectives such as *many* and *few* are not allowed in that configuration.

In summary, in this section it has been argued that quantifiers preceded by a determiner are not adjectives. In the next section some arguments will be given in support of generating QP low in the structure.

3.2.3 QP is generated in a low position

There is no much evidence for a low basic position of the QP, but in this section some data will be provided that support that view.

We will look at data concerning Q modifiers and their position possibilities in the nominal string in §3.2.3.1. A more restricted piece of data on the position of Q with respect to the noun *thanks* in some languages will be dealt with in §3.2.3.2. Finally, data from several languages in which the postnominal position of quantifiers is attested and seems to be the basic one will be provided: Spanish, southern Italian dialects, Sardinian, Hausa, Bantu (see §3.2.3.3).

3.2.3.1 Approximative modifiers

Observe the following examples:

- (139) a. *aproximadament* deu dies de vacances
 approximately ten days of holidays
 b. deu dies de vacances *aproximadament*
- (140) a. *més o menys* vint passatgers del tren
 more or less twenty passengers of-the train
 b. vint passatgers del tren *més o menys*

The approximative modifiers *aproximadament* and *més o menys* can precede the cardinal as is usually the case—recall examples in (71) above—but also appear in the final position of the nominal with no special intonation and no difference in meaning: compare the *b* examples with the *a* examples.⁹⁵ This embedded position is not allowed by other modifiers such as *uns*, *cap a*, *vora*, *al voltant*: they are required to be adjacent to the element they modify probably because of morpho-phonological reasons (notice that *uns* is the indefinite article and *cap a*, *vora* and *al voltant de* are prepositional expressions, whereas *aproximadament* and *more or less* are adverbial expressions, which in general are more independent). It is important to note that the possibility that *aproximadament* and *més o menys* appear to the right of the noun cannot be attributed to the more autonomous character of adverbs as they cannot appear in any position:

- (141) a. *deu *aproximadament* dies de vacances
 b. *deu dies *aproximadament* de vacances
- (142) a. *vint *més o menys* passatgers del tren
 b. *vint passatgers *més o menys* del tren

One possible account would be to consider that in examples like (139b) and (140b) it is the whole sequence ‘cardinal + NP’ that moves up past the modifier, which would also account for the ungrammaticality of (141) and (142). However, in the ‘head-hypothesis’ the derivation would become rather complex and unjustified as the modifier should first move out from the

⁹⁵ Notice that a non-approximative modifier such as *exactament* ‘exactly’ behave the same way:

- (i) a. *exactament* quatre hores (‘exactly four hours’)
 b. quatre hores *exactament*

QP to some higher specifier position (let us say XP), and subsequently there would be a remnant movement of the QP including the NP past the modifier to a higher specifier position (let us say YP). So two extra functional projections above the whole nominal (XP and YP) would be needed, and there does not seem to be any motivation that can trigger those movements. The derivation is represented below (where Md = modifier):

- (143) a. $[_{QP} Md [Q' Q NP]]$
 b. $[_{XP} Md [X' X^0 [_{QP} Md [Q' Q NP]]]]$
 c. $[_{YP} [_{QP} Md [Q' Q NP]]] [Y' Y^0 [_{XP} Md [X' X^0 [_{QP} Md [Q' Q NP]]]]]$

(143a) is the initial structure. In step *b* the modifier *aproximadament* or *més o menys* moves to Spec XP and in step *c* there is remnant movement of the whole QP to Spec YP.

In the 'spec-hypothesis' this kind of derivation would be ruled out: the movement of the Q modifier outside QP would not be possible to start with, so no remnant movement of the whole embedded structure could take place afterwards. Observe (144):

- (144) a. $[_{FP} [_{QP} Md [Q' Q]] [F' F^0 NP]]$
 b. * $[_{XP} Md [X' X^0 [_{FP} [_{QP} Md [Q' Q]] [F' F^0 NP]]]]$
 c. * $[_{YP} [_{FP} [_{QP} Md [Q' Q]] [F' F^0 NP]]] [Y' Y^0 [_{XP} Md [X' X^0 [_{FP} [_{QP} Md [Q' Q]] [F' F^0 NP]]]]]$

(144a) is the initial structure. In step *b* the modifier *aproximadament* or *més o menys* moves to Spec XP yielding ungrammaticality because extraction from inside a specifier is not licensed, and in step *c* there is remnant movement of the whole FP (including the NP) to Spec YP.

The derivation suggested in this thesis is much simpler as there is no need to appeal to remnant movement, nor are extra unjustified functional projections or extra movements required, as the QP is generated in a low position and moves higher up through the nominal functional projections usually postulated in a nominal to deal with features valuation. As the complete structure has not yet been presented, the derivation will be simplified at this point as it appears in (145), where QP moves to a functional projection not yet identified that I will label ZP for the moment.

- (145) a. $[_{FP} DP/NP [F' F^0 [_{QP} Md [Q' Q^0]]]]$
 b. $[_{ZP} [_{QP} Md [Q' Q^0]]] [Z' Z [_{FP} DP/NP [F' F^0 [_{QP} Md [Q' Q^0]]]]]$
 c. $[_{ZP} [_{QP} Md [Q' Q^0]]] [Z' Z [_{FP} DP/NP [F' F^0 [_{QP} Md [Q' Q^0]]]]]$

Observe that in (145), with just one movement (of QP to Spec ZP), two possible orders can be derived depending on what is finally pronounced: in (145b), the whole moved QP is pronounced and the left copy is not, which generates the examples in (139a) and (140a), where the modifier precedes the quantifier; in (145c) the modifier is not pronounced in the moved QP, but it is pronounced in the copy of it, which generates the examples in (139b) and (140b), where the modifier follows the nominal. This latter option, in which part of the moved material is pronounced in the final position and part in its basic position, is more marked, so we expect it not to be as common as the other option, as is indeed the case: recall that it is not allowed with all modifiers but only with *aproximadament* and *més o menys*.

I conclude that in nominals where the Q modifiers follow the noun, as *aproximadament* and *més o menys* in *deu dies aproximadament* and *vint passatgers més o menys*, these Q modifiers are in their basic position and indicate where the QP has originated. In contrast, in nominals where they precede the Q as in *aproximadament deu dies* and *més o menys vint passatgers*, the Q modifiers appear in a derived position where the whole QP has moved.⁹⁶ The two possibilities are schematically represented in (146):

(146) a. *deu dies aproximadament*

[[~~aproximadament~~ deu] [FP [NP dies] [QP aproximadament ~~deu~~]]]

b. *aproximadament deu dies*

[[aproximadament deu] [FP [NP dies] [QP ~~aproximadament~~ ~~deu~~]]]

3.2.3.2 Quantifiers with the noun thanks

The expressions to thank equivalent to ‘many thanks!’ in some languages behave in an interesting way with respect to the position and the form of the quantifier that modifies the

⁹⁶ See Corver and Zwarts (2006: 32-33) for the same argument based on Romanian and Dutch data, where the two positions of the adverb *approximately* are also found. Observe the following examples in (i):

- (i) a. *aproximativ douăzeci de oameni* Romanian
 approximately twenty of men
 b. *douăzeci de oameni aproximativ*
 (ii) a. [*Ongeveer twintig mensen*] heeft hij geïnterviewd. Dutch
 approximately twenty people has he interviewed
 b. [*Twintig mensen ongeveer*] heeft hij geïnterviewd.

In the discontinuous pattern in (ib) and (iib) “the dependency relation between the two elements is captured directly if it is assumed that the numeral originates in a postnominal position”. According to these authors, in (ia) and (iia) the adverb is moved along with the displaced the numeral (i.e. pied piping) whereas in (ib) and (iib) the adverb is stranded.

noun *thanks* or equivalent. Observe the following Italian examples, where *grazie* is a feminine noun in the plural:

- (147) a. *Mille grazie!* (lit. thousand thanks)
 b. *Grazie mille!* (lit. thanks thousand)
- (148) a. *Tante grazie!* (lit. so many_{f,pl} thanks)
 b. *Grazie tante!* (lit. thanks so many_{f,pl})
 c. *Grazie tanto!* (lit. thanks so much_{m,sg})
 d. **Tanto grazie!* (lit. so much_{m,sg} thanks)
- (149) a. *Molte grazie!* (lit. many_{f,pl} thanks)
 b. *Grazie molte!* (lit. thanks many_{f,pl})
 c. *Grazie molto!* (lit. thanks much_{m,sg})
 d. **Molto grazie!* (lit. much_{m,sg} thanks)

Quantifiers always precede nouns in Italian but the examples above show that they have a special behaviour with the noun *grazie*: quantifiers can both precede or follow this particular noun. Moreover, at least for *mille* and *tante*, Italian dictionaries usually provide examples with them in postnominal position as in (147b, 148b)⁹⁷ and the corpus CWIC contains 14 instances of *grazie mille* versus only 1 instance of *mille grazie*, which seems to indicate that the final position is more natural than the prenominal position (see 147a, 148a) or at least equally natural.⁹⁸ I take this as an indication that this final position is the basic one.⁹⁹ Further evidence for this account comes from the possibility that the postnominal quantifier does not agree with the noun, in contrast with the prenominal position of the quantifier, where agreement always

⁹⁷ As an illustration, observe the examples containing *tante*, *mille*, *molte* provided at the entry *grazie* in a few Italian dictionaries:

(i) a. *GDIU*: g. tante!; g. mille!, molte g.
 b. *Lo Zingarelli*: tante g.!, mille g.; g. mille!
 c. *DLI*: grazie tanto!; grazie mille, grazie tante! (the latter with the indication that it is used ironically to refer to something that is obvious and expected)
 d. *GDGLI*: mille—!, molte—!
 e. *DIC*: ~ mille, tante (o mille) ~

⁹⁸ One Italian informant confirmed that to me: for her the most natural and neutral position with respect to *grazie* was the final one (see 147b, 148b); in contrast, the position at the beginning (see 147a, 148a) sounded to her more formal; according to her it was less common and was felt as more marked. But for another informant there was no contrast in formality between the two positions, and actually the most natural position for her was the prenominal one, especially in the case of *tante* (she reserved *grazie tante* for the ironical use mentioned in the previous note, see (ic)).

⁹⁹ Cf. *molte*, for which (149a) is clearly more common than (149b). However, the grammaticality of the *b* example alone supports this analysis as well.

takes place—see (148c) vs. (148d), and (149c) vs. (149d). The lack of agreement is possible if no movement has taken place whereas the preceding position implies movement and agreement is then obligatory.

English data also supports this line of reasoning, as shown by the examples in (150):

- (150) a. *Many* thanks!
 b. Thanks *a lot*!
 c. Thanks *a million*!
 d. Thanks *very much*!

In (150) are the common expressions to say thanks in English given by dictionaries and also attested in the British National Corpus. Notice that the quantificational expressions contained in these examples always precede ordinary nouns in English, but as shown by (150b-d) that is not the case with the noun *thanks*. The existence of examples such as (150b-d) provides further supporting evidence for a low basic position of the quantifiers.

The difference between *many* in (150a) and *a lot* or *a million* in (150b-c) would be that only the former can be taken as a kind of agreeing form since *thanks* is a plural noun and there is no preposition intervening (we could consider *many* to be an adjectival form). The expression *a lot* is not an agreeing form and it would require the preposition *of* if it preceded *thanks*. The cardinal *a million* would not require a preposition if preceding *thanks* and actually *a million thanks* is attested in BNC (there is one instance versus four instances of *Thanks a million*, so this example does not give much evidence in any sense, but the fact that (150c) is possible is relevant enough).

Finally, the well-formedness of (150d) is striking because the expression *very much* not only does not agree with *thanks* but moreover *much* would require a mass noun. However, despite that mismatch, it forms the most common thanking expression: the BNC contains 448 instances of *Thanks very much* versus 239 instances of *Many thanks* and 147 instances of *Thanks a lot*. I claim that (150d) can be explained in the same line as the Italian examples (148c) and (149c): non-agreeing forms are possible if no movement has taken place and this suggests that the final position is a basic one.

If we turn to French, a small piece of evidence is also found. The noun *merci* appears in two thanking expressions, as illustrated in (151):

- (151) a. *merci beaucoup* (lit. thanks a lot)
 b. *merci mille fois* (lit. thanks thousand times)

Again the quantifier *beaucoup*, which always precedes nouns in French, in this case follows the noun *merci*, and there is no alternative **beaucoup de merci*. (151a) can be taken as further evidence that *beaucoup* appears in its basic position when it modifies *merci*. As *merci* is a mass noun, the only way a cardinal can modify it is by using the noun *fois*, but the example in (151b) is not very useful in the reasoning we are following, so we leave it aside.

In contrast with Italian, English and French, languages such as Catalan and Spanish do not show any special behaviour of quantifiers in thanking expressions: quantifiers have to precede the noun *gràcies* or *gracias*, respectively, like with any other ordinary noun. Observe (152):

- (152) a. Cat: *Moltes gràcies!* / *Tantes gràcies!*¹⁰⁰ / *Mil gràcies!*
 many thanks so-many thanks thousand thanks
 b. Sp: ¡*Muchas gracias!* / ¡*Mil gracias!* / ¡*Un millón de gracias!*
 many thanks thousand thanks a million of thanks

However, it is worth noticing that even in Spanish one can hear examples such as ¡*Gracias mil!*, which is not possible in Catalan, as far as I am aware.

3.2.3.3 Postnominal position of quantifiers in some languages

As a final piece of evidence in favour of a low basic position of indefinite quantifiers in the nominal structure, let us look at some data from languages where the postnominal position of quantifiers is attested: this is the case of Spanish, southern Italian dialects, Sardinian, Romanian, Hausa and Bantu.

We will see that in some languages the postnominal position is the only one possible whilst in others both the prenominal position and the postnominal position are acceptable for quantifiers. In general, indefinite quantifiers such as *many*, *much* and *few*, *little* are more common following the noun (and in that sense they pattern with adjectives) than cardinals or the equivalent of *some*, which tend to precede the noun like articles or demonstratives.

¹⁰⁰ This ‘thanks’ expression is not commonly used as far as I am aware and Catalan dictionaries such as *DIEC2* and *GDLC* do not contain it, but it is given in the *DCVB* (entry *gràcia*) next to the very common *Gràcies!* and *Moltes gràcies!*

Whether only a subgroup of quantifiers appears postnominally or there is variation in the ability to precede or to follow the noun, it is interesting to see that in contrast with prenominal quantifiers, postnominal quantifiers usually show, or have the option to exhibit, a more ‘neutral’ or unmarked form with less overt inflection or less overt marking of certain properties as we just saw in §3.2.3.2 above. This can be taken as an indication that the prenominal position is derived by movement past the noun, and the postnominal position is the basic one: overt agreement is commonly connected with movement, for instance in the past participle agreement.

Next, data from all the languages mentioned will be presented and described.

a. Spanish

It is worth noticing that in Spanish, the indefinite quantifier *ninguno* (‘no, any’) can be used postnominally as well as prenominally (examples are from the *DRAE*, entry *ninguno*, *na*):

- (153) a. No había *ninguna* golondrina. (‘There was *no* swallow.’)
 b. No he tenido *ningún* problema. (‘I did not have *any* problem.’)
 c. No he tenido *problema ninguno*. (‘I did not have *any* problem.’)

The examples show a different masculine form of the quantifier depending on the position with respect to the noun: ‘*ningún* + N’ vs. ‘N + *ninguno*’ (see 153b and 153c, respectively). Although here it seems that the postnominal form has more overt inflection than the prenominal form contrary to what was suggested above, note that *ninguno* is actually the basic form of the quantifier (and so it is considered in the *DRAE*) and *ningún* is obtained by truncation, a phenomenon that can affect prenominal positions in Spanish (see the entry of *ninguno*, *-na* in the *DRAE*, which explicitly states this and recall data and discussion in §3.1.1.III above).

Interestingly, the indefinite quantifier *alguno* (‘some’) can be postnominal as well, but in that case it is equivalent to *ninguno* and, thus, behaves as a negative polarity item (it must appear in a negative sentence).¹⁰¹

¹⁰¹ The same interpretation is obtained if postnominal *alguno* is replaced by *ninguno*, whether it is pre- or postnominal:

- (154) a. No hay *razón alguna* para que hables así. ('There is *no reason* to talk that way.')
 b. *En modo alguno* podemos admitir eso. ('*In no way* can we admit that.')
 c. *En parte alguna* he visto cosa igual. ('*Nowhere* have I seen anything like it.')

The fact that *alguno* can be interpreted as a negative polarity item in postnominal position (but not before the noun) despite its not starting with *n-* like polarity items do in Spanish is reminiscent of other cases where the quantifier in such a position has no full inflection or is a more neutral form (less marked) than in the prenominal position. As the interpretation of postnominal *alguno* is the same as *ninguno*, a possible account which I would like to defend here is to identify the two elements in this position and consider that in the former case the indefinite quantifier simply lacks the overt negative marker *n-*: *alguno* would be a kind of defective form of *ninguno* when it appears in postnominal position, a form which is only possible if it has not moved up past the noun. That would explain why in prenominal position *alguno* is never a negative polarity item but an existential quantifier, and in that position an interpretation as 'ninguno' can only be obtained if the actual form *ninguno* is used.

b. Italian dialects

As noted by Renzi (1997: 166-167) with respect to the relative order between nouns and quantifiers, the order N+Q is found in southern Italian dialects. Unfortunately, the lack of studies leaves us without much information on the distribution of this pattern and whether its status is in comparison to the order Q+N. In Renzi's words:

The AIS (maps 985, 988, 1249) reveals the order 'NP + quantifier' (the reverse of what is found in most Romance varieties, save Rumanian) to be present in southern dialects, with a greater geographical extension for the type *tanti* 'many' than for *poco* 'little, few'.

-
- (i) a. No hay *ninguna razón* para que hables así. ('There is *no reason* for you to talk that way.')
 b. *En modo ninguno* podemos admitir eso. ('*In no way* can we admit that.')
 c. *En ninguna parte* he visto cosa igual. ('*Nowhere* have I seen anything like it.')

When the nominal containing *alguno* precedes the verb as in (154b,c), notice that the negative particle *no* does not appear as is the general behaviour of negative polarity items in Spanish (i.e. *ninguno* 'no, none', *nadie* 'no one', *nada* 'nothing', *nunca* 'never', etc.):

- (ii) a. **No** podemos admitir eso *para nada*.
 not can_{1pl} admit that for nothing
 'We cannot *in any way* admit that.'
 b. *Para nada* podemos admitir eso.
 for nothing can_{1pl} admit that
 '*In no way* can we admit that.'

The type ‘NP + “much”, “many”’ appears in a number of discontinuous areas of S. Abruzzo, Basilicata, Salento, Calabria and Sicily. It is most frequent in Pugliese: Bari [‘frutt as’sa] lit. ‘fruit much’. In Sardinian, Logodurese and Campidanese have [‘yente ‘meda] and [‘gente ‘meda] lit. ‘people much’ (Blasco Ferrer (1986: 104)), but the reverse order is possible.

The type ‘NP + “few”’ is less frequent, being sporadically attested in Calabria and Sicily and more frequently in Sardinia [tʃ a p’pani ‘βayʉ] lit. ‘he has bread little’ in Laconi (AIS map 385).

In the absence of detailed studies, it is difficult to say in either case whether the order ‘NP + quantifier’ is obligatory or (as in Rumanian) optional.

The area of ‘NP + “few”’ is more southern and less compact than that of ‘NP + “much”, “many”’, which is in turn more southern and less compact than the domain of ‘NP + poss. adj.’.

c. Sardinian:

As observed in Jones (1993: §2.1.2), indefinite quantifiers in Sardinian typically precede the noun. However, *meta* (‘much, many’) and *pacu* (‘few, little’) can also occur postnominally, “particularly as a means of emphasising the quantity”:

- (155) a. Amus bitu {meta / pacu} vinu.
 b. Amus bitu vinu {meta / pacu}.
 ‘We drank {much / little} wine.’

Note that whereas *pacu* has gender and number inflection (m.sg: *-u*, f.sg: *-a*, m.pl: *-os*, f.pl: *-as*), *meta* only inflects for number (it takes an *-s*). Interestingly, when *meta* and *pacu* follow a plural noun, there is some uncertainty regarding number agreement: some speakers require the plural form (as when these quantifiers appears prenominally) whilst others treat them as invariable in this position: *libros meta* or *libros metas* ‘many books’, *libros pacu* or *librus pacos* ‘few books’. We take this possibility of not agreeing as evidence for a basic low position, as it was argued in the case of expressions with *thanks*.¹⁰²

¹⁰² See another example taken from Mensching (2005: 98):

(i) Si totu custu frore benit a bonu amus *pira meda*.
 ‘If all these blossoms come out we have *many pears*.’ (lit. pears many)

Like *meta* and *pacu*, the negative quantifier *perunu* ‘no, any’ can precede or follow the noun, “the emphatic effect being rather stronger in the latter case”. This quantifier always takes a singular noun and agrees with it in gender and also serves to deny a contextual presupposition. Observe the examples below:

(156) a. No’appo iscrittu peruna littera.

b. No’appo iscrittu littera peruna.

‘I did not write any letter.’

As *peruna* is always singular, there is no contrast between an agreeing form (in the plural) preceding the noun and a possible non-agreeing form (in the singular) following the noun as was the case of *meta* and *pacu*.¹⁰³

More data on Sardinian dialects can be found in Manzini and Savoia (2005), but surprisingly no attention is paid to this phenomenon in the main text, where the linguistic phenomena are described. The following data are presented in Manzini and Savoia (2005) to illustrate agreement patterns, with no mention of the quantifier position with respect to the noun in the sequence at all. Here we reproduce data with quantifiers from the towns Ittiri and Ardauli, which contain an example of postnominal Q: in both it affects the equivalent of *many* in the feminine, but not the masculine—see (157b) and (158b). As there is no explanation of the data, we do not know whether that position is optional or obligatory nor whether it could apply to the equivalent of *few* as well. We also have no information about what happens in the singular. However, at least these examples serve as further evidence that postnominal quantifiers are attested in Sardinian.¹⁰⁴

Note that *pira* ‘pear’ is syntactically singular although in the English translation the object is plural: it is an instance of the so-called “collective” nouns in Sardinian. As observed by Jones (1993: 33), Sardinian uses “singular count nouns denoting fruit, vegetables, insects and small animals with plural or collective reference”. According to Mensching, these type of nouns “do not denote a substance but something like an indefinite number” and considers them as “object-mass nouns” in contrast to “substance-mass nouns”. For more details, see Mensching (2005: §4).

¹⁰³ I wonder if the fact that Jones describes the postnominal position as being more emphatic, stressing the quantifier, has to do with a syntactic focus, which would imply movement to a particular functional projection, or if it might just derive from the basic order of constituents in the sequence purely related to old and new information distribution. If the latter, it would not be a counterargument for a postnominal basic position for quantifiers, as far as I can see. If the former, it might be, or, in any case, this data would not tell us much about the basic position of the quantifier.

¹⁰⁴ Sardinian has three main dialects: Logudorese, Nuorese and Campidanese. The towns Ittiri and Ardauli both belong to the speaking area of Logudorese. In Manzini and Savoia (2005) data from other Sardinian towns are provided as well: Luras, where also Logudorese is spoken, and Siliqua, which belongs to the Campidanese speaking area. Some of the data from Luras and Siliqua contain quantifiers equivalent to *few*, *many* and the cardinal *three*, but there is no instance of postnominal quantifiers: the order in all examples is

(157) Ittiri

- | | | |
|----------------------------|----------------------|---|
| a. 'paya f'feminaza | 'poche donne' | [= 'few _f women _f '] |
| b. 'femina m'mɛða | 'donne molte' | [= lit. 'women _f many _f '] |
| c. 'payo bbuɫ'θɛddɔzɔ | 'pochi coltelli' | [='few _m knives _m '] |
| d. 'mɛða bbuɫ'θɛddɔzɔ | 'molti coltelli' | [='many _m knives _m '] |
| e. 'suni 'βayaza / 'mɛðaza | 'sono poche / molte' | [='(they) are few _f / many _f '] |
| f. 'suni 'mɛðaza / 'payɔzɔ | 'sono molti / pochi' | [='(they) are few _m / many _m '] |

(158) Ardauli

- | | | |
|-------------------------|----------------------|---|
| a. 'payu 'veminaza | 'poche donne' | [= 'few _f women _f '] |
| b. 'feminar 'mɛða | 'donne molte' | [= lit. 'women _f many _f '] |
| c. 'payu 'attɔzɔ | 'pochi gatti' | [='few _m cats _m '] |
| d. 'mɛðaza 'attɔzɔ | 'molti gatti' | [='many _m cats _m '] |
| e. 'funti 'βayu | 'sono poche' | [='(they) are few _f '] |
| f. 'funti 'mɛða / 'payu | 'sono molti / pochi' | [='(they) are few _m / many _m '] |

d. Romanian

In Romanian, the postnominal position of quantifiers is found as well, provided that the NP is not heavily modified, as illustrated below:

- (159) Am văzut copii mulți.
 have_{1sg} seen children many
 'I have seen many children.'

This example has been analysed by Cardinaletti and Giusti (2006), who follow Giusti (1994), as DP-movement to Spec QP. See their representation below (= their ex. 62b), which shows that *copii* 'children' has moved to Spec QP past *mulți* 'many':¹⁰⁵

- (160) Am văzut [_{QP}[_{DP} copii][_{Q'} mulți t_i]]

Q+N. However, note that this does not necessarily imply that only that order is possible in the Sardinian spoken in these towns. Unfortunately we have no further information.

¹⁰⁵ They apply the same analysis to universal quantifier (i = their example 62a):

(i) Am văzut pe [_{QP}[_{DP} copii-i] [_{Q'} to t_i]].
 have_{1sg} seen Acc children-the all

However, another account is also possible where no movement has taken place, which corresponds to the analysis defended in this thesis:

(161) Am văzut [DP ... [FP[NP copii] [F' F [QP mul tcedil i t]]]]

In this case, the DP object¹⁰⁶ contains an FP, with *copii* ‘children’ in its specifier and *mul tcedil i* ‘many’ in its complement position. The order ‘N Q’ obtained in the final sequence corresponds to the basic order in which elements have been inserted in the structure, so no movement has applied.

But from the sequence in (159) it is hard to decide which analysis is more adequate; however, for consistency with all the other data presented here and all the arguments in favour of a low basic position of quantifiers, I take (161) as the correct one.¹⁰⁷

e. Hausa

As described by Zimmermann (2008: 417), in Hausa¹⁰⁸ numerals and quantity expressions such as the equivalent of *much/many* and *little/few* occur in postnominal position. This author assimilates them to noun modifiers like APs and PPs given that they follow the N as well and can be in predicative position.¹⁰⁹ However, as defended in this thesis, the assimilation to noun

¹⁰⁶ Recall that I assume all arguments are DPs.

¹⁰⁷ However, Cardinaletti and Giusti (2006), following Giusti (1994), provide data from Hebrew that seem to favour their analysis given the inflection facts. Their representation is as follows (it corresponds to their example 61):

(i) a. [QP meat [DP yeladim]] / [QP meat [DP yeladot]] ohavim le-saxek.
 few boys few girls love to-play
 b. [QP[DP yeladim][Q meatim [DP t]]] / [QP[DP yeladot [Q meatot [DP t]]] ohavim le-saxek.
 boys few_{m.pl} girls few_{f.pl} love to-play

As shown in (i), Q is inflected in postnominal position but not in prenominal position, which seems to indicate that movement has taken place in the former instead of the latter. An alternative account in the lines of the analysis I am defending would be to claim that in prenominal position some kind of truncation has taken place, and that is why the quantifier seems uninflected (in the lines of the Spanish data in 3.2.3.3a above). It would be interesting to know whether there are other cases of truncation processes in prenominal position in Hebrew.

¹⁰⁸ Hausa is the largest of the Chadic languages, spoken mainly in northern Nigeria and southern Niger (see Zimmermann 2008 for more details).

¹⁰⁹ As an illustration, see an example from Newman (2000: 383), quoted by Zimmermann (2008: 429):

(i) maata-nsà *hudu*
 wives-his four
 ‘His wives are four.’

According to Zimmermann, the unmarked order in Hausa is the one represented in (ii):

(ii) N > DET/DEM/POSS > NUM > ADJ/REL

He claims that this order is obtained by N movement to D⁰, “which leaves adjectives and numerals stranded in their base position between D and N” (Zimmermann 2008: 432).

modifiers does not necessarily follow from these two properties.¹¹⁰ Zimmermann (2008: 428-429) provides the following examples (= his ex. 27):

- | | |
|--|--|
| <p>(162) a. i. <i>yaaròo daya</i>
 boy one
 ‘one boy’</p> <p>b. i. <i>lookàcìi màì yawàa</i>
 time possessor.sg quantity
 ‘much time’</p> <p>c. i. <i>wàhalàa dà yawàa</i>
 trouble with quantity
 ‘much trouble’ (Jaggar 2001: 367)</p> <p>d. i. <i>kudii kàdan</i>
 money little
 ‘little money’</p> | <p>ii. <i>dàalibai biyu / ukù</i>
 students two / three
 ‘two / three students’</p> <p>ii. <i>mutàanee màa-su yawàa</i>
 people possessor.pl quantity
 ‘many people’ (Jaggar 2001: 367)</p> <p>ii. <i>mutàanee dà yawàa</i>
 people with quantity
 ‘many people’ (Jaggar 2001: 367)</p> <p>ii. <i>birai kàdan</i>
 monkeys few
 ‘few monkeys’ (Newman 2000: 382)</p> |
|--|--|

Interestingly, in partitives the quantifier precedes the noun, which is often marked for definiteness. Zimmermann (2008: 437) states that there are two basic kinds of partitive constructions. In one Q and the definite NP (or actually DP) are linked by the prepositional expression *dàgà cikin* ‘from within, out of’ as in (163) (=Zimmermann’s ex. 49) whereas the other is a complex N-N, where the quantifier element has nominal traits and is linked to the following definite NP by means of the nominal linker *-n* as in (164) (=Zimmermann’s ex. 50).

¹¹⁰ Another property Zimmermann mentions as an argument to consider weak quantifiers and cardinals as noun modifiers is that they can be followed by “other adjectives”, which he illustrates again with an example from Newman (2000: 383):

(i) *mootoocii bìyār̃ jaajàayee*
 cars five red
 ‘five red cars’

Given the order of constituents in the nominal structure proposed by Zimmermann (see previous footnote), it is not clear how this can be an argument for Qs to be adjectives as quantifiers precede adjectives. A good argument for this would be if, instead, adjectives could be followed by quantifiers. However, that is apparently not possible: according to Jaggar (2001: 346), “Posthead adjectives follow any determiner, e.g. *yārinyār̃ nān kyākkāwā* ‘this beautiful girl’, ‘*yamātā ukù kyāwāwā* ‘three beautiful girls’” (lit. girl this beautiful, girls three beautiful, respectively).

Examples like (i) or those by Jaggar do question the postnominal Q hypothesis defended here. Without a context and more data it is difficult to know whether these adjectives are predicative and could be modifying the constituent ‘N+Q’, or they are really attributive adjectives, in which case the hypothesis that Q is postnominal would be harder to maintain (and would imply movement operations including remnant movement that would be difficult to justify).

- (163) a. *biyu dàgà cikin dàalibâ-n su-nàa màganàa dà Màrgii*
 two from within students-DEF 3pl-PROG speech with Margi
 ‘Two of the students speak Margi.’
 b. *mun ga dà yawàa dàgà cikin yâarâ-n*
 1pl.PERF see many from within children-DEF
 ‘We saw many of the children.’

- (164) a. *mun ga dà yawàa-n yâarâ-n*
 1pl.PERF see with quantity-LINK children-DEF
 ‘We saw many of the children.’
 b. *mun ga biyu-n yâarâ-n*
 1pl.PERF see two-LINK children-DEF
 ‘We saw two of the children.’

- c. *mafii yawàn mutàanee sun san shì.*
 more quantity-LINK people 3pl.PERF know him
 ‘Most people know him.’

(Jaggar 2001: 368)

The first type in (163) is reminiscent of the *among* construction: the partitive interpretation is obtained because of the presence of a lexical preposition which entails that meaning. The second type in (164) is the only instance of a true partitive in the terms of this thesis: there is no lexical preposition but rather the quantifier selects the definite noun phrase directly. The presence of the link and the reverse order Q+N (cf. examples in 162) can be taken as an indication that Q has moved over N as has been defended here for partitives (recall also similar arguments in predicate inversion configurations or double object constructions).

f. Bantu

As described in Zerbian and Krifka (2008: 389), adjectives and demonstratives canonically follow the noun in Bantu languages and the same holds for quantifiers, as shown in the following examples (taken from Zerbian and Krifka 2008: 385-8, ex. 1a, 6b and 6c):

- (165) a. *O-mú-límí ó-mú-néné ó-mú-kâddé ó-mû a-gênda.* [Ganda]
 PPF1-CL1-farmer PPF1-CL1-fat PPF1-CL1-old PPF1-CL1.one SC1-go
 ‘One fat, old farmer is going.’ (Katamba 2003: 108)

- b. Ku-na maji **m-engi** mtoni. [Swahili]
 SC17.have CL6-water CL6-many CL3.river- LOC
 ‘There is a lot of water in the river.’
- c. Di-kgomo tše **di-ntši** di fula nage-ng. [Nortnen Sotho]
 CL10-cow PPX10 CL10-many CL10 graze CL9.field-LOC
 ‘Many cows are grazing in the field.’

However, in some Bantu languages at least, quantifiers can also precede the noun, as shown by (166) (taken from Zerbian and Krifka 2008: 389, ex. 7a):

- (166) Tše **di-ntši** di-kgomo di fula nage-ng. [Nortnen Sotho]
 PPX10 CL10-many CL10-cow CL10 graze CL9.field-LOC
 ‘Many cows are grazing in the field.’

This example with a prenominal quantifier is reported to have an additional meaning of emphasis, but in other cases the different position does not imply any difference in the semantics (for example, with the universal quantifier equivalent to *all*).

As before, the postnominal position of quantifiers is taken to be the basic one, and the prenominal position is derived by movement of Q over N. The fact that the quantifier is always the last element of the nominal in the string supports that proposal.

Interestingly, the same element used to refer to smallness in size is also commonly used in Bantu languages to refer to smallness in quantity (the interpretation one over the other will depend on the context). Observe the example below (taken from Zerbian and Krifka 2008: 390, ex. 12):

- (167) Ba-na ba **ba-nnyane** ba raloka ka ntle. [Nortnen Sotho]
 CL2-child PPX2 CL2-small CL2 play PREP outside
 ‘{Small / Few} children are playing outside.’

Examples like (167) support the hypothesis that quantifiers are lexical, given the ambiguous interpretation of the adjective *small*: as a property describing the size of the children or as a quantifier indicating their number.

Also, in general, the fact that quantifiers in the languages described pattern with adjectives and other noun modifiers in appearing in postnominal position is further support for the lexical status of quantifiers (in contrast with definite determiners, which are functional and precede the noun).

3.2.4 Conclusions

In §3.2 we have reached the following conclusions: *a)* quantifiers are lexical and project into QPs which have selectional properties; *b)* the QP as a whole selects a DP in partitives (vs. a NP in quantitatives), and *c)* the QP is merged in a low position of the nominal structure, where its lexical selectional requirements are fulfilled. Under the assumption that it is the maximal projection QP that selects the noun argument, the only possible structure that can accommodate the two constituents and reflect their selectional relationship is a functional projection FP in the lines of the clausal DP hypothesis by Kayne (1994) and predicate inversion analysis by Den Dikken (1998, 2006), although from this it does not follow that QP is a predicate. FP is understood as a syntactic frame that offers a position to two lexical constituents which are those that are semantically related. In FP, the QP is merged in its complement position, and the DP or NP is merged in its specifier position. The partitive versus quantitative interpretation is obtained in this FP: it follows from the type of argument selected by the quantifier.

However, this FP does not give the right order of elements. Moreover, for the structure to become a nominal, more functional projections are needed, at least NumP and also DP on the top. Thus above FP more functional projections are merged that will participate in Case and ϕ -features valuation¹¹¹ by agreement operations within the nominal and which will offer a landing site for moved elements in connection with these operations. Put differently, once QP and DP or NP are merged into FP, the subsequent operations of movement and merge are triggered by grammatical reasons or, what is the same, by feature valuation requirements, and extend the nominal projection with more functional material.

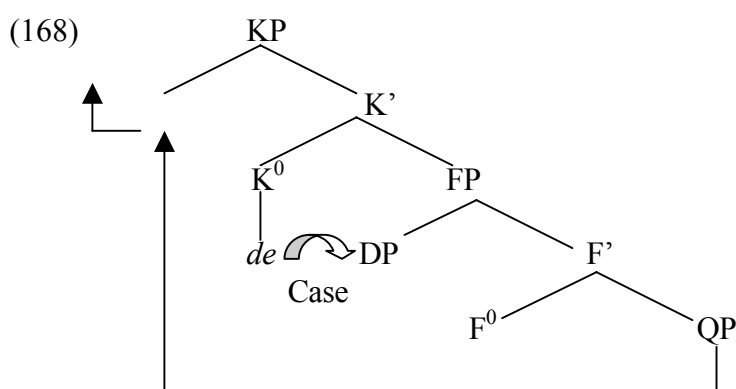
The following sections deal with the functional projections above FP in the nominal as well as with the derivation.

¹¹¹ Here *feature valuation* as proposed in Chomsky (2000, 2001) will be assumed. See §3.4 for more details.

3.3 The status of the prepositional element

3.3.1 *De* is a Case marker and heads a KP

It was concluded in Chapter 1 that the prepositional element *de/of* in partitives is not a lexical preposition nor does it contribute to the semantics of the construction but is a functional category that appears for licensing conditions which seem to be Case related (see the argumentation in §1.3). Under that assumption, the claim in this thesis is that *de/of* projects into a functional projection above FP which will be named KP (for Case Phrase) from now on. See the representation in (168):



This functional projection KP above FP makes a double contribution: it satisfies the Case requirements of the embedded DP, and it provides the landing site for the QP to raise in order to participate in feature valuation operations higher up in the structure. Notice that it is this QP movement to Spec KP which activates the head K^0 as a Case assigner (or makes it possible for K^0 to assign Case to the DP), so both contributions are connected.

This analysis is inspired by Kayne (1994), who proposes a similar account for predication examples, such as *two pictures of John's*.¹¹² Observe the following representation (note that our KP corresponds to Kayne's D/PP):

¹¹² It is important to note that later Kayne (1998) suggested a different analysis in the case of objects and proposed that *of* is merged outside the VP. Thus in a sentence like *John was admiring a picture of Mary*, the sequence *a picture of Mary* would not be a constituent. The motivation was to account for preposition stranding as in *Who was John admiring a picture of?* Interestingly, Kayne (2002: §1.1) extended this proposal to objects involving quantifiers such as *John has lots of money* and the French equivalent *Jean a beaucoup d'argent*. However, I do not consider this analysis as a possibility for Catalan as I find little motivation for it. To start with, Catalan has no preposition stranding. Moreover, as Kayne himself admits: "It might be that *a picture of John* and *lots of money* are sometimes constituents (when there's no extraction)" (Kayne 2002: §1.2, fn.5). And in any case this analysis applies only to objects, and nominals can appear in many other positions.

(169) [_{D/PP} [two pictures_i] [[_{D/P} of] [John ['s [_{e_i]]]].}

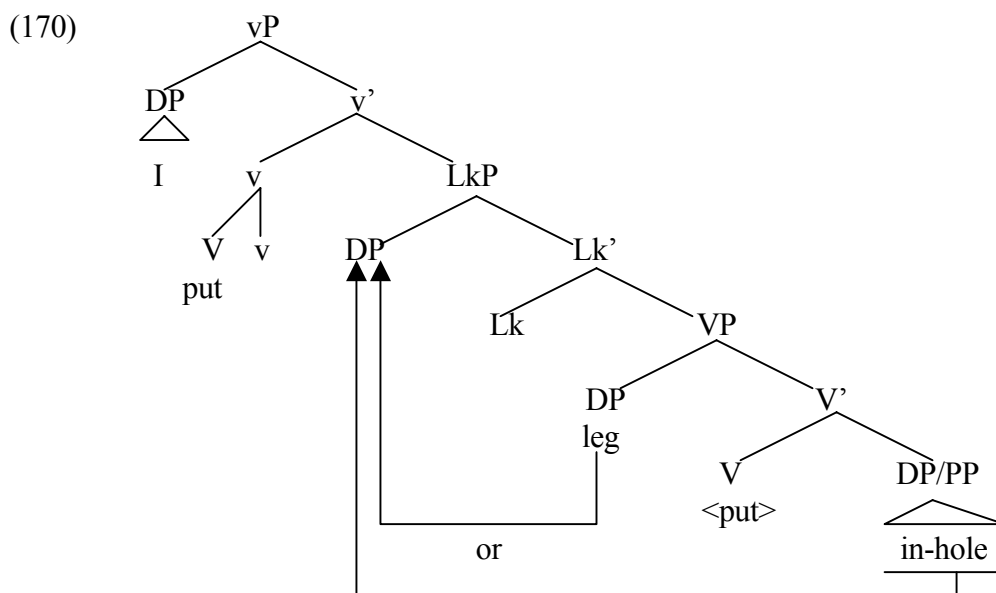
According to Kayne, the movement of *two pictures* to Spec D/PP and the insertion of *of* in D/P head turns the latter into a Case licenser for the possessor *John*. In this thesis Kayne's idea is simply extended to partitives, which have been attributed a parallel structure.¹¹³

More recently, a similar proposal based on Case terms is made as well by Baker and Collins (2006) to account for the link that appears in double object constructions in some languages such as Kinande (Niger-Congo), which in English would correspond to examples like *I gave a fruit to a woman* or *I put the leg in the hole*. These authors claim there is a LkP (Link Phrase) above VP and that one of the two arguments in the VP raises to SpecLkP.¹¹⁴ Interestingly, they propose that the head Lk is able to check the Case of the object that remains within VP, which explains why a link appears between the two objects in these languages and how Case is assigned to the second object. Below is their representation of the example equivalent to *I put the leg in the hole* (where the V *put* has moved to little *v*—the angle brackets indicate the copy left by the verb in its basic position):¹¹⁵

¹¹³ In fact, it is extended to indefinite nominals in general given the structure similarities claimed here between partitives and quantitatives.

¹¹⁴ According to Baker and Collins the head Lk bears an EPP feature (also called an OCC feature in more recent minimalist work), which is what triggers the movement of one of the two objects to Spec LkP. One could propose an EPP feature as well in our KP in order to justify the movement of QP to Spec KP in minimalist terms, but I leave this question open as it is basically a technical issue and it is not very explanatory. More interesting is Biskup (2007)'s proposal of a Phase Featuring principle that drives the presence of intermediate feature in successive cyclic movement and, therefore, avoids the problem of unjustified movement. It is worth pointing out at this point that in Kayne's and Den Dikken's work movement operations are not feature triggered.

¹¹⁵ Notice that V does not move through Lk. According to Baker and Collins (2006: §2): "This movement does not violate the Minimal Link Condition, presumably because Lk has no lexical category features that would be attracted by *v* (cf. Chomsky 1995)".



Although in our analysis of partitives *de/of* is not considered to be a link, the role it has very much resembles the one played by links in Baker and Collins' (2006) work. Calling these particles links or Case markers seems to be mainly a terminology issue here.

As for the double possibility of moving either the constituent in the Spec or in the complement of the lower projection, it must be noted that this is also found with FP containing a DP and a QP: although in partitive nominals the DP in Spec FP always remains in situ, and it is the QP which raises to Spec KP and further up (e.g. *two of my friends*), there are configurations in which the raising element is the DP instead, and then the QP remains in situ. That would be the case in predicational structures (e.g. *My friends are two*) as we saw in §3.2.2.5. Whether one constituent or the other raises depends on the features these two constituents bear and on the types of functional projections above FP. Before determining what these features are and how the derivation works, we will pay some attention to the Case contribution by KP headed by *de/of* in partitives but also in quantitatives and how this internal Case 'interacts' with the external Case assigned to the whole nominal.

3.3.2 Internal Case

In Chapter 1 we reached the conclusion that the prepositional element *de/of* appears systematically in partitives in a language like English or Catalan that have no Case morphology because the partitive construction contains an internal DP which like any DP requires being Case marked. The following explanation in terms of Case percolation was suggested: as there is no agreement between Q and the DP, the Case assigned to the whole

nominal cannot percolate to the embedded DP, and an overt Case marker (*de/of*) is necessary in front of it.

In effect, partitives systematically show a prepositional element in front of the embedded DP, or in languages with morphological Case the embedded DP has a particular Case which is usually different from the Case of the whole nominal. However, this account based on Case percolation via agreement must be revised as Catalan data provide evidence that the special Case marking of the embedded NP in quantitatives does not only depend on lack of agreement with the quantifier, contrary to what was suggested by Battye (1990) based on examples such as the following:

(171) a. beaucoup **d'**hommes

‘a lot of men’

b. un kilo **de** pommes

‘one kilo of apples’

(172) a. quelques hommes

‘some men’

b. deux hommes

‘two men’

According to Battye, in (171) the quantifiers are nominal, and, given the lack of agreement, the Case assigned to the whole nominal cannot percolate to embedded NP, which has to be marked with *de*. In contrast, in (172) the quantifiers are adjectival and agree with the following NP, so external Case percolates via agreement and no *de* appears.

This idea seems to be quite a general view (among others, see Kayne 1994 and especially Kayne 2002, 2005, Doetjes 1997, Gutiérrez 2008) and appears as a natural explanation as it describes a phenomenon parallel to the Case marking of N modifiers (*una taula metàl·lica*_{adj} vs. *una taula **de** metall*_{noun} ‘a metal table’). However, it needs to be revised because as it is stated, it makes predictions which are too strong and do not hold:

(173) a. It implies that when agreement takes place, only the external Case is assigned, so the internal Case is restricted to examples where there is no agreement.¹¹⁶

¹¹⁶ Although not explicitly stated, in Kayne's (1994) DP analysis the category D/PP is always projected no matter whether *de/of* is not overtly realised as is the case of adjectival predication (*a yellow car*), but in Doetjes (1997) and Gutiérrez (2008) the presence of *de* is exclusively related to the lack of agreement. As Doetjes (1997: 158) points out: “*de* is inserted as a last resort to provide the NP with case. DQs that do not agree with the NP they modify cannot be analysed as adjectives and get licensed by case. As they use the case which normally would license the NP, *de* has to be inserted” (where DQs=Degree Quantifiers). Gutiérrez (2008) only projects a KP headed by *de* whenever *de* is overtly realised, based on Spanish examples. Kayne (2002: §1.3) does not appeal to agreement but bases his account on a more abstract notion of accessibility of the N to the external Case or not, which has similar results: he suggests that *apples* in *three apples* is accessible to *v* and gets Case from it just like *three* whereas in *a pound of apples* it is not

- b. It excludes the possibility of coappearance of agreement and Case marker *de*.¹¹⁷

With respect to the first prediction in (173a), pronominalisation is a good test to show that internal Case is assigned even when agreement takes place. Let us take the French examples above. No matter *de* is overtly realised only when the quantifier is a nominal expression—recall (171) vs. (172)—, if we pronominalise the internal NP, then the clitic used is *ne* in all cases—see (174) and (175):

- (174) a. J'**en** connais beaucoup. (en = hommes)

I NE know a lot

- b. J'**en** ai acheté un kilo. (en = pommes)

I NE have bought one kilo.

- (175) a. J'**en** connais quelques-uns.¹¹⁸ (en = hommes)

I NE know some

- b. J'**en** connais deux. (en = hommes)

I NE know two

As claimed by Mateu and Rigau (2002: 234, end note 20): “Transitive verbs are associated with accusative case, not partitive case. Consequently, the clitic *ne* in (i-b) [= our example 176 below] is the genitive case that an overt or covert quantifier assigns to the N (see Rigau 1997)”.

“presumably as the result of a blocking effect induced by *a pound*”, and then *of* is merged for *apples* to get Case. Kayne (2005: §4.2) associates the presence of *de* with a nominal status of Q, and the lack of *de* with an adjectival status of Q: “*de* appears with *peu* because *peu* is nominal, and...*of* fails to appear with *few* and *little* because they are adjectival”. In conclusion, Kayne (2002, 2005), Doetjes and Gutiérrez’s accounts would need some refinement to be able to explain Catalan data, as will be made clear below.

¹¹⁷ Doetjes (1997: 157, fn. 5) notes, “The correlation [between the presence of *de* and the absence of agreement] is not absolute. There exist languages in which agreement and *de* are both present, and agreement-less languages that do without genitive case”. And reports about an exception of the first type that is found in Catalan: this phenomenon is described and illustrated in examples (192) and (193) below.

¹¹⁸ Recall that in French *quelque* needs to be marked for gender when it is not followed by an overt N, that is why *un(s)* or *une(s)* is added (see 3.1.1.III above):

(i) a. Est-ce que tu connais quelque_{sg} homme_{m.sg}/quelque_{sg} femme_{f.sg}/quelques_{pl} hommes_{m.pl}/quelques_{pl} femmes_{f.pl} ici?

b. Est-ce que tu connais quelqu’un_{m.sg}/quelqu’une_{f.sg}/quelques-uns_{m.pl}/quelques-unes_{f.pl} ici?

(176) a. La Maria llegeix (molts) llibres.

‘Mary reads (many) books.’

b. La Maria **en** llegeix (molts).

‘Mary reads many of them.’

Interestingly, if the whole nominal object (including the quantifier) is pronominalised in Catalan, then the definite clitic *el(s)* is used instead.¹¹⁹ Compare (177a) with (177b):

(177) a. [Molts/Alguns/Tres llibres]_i, ja **els**_i tinc.

‘{Many/Some/Three} (of the) books, I already have got **them**.’

b. [De llibres], aquí **en** tinc {molts/alguns/tres}. (en = llibres)

of books here NE have-got many some three

‘Books, here I’ve got {many/some/three}.’

Thus, in Catalan a different clitic is used whether the whole indefinite nominal in object position is pronominalised —see (177a) — or only part of it —see (177b).¹²⁰ I take each clitic (the definite clitic and the partitive/genitive clitic) as corresponding to a different Case: the external Case (accusative) and the internal Case (partitive/genitive),¹²¹ respectively.

It is worth noting here that there is a difference in interpretation whether one clitic or the other is used. Thus, if a definite objective clitic is used as *els* in (177a), the nominal is interpreted specifically: in this case it would refer to a set of books of a given list (for instance, a list of readings for a particular subject at the university). In contrast, if only part of the

¹¹⁹ It seems this possibility is excluded in French with indefinite nominals, as indicated by two native speakers, who found examples like (177a) in French ungrammatical. However, this does not weaken the argument about the internal Case.

¹²⁰ In the examples, the object is left-dislocated just to make clear what the pronoun refers to in each case.

¹²¹ Some authors consider that the Case assigned to the embedded NP in indefinite nominals is partitive (Brucart 1997), others that it is genitive (Mateu and Rigau 2002, Gutiérrez 2008). In partitives, variation is found as well: according to Brucart 1997 the Case assigned to the embedded DP is genitive whilst Gutiérrez 2008 considers it is partitive. I think there is no need to distinguish between partitive and genitive Case in languages, such as Catalan, where morphological Cases have been lost, especially when the same pronoun *en* and the same Case marker *de/of* are used both in indefinite nominals and also with the so-called genitive complements as well:

(i) a. He vist [totes les pel·lícules *de* Charlot].

have_{1sg} seen all the films of Charlot
‘I’ve seen all Charlie Chaplin’s films.’

b. (De Charlot,) *n*’he vist totes les pel·lícules.
of Charlot NE-have_{1sg} seen all the films

As it makes no difference for the analysis which Case in particular is assigned to the embedded NP or DP in indefinite nominals, I will identify it neither as partitive nor genitive but will keep it open as *partitive/genitive* or just use the general term *Case*.

nominal is pronominalised as in (177b), then the clitic *en* is the only possibility, and the preferred reading is a non-specific one (not partitive). No matter the semantic differences, what is relevant here is that the use of different clitics can be taken as an indication that two different Cases are assigned in indefinite nominals, one external and one internal. Whether the internal Case needs to be overtly marked or not is another question which is subject to different factors across languages.

English data containing pronouns provide a relevant piece of evidence as well for the assignment of internal Case in indefinite nominals. Observe the contrasts that obtain in subject position:

- (178) a. **They/We** two survived.
 b. The two of **them/us** survived.

In the *a* examples the pronoun has the nominative form *they* or *we* as it is in D whereas in the *b* examples it has the objective form *them* or *us* as it is lower in the nominal structure, and it is marked with the internal Case despite the whole nominal having nominative Case (given that is in subject position).¹²² I take the different order ‘Q + pronoun’ and the presence of the preposition *of* in (178b) as an indication that the QP has raised over the pronoun, which satisfies its Case requirement in situ: the pronoun gets Case from K^0 , an intermediate functional projection in the nominal (recall (168) above).¹²³

As for the second prediction (173b), it is true that the alternation between agreement and overt *de* (or equivalent) is the general phenomenon and it is attested in several languages, as pointed out in the literature. This is illustrated by the following Catalan data, which are examples parallel to those in French above:

¹²² Note that in other positions no contrasts arise as the pronoun has the objective form in the *a* examples as well, which corresponds to the Case the whole nominal gets: accusative (see ia) or oblique (see ib).

(i) a. I met **them** two. / They saw **us** two.

 b. I talked to **them** two. / They were interested in **us** two.

This lack of contrast does not undermine the argument; it only shows that in positions different from subject position the form of the pronoun is the same whether it gets the external Case or the internal Case, so they are not useful for distinguishing between the two Cases.

¹²³ For more details on the structure and the derivation of both orders, see §3.4.2.1 below.

(179) a. un_{m.sg} munt_{m.sg} de coses_{f.pl}
 ‘a lot of things’

b. moltes_{f.pl} coses_{f.pl}
 ‘many things’

(180) a. un_{m.sg} parell_{m.sg} de pel·lícules_{f.pl}
 ‘a couple of films’

b. dues_f pel·lícules_f
 ‘two films’

(181) a. una_{f.sg} dotzena_{f.sg} de llibres_{m.pl}
 ‘a dozen books’

b. dotze llibres_{m.pl}
 ‘twelve books’

Munt, *parell* and *dotzena* are nouns and do not agree with the following noun, so overt *de* is needed (despite *un munt* being a fixed expression) whereas *moltes*, *dues* and *dotze* are not nouns and agree with the following noun (although *dotze* does not have overt inflection), so overt *de* is not required (in fact, it is in principle rejected, though not always as will be illustrated below).

However, one first problem is that in some cases it is difficult to determine whether agreement has taken place or not given that there is no inflection in the quantifier: should we assume that no overt Case marker *de* or equivalent implies there is agreement and, in Battye’s terms, we are dealing with an adjectival quantifier? That seems to be the case, at least for numerals. Two types should be distinguished:

- (i) Simple quantifiers (by that I mean quantifiers that are a single word) that show no number (nor gender) inflection but have an invariable form: i.e. cardinals higher than two in Catalan such as *dotze* (‘twelve’) in the examples above and also indefinite quantifiers such as *massa* (‘too many’, ‘too much’), *prou* (‘enough’), etc. Examples: *cinc articles* (‘five articles’), *massa problemes* (‘too many problems’), *prou recursos* (‘enough resources’).
- (ii) Quantifier expressions that have a noun basis but have become defective in some way: the noun behaves as an invariable form in the quantifier expression although it can be inflected for number in other contexts. This is the case of English *hundred*, *thousand* or *million* in complex cardinals: for example, **three hundred** books, **five thousand** jobs or **two million** people (cf. *hundreds of books*, *thousands of jobs*, *millions of people*).

For all simple quantifiers we can easily assume that the absence of overt Case marker indicates that agreement has taken place, so they can be considered as agreeing quantifiers. If the quantifier does not show overt agreement, it is only for lexical reasons (it has no different forms for number nor gender inflection).

Interestingly, for cardinals in Catalan there is some evidence that agreement takes place even when they do not show overt endings since in complex cardinals all members of the quantifier expression that can be inflected do agree with the following noun no matter if there are members that remain invariable:

- (182) a. [QP dotze_{inv} mil_{inv} dos_{m,pl}-cents_{m,pl} dotze_{inv}]_{m,pl} diaris_{m,pl}
 'twelve thousand two hundred and twelve newspapers'
 b. [QP dotze_{inv} mil_{inv} dues_{f,pl}-centes_{f,pl} dotze_{inv}]_{f,pl} revistes_{f,pl}
 'twelve thousand two hundred and twelve journals'

Given that *two* and *hundred* in Catalan overtly agree with the following noun, I assume that *twelve* and *thousand* as part of the cardinal expression do as well. Thus, the whole quantifier expression agrees in gender and number as indicated in the examples: masculine and plural in (182a), feminine and plural in (182b).¹²⁴

The tendency in colloquial Catalan to inflect invariable indefinite quantifiers and add the plural ending *-s* to them so that they can agree with the following noun supports this view as well:

- (183) a. Ara no porto **prou** diners_{pl}. Colloquial Cat (cf. inv. *prou* in Standard Cat)
 now not carry_{1sg} enough money
 'I don't have enough money on me now.'
 b. Encara fa **masses** faltes_{pl}. Colloquial Cat (cf. inv. *massa* in Standard Cat)
 still makes too-many spelling-mistakes
 'He/She still makes too many spelling mistakes.'

¹²⁴ However, recall that Ionin and Matushansky (2004) and Matushansky (2008) have a different proposal, according to which cardinals are nouns and do not agree with the following noun (see §3.2.2.1 above).

These non-standard inflected forms are especially common in contexts where the noun is elliptical, probably as a way of recovering the number information that the non-overt noun or the clitic *en* cannot show:

- (184) a. De diners, no en porto **prous**. Colloquial Cat (cf. inv. *prou* in Standard Cat)
 b. De faltes, encara en fa **masses**. Colloquial Cat (cf. inv. *massa* in Standard Cat)

Quantifier expressions deserve some more attention given the complexity and variety of data. Observe the contrast in the following English examples:

- (185) a. a/one million people
 b. two million people
 c. millions **of** people

What determines the appearance of the Case marker *of* in the examples in (185) seems to be the ‘noun properties’ of the QP: the more it behaves as an ordinary noun, the more it requires an overt *of*. The expression *a million* (or the equivalent *one million*) can be taken as defective or grammaticalised as *million* does not show plural inflection when it is preceded by the cardinal *two* or higher (compare (185b) with **two millions people*). In contrast, in (185c) *millions* appears in the plural like an ordinary noun and, therefore, *of* is required. This syntactic difference is related to a semantic contrast: in the first two examples the QP is a number, a cardinal, whereas in the third example the interpretation of *millions* is vague; it means a very large amount, so it is more like an indefinite quantifier such as *many*.¹²⁵

If we turn to Catalan data, we see that the quantifier *milió* does not behave like *million* in English in that it always shows number inflection, but a similar contrast can still be found with respect to the realisation of an overt *de* or not. Observe the following examples, where (186a-c) correspond to the English ones above:

¹²⁵ However, *millions* in the plural does not always have a vague interpretation, as these examples taken from the British National Corpus illustrate:

- (i) a. Nobody will ever know exactly how many **millions** of young men and women were taken as slaves to the Americas during those terrible four hundred years. [HH3 207]
 b. ...wonder how many millions of logos are black and white and how many thousands of artists limit their use of colour purely to black and white, which is not in fact true of Joseph Kosuth. [CKY 344]

- (186) a. un milió **de** persones
 b. dos milions **de** persones
 c. milions **de** persones
 d. un milió dues-centes mil persones ('one million two hundred thousand people')
 e. dos milions dues-centes una persones ('two million two hundred and one people')

In (186a-c), as expected, an overt *de* is required, whether the interpretation is vague or not because *milió* behaves like an ordinary noun in that it is always inflected for number. It is only when *milió* is part of a complex cardinal expression like in (186d,e) that the Case marker *de* does not appear in Catalan (*de* is actually impossible: i.e. **un milió dues-centes mil de persones*, **dos milions dues-centes una de persones*). Notice that in the latter examples the first element in the QP agrees with *milió* in the masculine and that this noun is inflected in the plural when it is more than one million, but that the rest of the cardinal expression agrees with the noun *persones* (feminine and plural), with the exception of *una*, which lacks a plural form. See the representation below:

- (187) a. [QP un_{m.sg} milió_{m.sg} dues_{f.pl}-centes_{f.pl} mil_{inv}]_{f.pl} persones_{f.pl}
 b. [QP dos_{m.pl} milions_{m.pl} dues_{f.pl}-centes_{f.pl} una_{f.sg}]_{f.pl} persones_{f.pl}

We assume as before that the QP as a whole agrees with the noun *persones* in the feminine and plural, despite some elements of it not showing agreement (because they are lexically invariable such as *mil* or they are nouns such as *milió*), or show only partial agreement (because they can only inflect for gender such as *un_m -una_f*).

Thus although in Catalan *milió* is never invariable and in principle behaves like an ordinary noun with respect to Case requirements (cf. English), when it is contained in a complex cardinal expression, its noun properties somehow become opaque, and the Case marker *de* does not appear: the idea would be that syntax looks at the QP as a whole and considers cardinal numbers as agreeing forms in Catalan, which is the general behaviour cardinals display in this language. Interestingly, these data constitute another piece of evidence in favour of our analysis in which the QP as a full phrase relates to the internal NP or DP.

When the QP is a nominal phrase indicating a vague amount or a measure such as *two liters of water*, *one kilo of potatoes*, *a bottle of wine*, *a cup of coffee*, etc., then *of/de* is always obligatory in English (and also in Catalan) no matter if it is a more or less fixed expression as

in *a lot of problems* or *a bunch of kids* (cf. *lots of problems* or *bunches of kids*). This is expected as these QPs are headed by a noun, even if in some cases the noun has lost some of its original lexical properties or it has less semantic content than a common noun such as *table* or *happiness*. However, as noticed in Chapter 1, §1.3.1, the prepositional element does not appear in languages such as Swedish, Dutch or German.¹²⁶

- | | | |
|---------|---|---------|
| (188)a. | en kopp te
a cup tea
'a cup of tea' | Swedish |
| b. | een doos koekjes
a box cookies
'a box of cookies' | Dutch |
| c. | eine Dose Kekse
a box cookies
'a box of cookies' | German |

In this case, despite the prepositional element not being realised, it is clear that no agreement takes place between the QP and the NP, as shown by (188b,c): the noun corresponding to *box* is in the singular and the one corresponding to *cookies* is in the plural. These are not examples of fixed Q expressions as when the numeral within the QP is higher, the N appears in the plural: *eine Flasche Wasser* ('a bottle of water') but *zwei Flaschen Wasser* ('two bottles of water'). Notice that in the latter the noun in the QP is plural and the NP singular, a further illustration of lack of agreement. For some reason, which is beyond the scope of this thesis, in these languages there is no need of an overt *de/of* in contrast with Catalan and English in this type of nominal. I leave this question for future research.¹²⁷

To conclude, in absence of overt *de/of* in languages with no morphological Case, I assume that agreement takes place between the QP and the embedded NP when the QP contains a single element or a cardinal expression: the Q may not show overt agreement because of its lexical properties (it has just one form) or because of its being part of a complex

¹²⁶ These examples are repeated from Chapter 1, §1.3.1, for convenience: they correspond to the *b* examples from (90)-(92). The *a* examples there were their partitive counterparts, which do have an overt prepositional element (*av*, *van* or *von*).

¹²⁷ See Corver (1998) for an account in terms of measure N incorporation into the head where *of*—a nominal copula according to this author—is realised instead (a sketch of his analysis was given in §3.2.2.4 above).

cardinal, in which case it is the whole cardinal which agrees with the NP (not necessarily every subpart of it).

More interesting than the apparent lack of both agreement and Case marker is the possibility of their co-appearing: Catalan provides data which show that indefinite nominals can contain both agreement and the Case marker *de*, which is unexpected according to the general assumptions mentioned above in (173). In this language, even when agreement clearly takes place between the QP and the NP, *de* must be overt under certain conditions: when the NP contains an elliptical N followed by an AP or when N is pronominalised by *en* and the NP contains an AP.¹²⁸ Observe the nominals in brackets in (189), where *e* stands for the empty N head:¹²⁹

- (189) a. molts problemes_i antics i [alguns *e_i* **de** nous]
 many problems_{m,pl} old and some_{m,pl} of new_{m,pl}
 ‘many old problems and some new ones’
- b. De faldilles_i, en_i tinc [dues *e_i* **de** blanques].
 of skirts_{f,pl} NE have_{1sg} two_f of white_{f,pl}
 ‘Skirts, I have two white ones.’

Even if the quantifiers *alguns* and *dues* agree with the N (as indicated in the glosses), *de* must be overt in these nominals to mark the following AP when the N is not overt or it is pronominalised, which I take as evidence that Case is always assigned to the embedded NP. Notice that if the first N modifier in the string is a PP, no *de* appears no matter whether it is

¹²⁸ In French and Italian the prepositional element can appear in front of AP as well in elliptical nominals, but not as systematically as in Catalan as indicated by the brackets in the *a* examples. However, even in these languages *de/di* is obligatory in certain contexts: i.e. in absence of an overt quantifier (see the *b* examples).

(i) Fr. a. J'en ai vu *un* (**de**) bon. (Milner 1976: 151, quoted by Azoulay-Vicente 1985: 31)

 ‘I saw a good one.’

b. J'en ai ***(de)** beaux. (Azoulay-Vicente 1985: 238)

 ‘I have got good ones.’

(ii) It. a. Ne voglio *alcune* (**di**) belle. Cordin 1988: 638)

 ‘I want some beautiful ones.’

b. Ne voglio ***(di)** belle. (Cordin 1988: 638)

 ‘I want beautiful ones.’

For more data and discussion on the distribution of overt *de* in these languages, the reader is referred to Azoulay-Vicente (1985), Hulk and Verheugd (1994) and Tellier and Valois (1996) for French, and Cordin (1988) for Italian. See also Bernstein (1993a, 1993b) and Martí-Girbau (1994, 1995, 2000).

¹²⁹ With an overt N these nominals would be ungrammatical if *de* was realised:

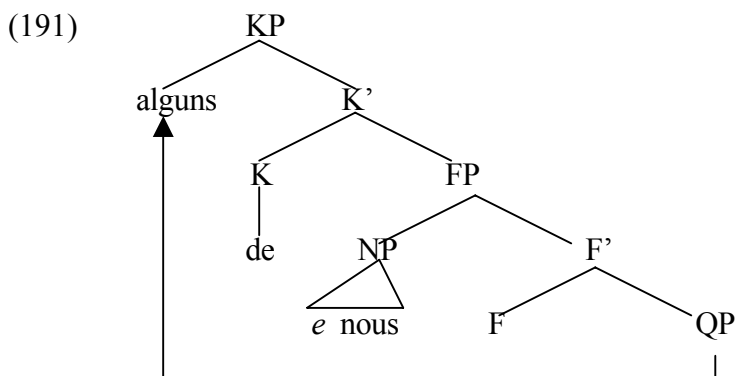
(i) a. alguns problemes (***de**) nous

b. Tinc dues faldilles (***de**) blanques.

followed by an AP or not (see 190a); or if there are two APs, only one *de* is realised before the first AP (see 190b):

- (190) a. De faldilles, en tinc dues (***de**) amb botons blanques.
 ‘Skirts, I have two white ones with bottoms.’
 b. De faldilles, en tinc dues **de** blanques molt elegants.
 ‘Skirts, I have two elegant white ones.’

From all these data I conclude that *de* is a Case marker for the whole NP that can only be realised in front of a nominal element (a [+N] element such as N or A, but not P) and that it is located above the NP in the nominal structure (*de* is only realised once and higher up, no matter the number of nominal modifiers within NP).¹³⁰ For example, the nominal in brackets in example (189a) would be represented as follows:



Note that (191) is like the partitive structure represented in (168) above but with an NP instead of a DP in Spec FP.

More striking are Catalan examples¹³¹ with an overt noun which show both agreement and overt *de*, a possibility which is restricted to weak quantifiers:¹³²

¹³⁰ See the argumentation and more data in Martí-Girbau (1994, 1995), although the analysis presented there is different from the one defended here.

¹³¹ It is worth noting that, like Catalan, Occitan has examples with agreeing Q + *de* + N (in addition to nominals of the form ‘agreeing Q + N’ and ‘non-agreeing Q + *de* + N’). See Wheeler (1991: 43; 1995: 226–7, end note 6) for a list of examples, though unfortunately this author only reports the existence of the three patterns and provides no further information on the type of Q, the distribution of *de* nor the semantic properties of these constructions in Occitan.

¹³² Cf. cardinals, which do not allow *de* to be realised if the noun is overt:

(i) a. Hem passat [cinc (***de**) dies] fora.
 have_{1pl} spent five of days away
 ‘We have been away for five days.’

- (192) a. Hi ha [bastant **de** trànsit], al centre.
 there has quite-a-lot of traffic in-the centre
 ‘There is quite a lot of traffic in the town centre.’
- b. Hem passat [bastants **de** dies] fora.
 have_{3pl} spent quite-a-lot of days away
 ‘We have been away for quite a long time.’
- c. Ara tinc [molt **de** temps lliure].
 now have_{1sg} much of time free
 ‘I have a lot of free time now.’
- d. La Maria té [molts **de** problemes].
 the Maria has many of problems
 ‘Maria has many problems.’

Examples like the ones above were very common in old Catalan and still are in Balearic Catalan, which is the most conservative Catalan dialect. In current central Catalan they coexist with the version with non-overt *de*, which seems to be generalising over the version with overt *de*, especially in cases where the agreement involves feminine inflection. Thus, even if examples in (192b) and (192d) show plural agreement of the quantifier through *de*, in general *de* is preferred when the quantifier has non-overt ϕ -features as in the unmarked masculine singular and becomes less acceptable in the feminine, especially in the plural. The following gradation is obtained (see 193a), which is illustrated in the examples below (193b,c,d):¹³³

- (193) a. masc. sg. $\geq$ masc. pl. $\gg$ fem. sg. $>$ fem. pl.¹³⁴

-
- b. La Maria té [un (***de**) problema].
 the Maria has one of problem
 ‘Maria has one problem.’

¹³³ Even in Majorcan there is a contrast depending on the inflection of the quantifier. Doetjes (1997: 157, fn. 5) points out that: “According to Joana Rosselló (p.c.) *de* is obligatory with a masculine noun and optional with a feminine or plural noun. In other words, if the quantifier bears agreement morphology, insertion of *de* is optional, when it does not, *de* is required, which shows that still the same tendency we find in other languages is present”. The conclusion Doetjes reaches is correct, but her description of Majorcan data is inaccurate with respect to the plural masculine, which actually patterns like the singular masculine and not with the feminine, as has been confirmed to me by Joana Rosselló (p.c.). This is so because in Majorcan there is a general phonological restriction against a sequence of three consonants, which are systematically reduced to a cluster of two by not pronouncing the consonant in the middle: for example, the cluster *-tsd* in the sequence ‘*molts de*’ reduces to *-td* (the plural *s* becomes silent), so it sounds just like the singular ‘*molt de*’.

¹³⁴ This gradation holds despite the distribution of *de* not being uniform among speakers: I tried to reflect this variation by indicating more than one possible judgment in the examples when relevant.

- b. Avui fa molt (de) fred.
'Today is very cold.'
- c. Avui fa molta (^{??}de) calor.
'Today is very hot'.
- d. He donat molts (^{✓/?}de) llibres i moltes (^{??/*}de) revistes a la biblioteca.
'I gave many books and many journals to the library'.

Catalan traditional grammars all note the possibility of most weak quantifiers being followed by *de* and describe this phenomenon as optional. However, it is only seemingly optional. A closer look at the data reveals that the counterpart with overt *de* has a more restricted distribution, as it allows only the non-specific reading. Compare (194) and (195):

- (194) a. Donaré molts llibres a la biblioteca. [ambiguous: specific / non-specific]
'I'll give many books to the library.'
- b. Molts llibres, els he donat a la biblioteca. [specific]
'Many books, I gave them to the library.'
- c. els molts llibres que he donat a la biblioteca [specific]
'the many books that I gave to the library'
- d. Molts llibres són a la biblioteca. [specific]
'Many books are in the library.'
- (195) a. Donaré molts **de** llibres a la biblioteca. [not ambiguous: non-specific]
- b. *Molts **de** llibres, els he donat a la biblioteca.
- c. *els molts **de** llibres que he donat a la biblioteca
- d. *Molts **de** llibres són a la biblioteca.

The form with no prepositional element behaves as expected for an indefinite: it can be ambiguous between a specific reading and a non-specific one—see (194a)—but has only a specific reading in certain contexts—see (194b,c,d). In contrast, the form with *de* has only the non-specific reading—see (195a)—and triggers ungrammaticality if the specific reading is forced—see (195b,c,d).

It is not clear why the presence of *de* would have such a semantic consequence, especially because it has been associated here to a Case marker.¹³⁵ However, it is worth mentioning here that the connection between the presence of *de* and a non-specific interpretation observed in these examples is not an isolated case in Catalan but is actually an instance of a general pattern in indefinite nominals in this language: quantitatives containing an overt *de*—the so-called pseudopartitives—are always non-specific in Catalan.¹³⁶

(196) a. He comprat una mica de pa.

‘I’ve bought a bit of bread.’

b. *Una mica de pa, l’he comprat.

a bit of bread it-have_{1sg} bought

c. *Una mica de pa era al calaix.

‘A bit of bread was in the drawer.’

Similar examples can be found with *una pila*, *un munt*, *un piló*, *un grapat*, *una colla*, *una multitud*, *una immensitat*, *una infinitat*, etc. (all the preceding quantifier expressions meaning ‘many, much’). Compare (197) with (198):

(197) a. He donat una pila de llibres a la biblioteca. [not ambiguous: non-specific]

‘I’ve given lots of books to the library.’

b. *Una pila de llibres, els he donat a la biblioteca.

a lot of books them have_{1sg} given to the library

¹³⁵ Interestingly, in Basque there is a similar phenomenon with the indefinite article: as noted by Etxeberria (2008: §2.2), the indefinite article can be followed by a nominal expression that carries genitive case inflection (*-en*) and “in such a case, the interpretation we get is ‘some x or other’”. He further states, “the use of the genitive makes the indefinite DP be interpreted always non-specifically”. In contrast, if the genitive case marker is not used, then the interpretation is ambiguous between specific and non-specific, as expected in an indefinite nominal. This is illustrated in (i):

(i) a. Ricardo-k zuhaitz-**en** bat ikusi du desertu-a-n. non-specific

Rigardo-ERG tree-**GEN** one-ABS see aux.sg desert-D-LOC

‘Ricardo has seen some tree or other in the desert.’

b. Ricardo-k zuhaitz bat ikusi du desertu-a-n. specific or non-specific

Rigardo-ERG tree one-ABS see aux.sg desert-D-LOC

‘Ricardo has seen a tree in the desert.’

¹³⁶ See Martí-Girbau (2001) for more data, although the analysis presented there is different: *de* is claimed to be a marker of unspecificity.

- (198) a. Aquí hi ha una pila de llibres i dues de revistes. [pila = object]
 ‘Here is a pile of books and two of journals.’
 b. Una pila de revistes ja la podem llençar: són revistes antigues.
 ‘One pile of journals can be thrown away: they are old journals.’

As expected, the specific interpretation is rejected when *una pila* is a Q expression as in (197b), whereas it is possible when *pila* refers to an object as in (198b), where the Q is just *una* and *pila* heads the embedded NP. Notice the different form of the resumptive pronouns as well: masculine plural *els* in (197b) as the only element with a referential index in the object nominal is *llibres* (the example is equivalent to (194b) above), but feminine singular *la* in (198b) as *pila* refers to an object and thus it has a referential index just like *llibres*.

It is not clear why Catalan quantitatives with overt *de* are always interpreted as non-specific. It might derive from properties of the QPs that appear in these quantitatives, although this would imply that the quantifier in the examples like *molts de llibres* has some different property from the quantifier in *molts llibres*. This needs more elaboration that I leave for future research. However, what matters to the argumentation here is that Catalan provides evidence that internal Case is always assigned and supports the idea that KP is always projected in indefinite nominals despite the fact that in some cases there is no overt Case marker.

Actually, to account for the variation of contexts where *de* is overt or not in Catalan, the simpler proposal is to claim that K^0 should be non-overt unless a Case marker is necessary for some reason and only then is *de* inserted. Economy plays a role here: merging an element is avoided if it is not required, so the merge of *de* is a last resort operation.¹³⁷ Let us recall the situations in which *de* is overt in Catalan and try to suggest what triggers its presence:

- (i) In partitives: *de* is always present because the embedded DP needs an overt Case marker.

¹³⁷ Even in a language like Spanish, with no partitive clitic *en* and no presence of preposition *de* in front of dislocated indefinite nominals, we find examples where *de* is realised that we take as evidence that partitive Case has been assigned by the agreeing quantifier. Observe the examples in (ii) (taken from Azoulay-Vicente 1989: 86), where the distance between Q and the noun forces *de* to be realised, which contrast with the examples in (i), in which the adjacency of Q+N makes *de* unnecessary and actually ungrammatical:

(i) a. ¿Cuánto (*de) café ha tomado? (‘How much coffee has (s)he had?’)
 b. ¡Qué poco (*de) café ha tomado! (‘How little coffee has (s)he had!’)
 (ii) a. ¿Cuánto ha tomado **de** café?
 b. ¡Qué poco ha tomado **de** café!

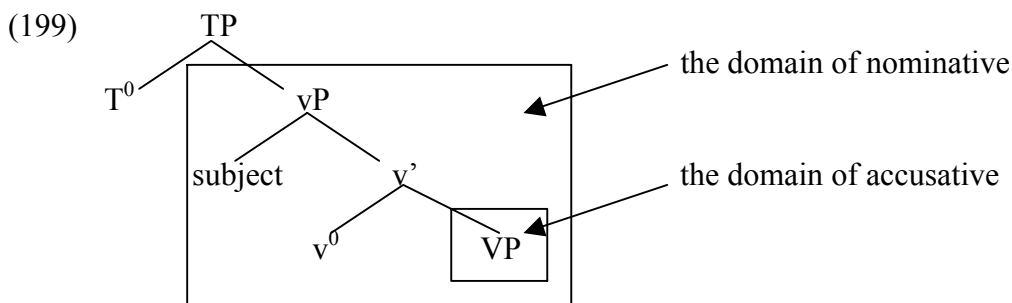
(ii) In quantitatives: *de* must be realised when no agreement takes places between the QP and the NP (in which case the QP displays noun properties)—that is the general case—but also in certain cases in which the QP does agree with NP: (a) whenever the NP is elliptical and there is an AP within the NP, *de* must appear between Q and the following AP; (b) moreover, most weak quantifiers allow *de* to appear as well in front of an overt N though the counterpart with no *de* is always possible and sometimes preferred (cf. cardinals, which reject *de* preceding an overt N).

In quantitatives, the presence of *de* patterns with the general behaviour in the language with respect to genitive Case markers: they only appear in a sequence N+N, which becomes ‘N *de* N’, but not in a sequence A+N (where A is an adjective or any agreeing form, as opposed to N, which is a non-agreeing form). In this latter case, *de* is only present in elliptical contexts, which can be seen as part of a general phenomenon of recovering information that is not accessible if the noun is non-overt, in the lines of analyses of noun ellipsis that rely on the presence of adjectival morphology as a licenser of the omitted noun (see Alexiadou, Haegeman and Stavrou (2007: 269ff) for references and discussion of data). As stated in Alexiadou, Haegeman and Stavrou (2007: 270): “The descriptive significance behind this is that the formal (phi-)features of the missing noun can be retrieved through the suffix on an adjective, a quantifier or a numeral”. Similarly, it can be considered that *de* instantiates one of the features of the noun when it is elliptical.

When the noun is overt and the QP is adjectival, it has been noted that the presence of *de* seems to trigger a non-specific reading: i.e. *molts de llibres* ‘many books’ (cf. *molts llibres*, with non-overt *de*, which is ambiguous). Although it is not clear what this association between overt *de* and non-specificity derives from in these examples, it has been observed that it holds in Catalan quantitative nominals in general (pseudopartitives contain *de* and are all non-specific: i.e. *un munt de llibres*).

To summarise the discussion so far, I claim that the structure of indefinite nominals always contains a KP above FP, which is responsible for the Case valuation of the embedded NP or DP. The internal Case is not always overtly marked, and there is a lot of variation across languages and also within the same language. In Catalan the internal Case marker is realised as *de* when required: always in partitives because its argument is a full DP, some times in quantitatives depending on different factors.

At this point a question arises: if the internal Case is always assigned, how does it interact with the external Case? I would like to suggest an account based on Case domains as proposed by Matushansky (2008). To illustrate it graphically, observe the representation of the domains that nominative and accusative Case have in a sentence according to this author:¹³⁸



Under this view, Matushansky claims that constituents have a bundle of Case features, the ones corresponding to the domains they are in. Whether the internal Case shows up or not in certain languages depends on the type of external Case, which can override the internal one if it is oblique but does not if it is nominative or accusative. Observe the following examples of Russian indefinite nominals with cardinals (from Matushansky 2008: §6):

- (200) a. tridcat' šagov direct case: genitive under cardinal
 thirty_{NOM/ACC} steps_{GEN}
 b. tridcat'ju šagami instrumental case: throughout
 thirty_{INSTR} steps_{INSTR}
 c. vtridcati šagax locative case: throughout
 in thirty_{LOC} steps_{LOC}

When the nominal has nominative or accusative case, the embedded NP is marked for genitive: that is the internal case assigned within an indefinite nominal in Russian headed by cardinals. But when the nominal has an oblique case such as instrumental or locative, then the embedded NP is marked for that case as well. According to Matushansky (2008: §6): “case is assigned to the totality of the xNP, and oblique cases, being more marked, are ordered before the direct cases in vocabulary insertion rules, and thus override them”.¹³⁹

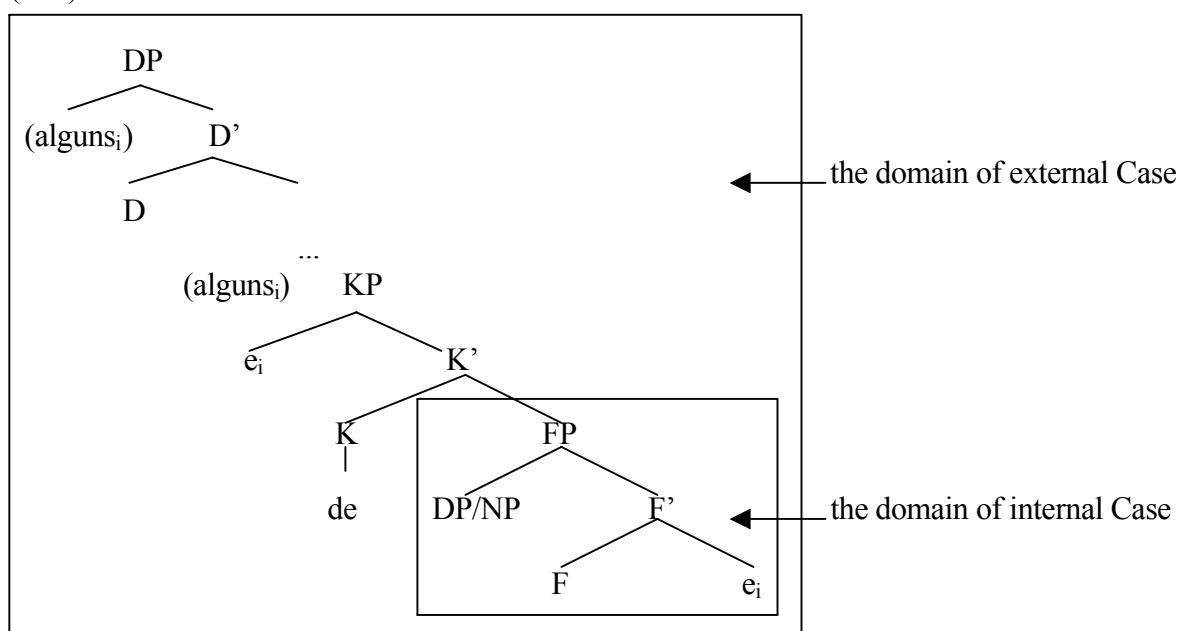
¹³⁸ Matushansky (2008: §3.3).

¹³⁹ However, see Bošković (2006) for an alternative proposal, according to which the case inflection showed by the noun in indefinite nominals with cardinals corresponds to the case that is actually assigned within the

How would Matushansky's proposal apply to our indefinite nominals? The idea is that the whole nominal gets the external Case and the embedded DP or NP gets the internal Case, so actually this embedded material is in the domain of two Cases: the external one and the internal one. This is a way of capturing the intuition that a nominal which is for example the object in a sentence gets accusative Case and that this is the Case of the whole nominal, no matter if within the nominal there are constituents that may get different Cases assigned depending on their requirements. So, for example, the whole nominal *la germana de la Berta* ('Berta's sister') has accusative Case in the sentence *Avui he vist la germana de la Berta* ('Today I saw Berta's sister.') despite the fact that within this nominal *la Berta* gets genitive Case (marked by *de*). I will not get into the issue of bundles of features here as I want to focus only on the general notion of Case domain as opposed to Case percolation down the structure via agreement.

The different Case domains in our indefinite nominals could be represented as follows:

(201)



The brackets in the quantifier *alguns* indicate that the QP does not always raise to Spec DP, but it does raise to some functional projection above KP. All possible movements and complete structure will be made clear in the next section when all functional projections are added to the tree and the derivation is described.

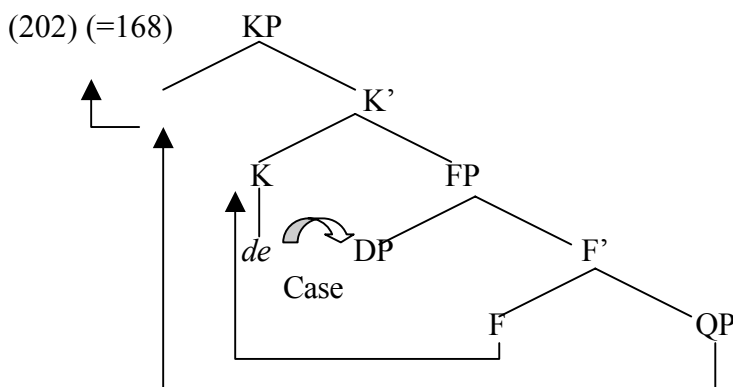
nominal (genitive or instrumental), and so it is independent of the external case assigned to the whole nominal.

3.4 Derivation

So far the projection FP, which hosts the QP and the DP in partitives (or NP in quantitatives), has been extended with a KP, which is headed by *de* and is responsible for the embedded DP (or NP) getting Case. The specifier of KP is also used as the target of movement for the QP, which raises further up. In this section the rest of functional projections above FP and KP will be added and justified, and the whole derivation to obtain partitives will be described (see §3.4.1). Some attention will be given to the derivation of examples where the QP is predicative as well (see §3.4.2). Finally, the structure and derivation of quantitatives will be dealt with (see §3.4.3).

3.4.1 Partitives structure and derivation

In this section the complete structure of partitives will be provided as well as a description of the features of their components and of the movements that take place to obtain the final sequence. Let us first recall the bit of structure that has been proposed for partitives thus far:



We start with an FP, which is a frame where the QP and the DP are base generated, and above this FP a KP is inserted in order to deal with the Case requirements of the embedded DP. Since Burzio's well-known generalisation, it is commonly assumed that a head cannot assign Case if its specifier is empty, so the movement of QP to Spec KP activates K^0 as a Case assigner.

It is important to note that this QP movement from complement position in FP to the Spec of the projection KP above is rendered possible by the movement of F to K (as represented in the structure above with the arrows), which extends the phase and so ensures

that the DP position in Spec FP and the QP's landing site in Spec KP are equidistant from the QP's extraction site.¹⁴⁰

We assumed that these movements benefit the DP in that they allow its Case feature to be valued by *de*, but in principle they are not triggered by any feature that needs to be valued by the elements that undergo movement: as a solution an EPP feature in K that requires its specifier to be filled could be proposed, but that would not be very explanatory (not even under Burzio's generalisation). Moreover, it should be stated that the category to be moved to Spec KP should be the QP, but it is difficult to think of a suitable feature for it. I leave this question about what triggers QP to move to Spec KP open, since at this point I do not see any convincing explanation for it.¹⁴¹

Apart from Case, in the basic structure we have presented so far there are ϕ -features, both from the embedded DP and the QP, that come into play as well. What is the role of these features in the derivation? Before going into details, let us first establish how agreement works in general. Following Chomsky (2000, 2001), I assume that there is a distinction between valued features and unvalued features¹⁴² and that Agree is an operation which consists in feature valuation: in the derivation, a probe with an unvalued feature establishes a relation with the closest goal with a matching feature under its c-command domain, and by Agree, the unvalued feature of the probe gets valued with the same value of the goal. It is worth mentioning that in this system, Agree does not trigger movement by itself; it is only when the probe bears the EPP (or OCC) property that the goal is required to move up to the probe projection.

I depart from Chomsky's proposal with respect to feature deletion once valuation has taken place and assume that Agree is a *sharing feature* operation in line with Frampton and

¹⁴⁰ Recall Den Dikken (2006) for a similar proposal in predication structures, where the relator head R moves to the linker head above to make predicate inversion compatible with locality, although for this author *de* is a copula, not a Case marker:

(i) a. $[_{FP} [PREDICATE]_j [_{F'} LINKER + RELATOR_i [_{RP} [_{XP} SUBJECT] [_{R'} t_i t_j]]]]$. [(ia)= (103) above]
 b. $[_{NumP} a [_{FP} [_{YP} jewell]_j [_{R'} [_{L+R_i} of] [_{RP} [_{XP} a village] [_{R'} t_i t_j]]]]]$ [(ib)= (104a) above]

¹⁴¹ Recall footnote 114 above.

¹⁴² Chomsky derives the distinction between valued and unvalued features from the distinction between interpretable and uninterpretable features: he claims that unvalued features are always uninterpretable whereas valued features are interpretable. However, see Pesetsky and Torrego (2007), who propose a disassociation between the two properties $[\pm valued]$ and $[\pm interpretable]$ and claim the existence of features that are $[-valued]$ but $[+interpretable]$ (e.g. tense on T) or $[+valued]$ but $[-interpretable]$ (e.g. tense on finite verbs); see also Piccolo (2005), who applies Pesetsky and Torrego's proposal (from their unpublished 2004 ms.) to nominals and claims that number and gender features are $[-valued]$ but $[+interpretable]$ in the corresponding functional projections in the nominal whereas they are $[+valued]$ and $[-interpretable]$ in nouns. As what is relevant for our argument is the $[\pm valued]$ property of features, I will not go into the issue of the $[\pm interpretable]$ property here.

Gutmann (2000, 2006) and Pesetsky and Torrego (2007) (see Danon 2010 for the arguments in favour of a feature sharing approach especially within the nominal domain). According to this view, features are not deleted after Agree but remain present on all nodes on which features are shared (interface conditions will determine where each feature is to be interpreted). This solves the problem of Chomsky's requirement for the DP to be ϕ -complete to be able to agree with T (under a deletion approach no node in the DP structure would be ϕ -complete as no element enters the derivation with a full set of valued ϕ -features and those valued through Agree are deleted).

Thus, some elements enter the derivation with valued features, others with unvalued features, and yet others with a mixture of the two types: i.e. nouns have valued ϕ -features but unvalued Case feature; elements such as adjectives that agree with nouns have unvalued ϕ -features; and functional heads have unvalued features as well. It is also worth pointing out that gender, as an intrinsic property of nouns, is a feature already present in their lexical entry whereas number, being non-intrinsic, is not (non-intrinsic or optional features are those that can vary). It is assumed that nouns are given a number value before they enter the derivation, when they are taken from the lexicon:¹⁴³ the number value is chosen via the Numeration (see, for example, Pesetsky and Torrego (2007); Alexiadou, Haegeman and Stavrou (2007)).

In this system, Case works in a different way with respect to other features: it is assigned by certain elements with that capacity (T, v , P are Case assigners), and nouns (or nominals) have an unvalued Case feature which is valued once they enter into an Agree relation with a Case assigner.

3.4.1.1 FP and the features of DP and QP

After this brief outline on agreement and feature valuation operations, let us now see how the derivation of partitives develops with respect to the features of the DP and the QP once they are merged into FP. The DP enters the derivation with valued gender and number features¹⁴⁴ and an unvalued Case feature, which gets valued by K as described above. As for the QP, we need to distinguish between two types: **non-agreeing QPs** (the ones with nominal properties,

¹⁴³ An exception is the *pluralia tantum*, which would have their number value as well as their gender determined in the lexicon as both are intrinsic in this type of noun.

¹⁴⁴ As a DP projection, it contains a NumP and I assume also a Gender projection with valued features thanks to Agree with N in NP:

(i) [_{DP} [_{NumP} [_{GenderP} [_{NP} N]]]]

Num⁰ and Gender⁰ have unvalued features and probe N⁰ to get them valued.

Note that apart from *GenderP* the gender projection has been as well labelled as nP or WMP (Word Marker Phrase) in the literature (see Alexiadou, Haegeman and Stavrou (2007) for the relevant references and a discussion on the evidence for gender to be a functional head).

which are expressions containing a noun such as *la majoria* ‘the majority’, *la meitat* ‘half’, *una part* ‘one part’ or *dos terços* ‘two thirds’) and **agreeing QPs** (those with adjectival properties in the sense that they have gender and number inflection such as *un-una* ‘one_m-one_f’, *molts-moltes* ‘many_{m,pl}-many_{f,pl}’, *algun-alguna-alguns-algunes* ‘some_{m,sg}-some_{f,sg}-some_{m,pl}-some_{f,pl}’).

As corresponds to any noun projection, nominal QPs enter the derivation with valued gender and number features (they are usually NumPs—e.g. *una part*, *dos terços*—though in some cases they can be a DP as in *la majoria* or *la meitat*) but unvalued Case feature, which will be valued by the external Case assigned to the whole partitive nominal (as will be seen later).

In contrast, agreeing QPs enter the derivation with an unvalued gender feature but crucially with a valued number feature given that they agree with the DP only in gender, not in number. The lack of number agreement between the embedded DP and the adjectival QP in partitives can seem striking at first sight: as an agreeing form, we would expect the QP (like adjectives, for example) to have unvalued number and gender features and agree with the DP in both number and gender. That is actually what happens with the quantitative QP, as will be seen later. However, unlike quantitatives, partitives entail a notion of partition, with the lack of number agreement being an essential part of it.

My suggestion is that the lack of number agreement derives from the selectional properties of QP: if a QP selects a DP, a partitive interpretation is obtained, which implies that the QP extracts (or denotes) a subset or a portion of the set of elements or of the whole referred to by the DP, respectively (recall the two types of partitives: set partitives and entity partitives). It is worth mentioning that the lack of agreement is actually visible only in set partitives (with an adjectival QP), where the DP is required to be plural because of the partitive meaning and the QP can be singular (if the subset contains a single element) or plural (if the subset contains more than one element): *un dels llibres* vs. *molts dels llibres* (‘one_{sg} of the books_{pl}’ vs. ‘many_{pl} of the books_{pl}’).

Thus, the quantifiers of set partitives need to enter the derivation with a valued number feature, [+Plural] or [–Plural], as is the case of nouns. It is important to note that this value is not specified in the lexicon but is assigned just before entering the syntax domain, once the lexical element has been chosen for the numeration, as it has been assumed for number in nouns. This is so because number is not an intrinsic property in contrast with gender; thus, only the latter is specified in the lexical entries of nouns, as mentioned above.

Interestingly, the need of QPs in set partitives to have their own number value is reflected in the form the quantifier takes in Catalan: recall that, in set partitives, quantifiers have to have overt number inflection; their number must be morphologically specified. This property was described in Chapter 1 but no justification was given at that point. Now we assert that it is related to the fact that QPs in partitives have their number specified in the numeration, and for that to be possible in Catalan, the quantifier needs overt number inflection, or what it is the same, the quantifier needs to have different forms for each number value. Now we are in a position to explain the following contrast (already noted in Chapter 1, §1.2.1):

- (203) a. *bastants dels meus amics*
 b. **força dels meus amics*
 c. ?*forces dels meus amics*
 ‘quite a lot of my friends’

Despite *bastant* and *força* being synonyms in Catalan (they both mean ‘quite a lot’), they differ in that *bastant* has number inflection (Ø for the singular, *-s* for the plural: *bastant* – *bastants*), but *força* does not; it is an invariable form which can combine both with a singular noun (a mass noun as in *força sucre* ‘quite a lot of sugar’) and a plural noun (as in *força amics* ‘quite a lot of friends’). Hence, only quantifiers that can be specified for number are licensed in a partitive nominal: i.e. *bastant*-*bastants* but not *força* (as the latter cannot tell us whether it is singular or plural). Interestingly, the addition of plural number inflection to *força* improves the result—as shown in (203c)—though *forces* is a form only used in colloquial Catalan (banned by prescriptive grammars in standard Catalan).

One may wonder why *cap* ‘no, none’, being invariable like *força*, is then licensed in the partitive construction. The reason is that, in contrast with *força*, the quantifier *cap* is marked for number although it has only one form: it is always singular (*cap llibre* ‘no book’ vs. **cap llibres* ‘no books’). Thus, even if not visible, *cap* has singular number inflection (recall that singular in Catalan corresponds to a zero affix Ø).

However, as mentioned before, in set partitives there is gender agreement between the QP and the DP: i.e. {*dos/molts*} *dels nois* (two_m/many_{m,pl} of the_{m,pl} guys_{m,pl}), {*dues/moltes*} *de les noies* (two_f/many_{f,pl} of the_{f,pl} girls_{f,pl}). It was suggested earlier that this gender agreement derives as well from the partitive semantics and can be dealt with in selectional terms. But how does this gender agreement actually take place in the structure? I will assume that it is a

case of *Concord* between the DP and the QP, which should be distinguished from *Agree* relations.

A distinction between *Agree* and *Concord* is proposed by Uriagereka (2006) and Henderson (2006).¹⁴⁵ As pointed out by Henderson (2006: 61): “Traditionally, the term ‘concord’ has referred simply to agreement within the nominal domain, while the term ‘agreement’ has referred to agreement within the verbal domain, or as a general term”. However, this author takes “the position (also taken in Uriagereka 2004) that concord and agreement involve two fundamentally different relations in grammar. Specifically, while the relation *Agree* is a context-sensitive relation that can take place at a distance and requires the notion of c-command, the relation *Concord* is a context-free relation that can only hold in a strictly local fashion. Thus, while *Agree* involves a probe-goal relation and a subsequent feature valuation procedure, *Concord* does not involve either of those things”.

Both authors claim that, unlike *Agree*, *Concord* is totally local and has a ‘freezing effect’ on the element engaged in the checking process, which seems to derive from this strict locality requirement. However, they do not specify exactly what this local configuration should be, nor do they provide a general characterisation of *Concord* (the key to identify *Concord* seems to be the freezing effect, but Uriagereka associates it with lack of Person specification in contexts of Case assignment whereas Henderson relates *Concord* to exact agreement morphology in Bantu contexts of multiple agreement in compound tenses structures but also within nominals). Interestingly, Henderson (2006: 64, end note 1) says that “I have called the relation “concord” on analogy with what I believe to be a similar relation that exists between nouns and adjectives that modify them in the nominal domain” and admits that “the structural nature of concord remains unclear, though selection seems to me the most promising. For the purposes of this paper, I will simply take adjacency to be the expression of this relation”.

So, on analogy with adjective modification within nominals and given that, in contrast with number, a gender projection would not be justified in the partitive structure,¹⁴⁶ I will suggest that gender agreement between the QP and the DP in partitives takes place locally in the FP where the selectional relation is encoded. No special configuration will be needed other

¹⁴⁵ Henderson (2006) quotes from an earlier version of Uriagereka (2006): Ms. dated from 2004.

¹⁴⁶ Gender is uninterpretable and only justified as a projection that selects an NP in order to indicate its categorial properties (see Picallo 2005, 2007, among others), so in the partitive construction I assume a GenderP only within the DP. In contrast, number is interpretable, and its syntactic and semantic role in

than just the requirement of being within the same projection FP and having a selectional relation. The QP enters the derivation with an unvalued gender feature which seeks a close constituent with a valued gender feature: the embedded DP in Spec FP. By Concord, the value of the gender feature of the DP will be copied into the QP, and both constituents will share a valued gender feature.

An important difference with respect to Uriagereka and Henderson is that Concord has no freezing effect here and the QP, once its gender feature is valued, is free to move up in the structure to Spec KP and further up. One might claim that the freezing effect is not a general consequence entailed by Concord but a possible effect in certain configurations only, perhaps restricted to the verbal domain (which is precisely the domain studied by Uriagereka and Henderson, in which they notice the mentioned freezing effect). Henderson provides an example of a nominal which contains Agree as well as Concord operations¹⁴⁷ as an illustration that the two types of relations can exist in both the verbal and the nominal domain, but he does not specify whether Concord has the same freezing effect within nominals, forcing adjacency and thus precluding inversion operations. It would be interesting to check whether that is indeed the case.¹⁴⁸

Finally, I assume that, apart from ϕ -features, adjectival QPs also have an unvalued Case feature. This follows naturally from the characterisation of adjectives as [+N] elements like nouns (as opposed to verbs and prepositions, which are [−N]), so it is assumed that adjectival QPs also have Case requirements and enter the derivation with an unvalued Cased feature, just like the nominal QPs do (see Kayne 2002: §1.4, who suggests that all lexical elements in a nominal get Case: nouns but also adjectives and determiners).

partitives is not questioned, so a NumP projection is needed in the partitive construction (one apart from the NumP within the embedded DP), as has been proposed.

¹⁴⁷ The example is:

(i) U-le mti *m*-zuri *m*-moja **u**-li-anguka [Swahili]
 3DEM 3tree 3AGR-good 3AGR-one 3AGR-PAST-fall
 ‘That one good tree fell.’

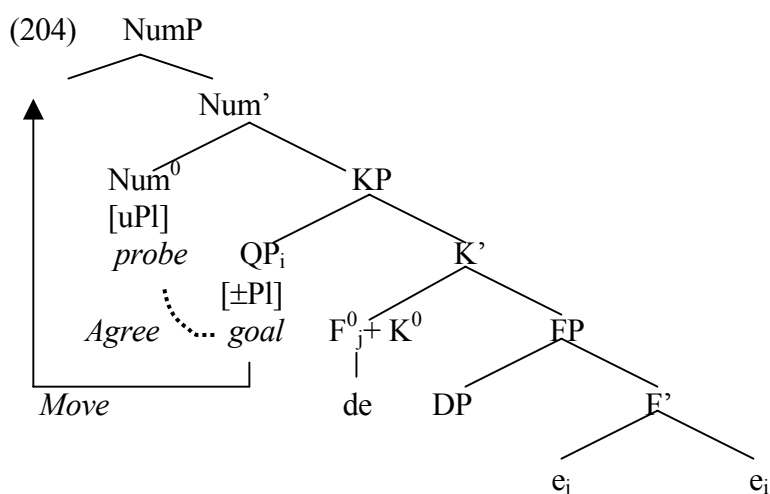
(i)—which corresponds to his example (4)—illustrates that “While items such as demonstratives show agreement morphological[ly] identical to that used between a subject and verb, adjectives display different morphology, identical to the nominal prefix of the noun” (Henderson 2006: 61). In other words, the former is a case of Agree whereas the latter is a case of Concord.

¹⁴⁸ I thank Mark Baker (p.c.) for indicating to me that as far as he knows there is no predicate inversion within nominals in Swahili, but that this is probably due to the existence of a very low number of adjectives in this language and the fact that these few adjectives are not of the type usually involved in predicate inversion.

3.4.1.2 NumberP and the number feature

Given that there is no number agreement between the QP and the DP in partitives (no matter whether the QP is nominal or adjectival) and that the partitive nominal needs to have a number specification, which is morphologically realised in the QP as showed by the data, a functional projection NumP is needed in the structure above KP.

Num⁰ is merged in the structure with an unvalued number feature, which will be valued by QP. This number feature, once valued, will be the number of the whole partitive nominal (relevant for external agreement); in contrast, the number of the embedded DP does not play any role outside that DP itself. The next step in the derivation is represented in (204), where a NumP has been added to the structure:



As indicated in the structure, Num⁰ has an unvalued number feature —[uPI]— and probes the closest goal with a matching number feature, which is the QP in Spec KP (the DP would be another potential goal, but it is not the closest, so it is not considered for an Agree relation with Num⁰). By Agree, Num⁰ and the QP share the value of the number feature of QP: [+PI] or [−PI]. An EPP feature in Spec NumP makes the QP move there, as indicated by the arrow in the tree.

With respect to the external agreement, it is worth recalling here that whenever the verb agrees in the plural despite the QP being singular, it is assumed to be an instance of *ad sensum* agreement, as suggested earlier in this thesis: this double possibility is only obtained when the QP has a collective meaning, which is restricted to nominal QPs such as *(una) part* ‘(one) part’, *la majoria* ‘the majority’, or *un terç* ‘one third’ when combined with plural DPs.

- (205) a. Una part dels conferenciantes {*va_{sg}* / *van_{pl}*} arribar tard.
 ‘Part of the speakers {was / were} late.’
 b. {Un / Cap} dels conferenciantes {*va_{sg}* / **van_{pl}*} arribar tard.
 ‘{One / None} of the speakers {was / *were} late.’

So the two possible agreement options in the verb in a sentence like (205a) have different sources: the singular agreement is syntactic whereas the plural agreement is semantic.¹⁴⁹ The interpretation differs in that in the singular a collective reading is usually obtained (in this case, a portion of the whole group of speakers: a subgroup as a whole) although a distributive reading is available as well; however, in the plural the distributive reading seems to be the only possibility (in this case, a number of individuals, which are a subgroup of the group of speakers). It goes without saying that this double option of verb agreement is unavailable in non-collective singular QPs such as *un-una* ‘one’ or *cap* ‘none’, as illustrated in (205b).

3.4.1.3 DP and the [+Spec] feature

The derivation has a final step, which consists of merging a DP, the top functional projection. As commonly assumed in the literature (Enç 1991, Longobardi 1994, Julien 2002, Borer 2005), referentiality is defined in D and is generally associated with overt inflection. Although determiners do not directly contribute to the description of the entity denoted by the nominal, they contribute to its interpretation by playing a role in the referential properties of the DP: depending on the determiner, a nominal can be definite or indefinite, specific or non-specific. As we are mainly dealing with indefinite nominals here, we will focus on the property of

¹⁴⁹ However, notice that if an adjectival secondary predicate is added to the sentence (or the partitive nominal is the subject of a passive sentence with a past participle or of a copular sentence with an adjectival predicate), this AP or participle obligatorily agrees in the plural with the partitive nominal as must the verb:

- (i) a. Una part dels conferenciantes {**va_{sg}* / *van_{pl}*} arribar cansats_{pl}.
 ‘Part of the speakers arrived tired.’
 b. Una part dels conferenciantes {**va_{sg}* / *van_{pl}*} ser allotjats_{pl} en cases particulars.
 a part of-the speakers was / were accommodated in homes private
 ‘Part of the speakers were found accommodation in private homes.’
 c. Una part dels conferenciantes {**estava_{sg}* / *estaven_{pl}*} malalts_{pl}.
 ‘Part of the speakers were ill.’

So in these cases the semantic agreement is forced given that the nominal *una part dels conferenciantes* refers to a plurality of items and these adjectival predicates are predicated from individuals, so they necessarily agree in the plural. If the APs are replaced by PPs, which do not agree, then the optionality in the verb agreement is again available and the distributive reading is possible under singular agreement as in (205a):

- (ii) a. Una part dels conferenciantes {*va_{sg}* / *van_{pl}*} arribar amb mal de cap.
 ‘Part of the speakers arrived with a headache.’
 b. Una part dels conferenciantes {*estava_{sg}* / *estaven_{pl}*} amb grip.
 a part of-the speakers was / were with flu
 ‘Part of the speakers had the flu.’

specificity and assume, following Enç (1991), that all partitive nominals are specific by definition, given that they are linked to a discourse referent through the embedded DP.¹⁵⁰ It is this link to an established discourse referent and the consequent presupposition of existence that seem responsible for the ungrammaticality in existential sentences. Recall the following contrast (already observed in Chapter 1, §1.5.2):

- (206) a. There are some cows in the backyard.
 b. There are two cows in the backyard.
 c. There aren't any cows in the backyard.

- (207) a. *There are some of the cows in the backyard.
 b. *There are two of the cows in the backyard.
 c. *There aren't any of the cows in the backyard.

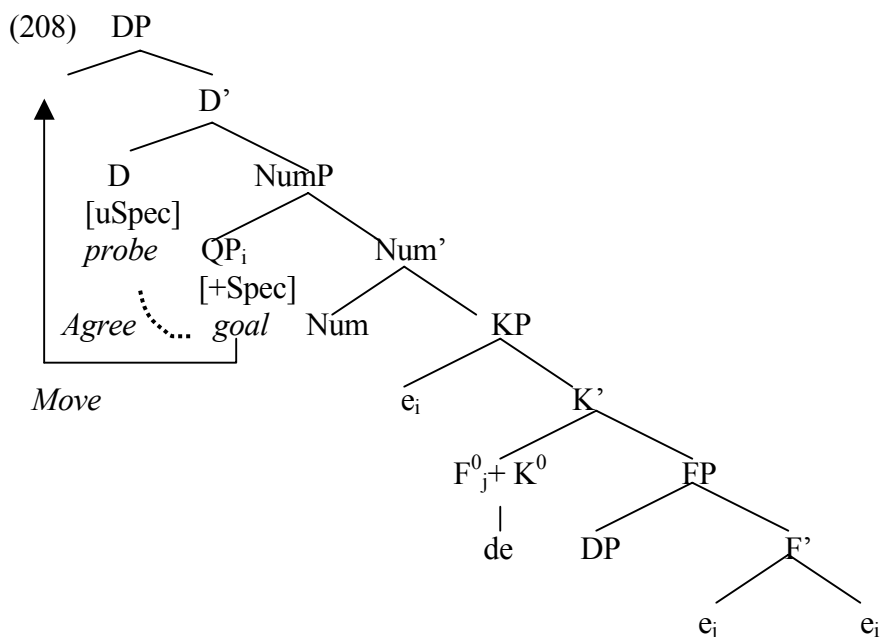
(Enç 1991: 14, ex. 44, 45)

In the examples above all nominals are indefinite, but partitives are not licensed contrary to quantitatives, so Enç suggests replacing the term *definiteness effect* with the more appropriate *specificity effect*. To reflect the important syntactic effect that the embedded definite DP has in partitive nominals, I will claim that the quantifier that selects the DP inherits a [+Spec] feature through its relation with the DP (as it is a definite DP, it is automatically specific according to Enç).¹⁵¹ So the top D enters the derivation with an unvalued [uSpec] feature, which is valued by the matching feature of QP, which, according to what has been said, is always [+Spec] in partitives. Specificity has commonly been associated to the DP functional projection and a connection between a specific interpretation and the existence of overt material in DP has usually been assumed (Longobardi 1994). In this line, I claim that by an EEP feature the [+Spec] QP raises to Spec DP.

¹⁵⁰ It is interesting to note that Enç relates definiteness to specificity in that they both require linking to previously established discourse referents; what distinguishes them is the nature of the linking: in definites it is an *identity* relation whereas in specifics an *inclusion* relation. Thus specificity involves a weaker, looser relation to already established referents than definiteness. This is reflected on the type of antecedent these nominals have: in Enç's terms, a *weak antecedent* for specific nominals vs. a *strong antecedent* for definite nominals.

¹⁵¹ A similar idea is proposed by Gutiérrez (2008), who claims that partitive nominals become definite because the [+Def] feature from the embedded DP percolates to the partitive quantifier (this explains why partitive nominals have a syntactic behaviour similar to definite DPs: i.e. in existential sentences). Recall that the structure she proposes for partitives is a QP in which Q selects a DP as a complement.

Observe the representation in (208):



This obligatory movement of QP to Spec DP in partitives has the desirable effect of precluding the insertion of a determiner in D⁰ and so explains why Catalan partitives cannot be preceded by an overt definite article or any definite determiner such as a demonstrative: as the QP is in Spec DP, no overt D can appear given the *Principle of economy of lexical insertion* proposed by Dimtrova-Vulchanova and Giusti (1998) (recall (123) above). A demonstrative, being a head or an XP, would be rejected for the same reason: as a head, it could not raise to D or be generated in D because it would violate the *Principle of economy of lexical insertion*; as an XP it could not raise to Spec DP because it is already filled by QP.

Before illustrating the derivation of partitives just described in general terms with a couple of particular examples, I would like to devote some more attention to this [+Spec] feature in quantifiers that enter the partitive construction. We need to draw a distinction between, on the one hand, the [+Spec] feature which quantifiers that enter the partitive construction all inherit from the DP they select and, on the other hand, the [+Spec] or [−Spec] feature which quantifiers can be marked with in the lexicon or when entering the numeration according to their lexical properties, as will be seen in the case of quantitatives later. There are quantifiers that are marked in the lexicon as forming specific nominals (they are [+Spec])¹⁵² such as *alguns-algunes* ‘some_{pl}’ or as forming non-specific nominals (they are [−Spec]) such

¹⁵² See Enç (1991: 15), who illustrates this in Turkish: the weak quantifier *bazi* ‘some’ is marked as specific in the lexicon whereas the synonym *birkaç* ‘some’ is not (the latter patterns with the English *some* in that it can be either specific or non-specific, whilst the former is always specific).

as *cap* ‘no, none’ or *qualsevol* ‘any’. In partitives, the [+Spec] feature of the embedded DP overrides the [±Spec] feature the quantifier would have on its own: D⁰ always becomes [+Spec], and the whole partitive nominal turns specific, no matter if the quantifier would be [−Spec] in a quantitative nominal. As stated by Enç (1991: 16), “the specificity of an NP cannot always be predicted from the semantics of its determiner...it is partially constrained by the lexicon, by the definiteness of the NP, and by the principle that requires quantifiers¹⁵³ to be specific”.

Indeed, as we saw in Chapter 1, not all quantifiers in Catalan partitives are specific: *cap* ‘none’ and *qualsevol* ‘any’ are quantifiers admitted in partitives although they cannot have a specific interpretation on their own. However, we also saw that the restriction imposed by the embedded DP on the set of elements from which these quantifiers pick out a subset (the presence of the definite DP contextualises the set) has the effect of providing a specific reading of the whole nominal: the possible references of the individuals in the subset are restricted to a certain number and can only vary among known individuals. It is in that sense that Enç can state that all partitives are specific by definition. Moreover, the partitive nominal containing these non-specific quantifiers pattern syntactically with ordinary specific nominals: they are licensed in specific contexts (in contrast to a quantitative nominal containing these non-specific quantifiers).

This is illustrated in the following examples, which are repeated from Chapter 1.¹⁵⁴

- (209) a. *Qualsevol jutge l’hauria declarat innocent.*
 any judge him-would_{3sg}-have declared innocent
 ‘Any judge would have found him not guilty.’
- b. *Qualsevol dels jutges l’hauria declarat innocent*
 anyone of-the judges him-would_{3sg}-have declared innocent
 ‘Any of the judges would have found him not guilty.’
- (210) a. **Cap capellà no hi és.*
 no priest not there is
 ‘No priest is there.’

¹⁵³ ‘Quantifiers’ here refer to universal quantifiers, which imply presupposition of existence and, therefore, are always specific. Weak quantifiers are referred to by Enç as *weak determiners*.

¹⁵⁴ They correspond to examples (59) and (60) in Chapter 1, §1.2.1.

- b. Cap dels dos capellans no hi és encara.
 none of-the two priests no there is yet
 ‘Neither of the two priests is there yet.’

Whereas *qualsevol jutge* in (209a) has a generic interpretation, in the partitive construction *qualsevol dels jutges*, its referential possibilities become restricted to a contextualised set of judges, and the speaker has real individuals in mind to whom (209b) can refer to: ‘either A, B or C’ (if the set consisted of three judges: A, B and C). In Chapter 1 we concluded that this higher degree of concreteness is what allows non-specific quantifiers such as *qualsevol* to appear in the partitive construction in Catalan.

(210) illustrates an unexpected contrast if *cap* does not allow a specific interpretation: both sentences force a specific reading of the subject, which yields an ungrammatical result when *cap* appears in a quantitative nominal as in (210a), but crucially *cap* is licensed by the partitive construction in (210b). Again, in the *b* example the speaker has real individuals in mind: if there are two priests A and B, the sentence would be equivalent to ‘neither A nor B has arrived’.

All the examples above illustrate the effect that an embedded DP can have in a partitive nominal: the [+Spec] feature of this embedded DP is transmitted to the whole nominal through the quantifier. What is interesting in Catalan, in comparison with other languages, is that not all quantifiers can inherit the [+Spec] feature from the embedded DP, and, therefore, this language shows restrictions on the quantifiers admitted in partitives. The quantifiers that can inherit the [+Spec] feature from the DP in Catalan partitives are (a) those quantifiers that can already be [+Spec] on their own such as *molts* ‘many’, *alguns* ‘some’ or all cardinals (which are ambiguous between a specific and a non-specific reading in indefinite nominals), and (b) a group of non-specific quantifiers, those that denote individuals, such as *cap*, *qualsevol* and *algun* (given that they are closer to specificity than quantifiers that denote amounts, which are completely excluded from Catalan partitives). If a quantifier can be both [+Spec] or [–Spec], in Catalan partitives it is by default interpreted as [+Spec] unless the [–Spec] is forced:

- (211) a. Vol conèixer un actor. (2 readings: specific and non-specific)
 ‘(S)he wants to meet an actor.’
 b. Vol conèixer un dels actors. (1 salient, natural reading: specific)
 ‘(S)he wants to meet one of the actors.’

- c. Vol conèixer un dels actors, el que sigui. (1 reading: non-specific)

‘(S)he wants to meet one of the actors, no matter which one.’

(211a) shows that *un* allows a specific or a non-specific reading of the quantitative nominal whereas in partitives it tends to have a specific interpretation (*un dels actors* refers to a particular individual) (see 211b), and it only has a non-specific interpretation if forced by the context, as in (211c).

Similarly, entity partitives in Catalan seek concreteness: thus, as described in Chapter 1 (§1.2.2), in Catalan only quantifiers that denote portions or parts are allowed, but not those that denote imprecise amounts. This is shown by the following examples:¹⁵⁵

(212) a. la meitat d’aquest pastís

the half of-this cake

b. un tros d’aquest pastís

a piece of-this cake

c. ?*molt d’aquest pastís

much of-this cake

(213) a. la meitat de l’aigua

the half of the-water

b. una part de l’aigua

a part of the-water

c. ??molta de l’aigua

much of the-water

Although in entity partitives the notion of specificity becomes loose, our conclusion in Chapter 1 was again that in entity partitives only quantifiers that can be specific are allowed (in the sense of denoting more or less delimited or contoured elements that can be singularised somehow), which are precisely those quantifiers that denote parts or portions but not imprecise amounts.

To sum up, all quantifiers licensed in Catalan partitives share the property of being specific (or are close to specific), which is the basic notion required for them to be able to select a [+Spec] DP. Interestingly, the requirement that quantifiers in set-partitives have overt inflection or at least are marked for number follows from the fact that the partitive quantifiers denote individuals in Catalan and this is also related to referentiality.

Something must be said at this point about other languages, such as English, which do not seem to have any restriction on the type of quantifier that enter the partitive construction: in these languages the QP inherits the [+Spec] feature of the DP they select as well as was

¹⁵⁵ They correspond to examples (64) and (65) in Chapter 1, §1.2.2.

Case inflection indicating what the Case of the nominal is (other nominal elements such as adjectives or nouns may bear Case as well, but sometimes it is different—weak—or is an internal Case marking).¹⁶⁰

Interestingly, Case has also been related to referentiality (as well as to definiteness) based on languages that have a different Case marking depending on whether the nominal is specific or non-specific (e.g. Finnish)¹⁶¹ and languages where direct objects have overt Case marking (usually accusative) only if they are specific but have no Case markings when they are non-specific (e.g. Turkish).¹⁶²

Under the assumption of the relation that holds between D, referentiality and external Case, I will claim that D^0 bears an unvalued Case feature for the whole nominal argument (recall the proposal of Case domains by Matushansky 2008 discussed in §3.3.2 above), which is to be valued by an external Case assigner (T, v or a preposition). The unvalued Case feature of the QP probably gets valued by Agree with D once the external Case is assigned to the DP or, what I take to be the same, because it is in the Case domain of the DP.¹⁶³ See the representation of Case domains in the nominal below:

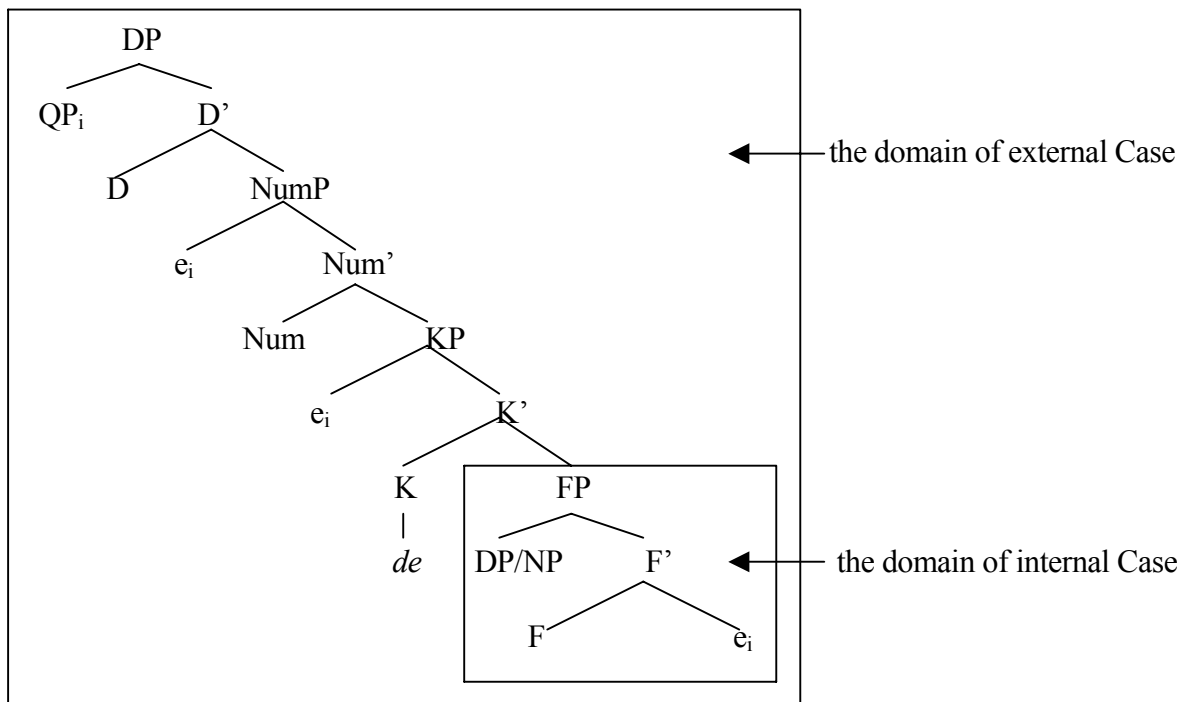
¹⁶⁰ Recall the German data in footnote 88, which shows that the first element in the nominal sequence bears the strong Case inflection in this language: usually determiners but also quantifiers or adjectives. The natural account would be to postulate that this Case marking is located in D and that the top DP projection must contain lexical material as a bearer for the Case inflection: this is obtained by insertion (determiners) or by movement (quantifiers and adjectives).

¹⁶¹ See Belletti (1987, 1988) for data and discussion.

¹⁶² See Enç (1991) for data and discussion.

¹⁶³ However, see Kayne (2002: §1.4), who suggests that Case is limited to lexical items and is against the standard assumption that the assigned Case is the Case of the whole nominal too given that “from a minimalist perspective, this is a notable redundancy”. So, for example, in a nominal such as *three apples*, the items *three* and *apples* would each have accusative Case assigned by v under agreement, and this Case valuation would take place separately for each element.

(215)



Although I assume that the whole nominal bears the external Case, the top DP projection is the one the external Case assigner ‘sees’ as a goal for Case valuation given it is the top maximal nominal projection which makes it an argument. See more on the status of the DP in connection with Case and referentiality when dealing with quantitative nominals in §3.4.3 below.

3.4.1.5 Derivation of two particular examples

Now let us see the complete derivation of two particular examples of partitives, one with a nominal QP and another with an adjectival QP, as an illustration of the analysis defended here.

EXAMPLE 1: Partitive with a nominal QP

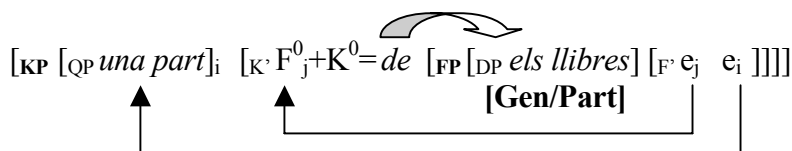
The derivation to obtain a partitive with a nominal QP such as the entity partitive *una part dels llibres* (‘part of the books’) has the following steps:

Step 1. QP and DP are merged in FP:

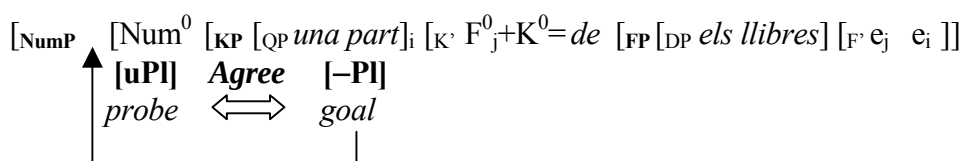
[_{FP} [_{DP} <i>els llibres</i>] [_{F'} F [_{QP} <i>una part</i>]]]	
[-Fem]	[+Fem]
[+Pl]	[-Pl]
[uCase]	[uCase]
[+Spec] $\Rightarrow$	[+Spec]

Both the DP and the QP are nominal projections with valued ϕ -features and an unvalued Case feature. The QP inherits the [+Spec] feature of the DP it selects. Within FP no Case feature can be valued, so more structure is needed.

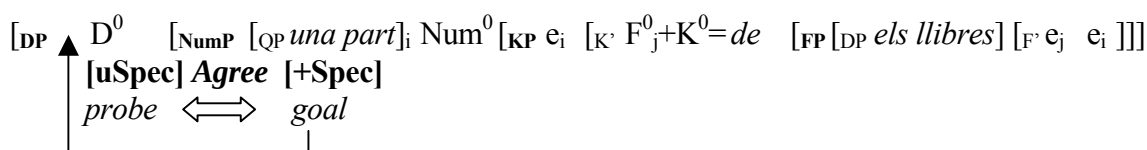
Step 2. K^0 is merged in the structure. F^0 moves to K^0 and QP moves to Spec KP. K^0 becomes a Case assigner by these operations, and the Case feature of DP gets valued by K^0 under Agree (it is realised as *de*):



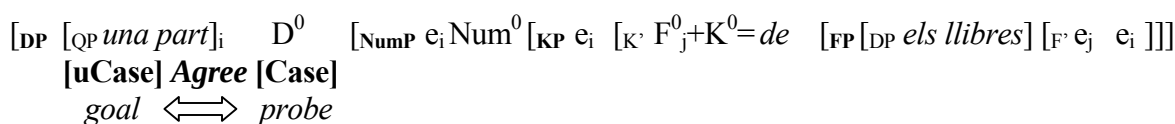
Step 3. Num^0 is merged with an unvalued number feature [uPl]. The number of Num^0 gets valued ([−Pl]) by Agree with QP, and subsequently QP moves to Spec NumP (by EPP):



Step 4. D^0 is merged with an unvalued [uSpec] feature. This feature in D^0 gets valued ([+Spec]) by Agree with QP, and subsequently QP moves to Spec DP (by EPP):



Step 5. When the whole nominal gets an external Case, the unvalued Case feature of the QP will get valued in DP (probably by Agree with D^0 , which has its unvalued Case feature valued by the external Case assigner: T, ν or a preposition).



Step 5. When the whole nominal gets an external Case, the unvalued Case feature of the QP will get valued in DP (probably by Agree with D^0 , which has its unvalued Case feature valued by the external Case assigner: T, v or a preposition).

[_{DP} [_{QP} *un*]_i D^0 [_{NumP} e_i Num⁰ [_{KP} e_i [_{K'} F⁰_j + K⁰ = *de* [_{FP} [_{DP} *els llibres*] [_{F'} e_j e_i]]]]
 [**uCase**] **Agree** [**Case**]
 goal $\longleftrightarrow$ *probe*

3.4.2 QP in predicative structures and derivation

The previous section dealt with the structure and derivation of partitive nominals. However, as suggested above, the selection of a DP by a QP can give rise to a predicative structure if the QP can function as a predicate, that is to say, if it applies as a property to the whole extension of the embedded DP. It is important to note that quantifiers that function as predicates have no specific feature (as is the case of adjectives or PPs or predicate NPs) and that no inheritance of the [+Spec] feature of the embedded DP takes place when the relation is predicational. Most indefinite quantifiers can be predicates, and the prerequisite for becoming a predicate seems to be the possibility for the quantifier to be non-specific, whether that is an option as in *molts-moltes* ‘many’, *bastants* ‘quite a lot’ or all cardinals or is the only reading as in *pocs-poques* ‘few’, *massa* ‘too many’ or quantificational expressions such as *un munt* ‘a lot’. An exception to this ability of functioning as a predicate is the quantifier *algun* (‘some, several’) in any of its forms,¹⁶⁴ probably due to its lack of descriptive content.

When the QP is a predicate, the functional projections above FP are different from those claimed to be in partitives since the final result is a whole sentence. There are two different ending configurations: (i) a copular sentence—see (216a)—or (ii) a non-copular sentence in which the QP is a secondary predicate—see (216b), where *a milers* predicates of *els colons*:

(216) a. *Els meus estudiants són {molts / trenta / un munt}*.

‘My students are {many / thirty / a lot}.’

¹⁶⁴ No matter if the singular forms *algun-alguna* are specified as [–Spec] (cf. the plural forms *alguns-algunes*, which are usually [+Spec] and would not be expected to be a predicate). The reader is referred to Chapter 1, §1.2.1, for a comparison between the singular forms and the plural forms of *algun* based on examples (55–57) there.

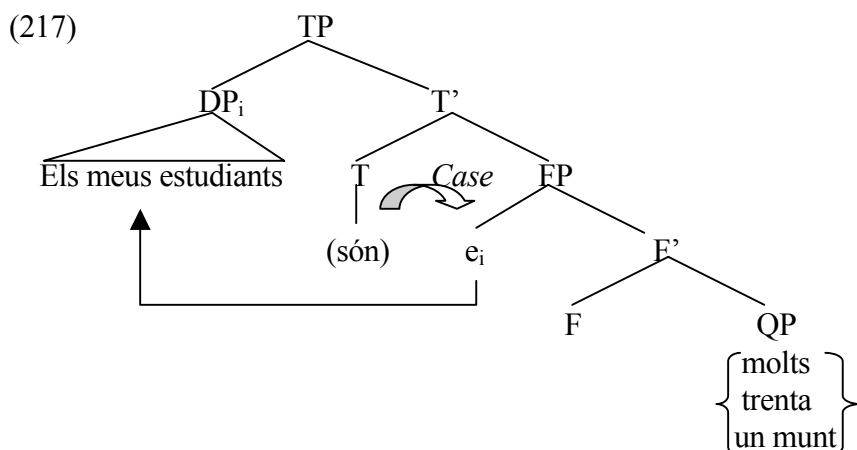
- b. *Els colons arribaven a milers a l'oest empesos per la promesa d'una nova vida.*
 the colonists arrived in thousands in the-west driven by the promise of-a new life
 'Colonists arrived by the thousand in the West driven by the promise of a new life.'

In the copular sentence, the derivation starts with an FP like in partitives with the difference that the QP has no $[\pm\text{Spec}]$ feature (given its predicative status). In the non-copular sentence we have the same scenario except that the FP contains an overt F which relates the DP and the QP, a 'relator' in Den Dikken's terms. In the following subsections each type of configuration will be dealt with.

3.4.2.1 Predicative QP giving rise to a copular sentence

My claim is that this type of sentence starts with a projection FP containing the DP in the specifier and the QP in its complement just as in a partitive nominal, but with the difference being that in this case it is a predicational FP just like the examples studied in predicate inversion analyses (Kayne 1994, Den Dikken 2006).

The QP as a predicate stays in situ (if it is nominal such as *un munt*, it has all its ϕ -features valued;¹⁶⁵ if it is adjectival such as *molts* and *trenta*, its unvalued number and gender features are valued by agreement with the DP inside the FP through the predication relation, via Concord). The DP has all its ϕ -features valued but needs to value its Case feature, so a TP projection is inserted above the small clause FP to satisfy the Case requirements of the DP, which is the subject of the predication. Observe the representation below:



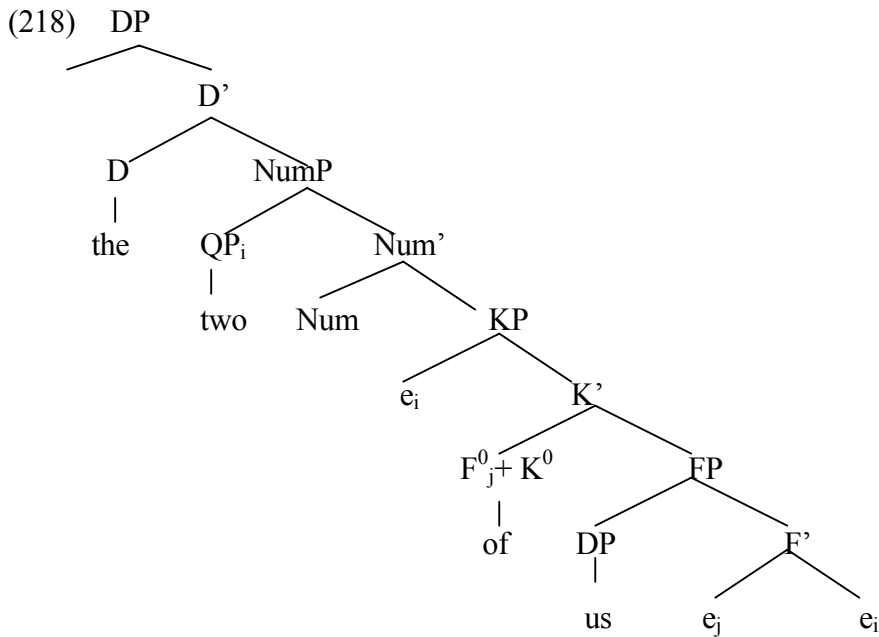
¹⁶⁵ Despite being a nominal, it would not have an unvalued Case feature because, as a predicate, it has no Case needs.

T^0 assigns nominative Case to the DP, which gets its unvalued Case valued under Agree with T^0 , and an EPP feature attracts the DP to Spec TP (as represented by the arrow). The verb *be* is inserted in T^0 as a lexical support for tense features¹⁶⁶ and thus a copular sentence is obtained. An alternative, more in Den Dikken's line, would be to consider that the verb *be* is generated in F^0 as the relator of the predication relationship and subsequently raises to T^0 . As it does not make any difference for our analysis, we leave this question open.

A question arises at this point: why is a KP not inserted here to satisfy the Case needs of the DP as in partitive nominals? It could be stated that predicative QPs do not raise and therefore K^0 could not be a Case assigner for the DP, but that would be a mere stipulation as predicates do raise sometimes in the same configuration (recall precisely predicate inversion constructions). However, one could argue that quantifiers are not ordinary predicates, so they might have this special property which would distinguish them from APs or PPs (we saw that quantifiers are a sort of defective predicate in certain respects: recall discussion in §3.2.2.5 above).

Actually, it seems that there are indeed some cases in which a KP is inserted when the FP is predication, and the final structure becomes a nominal: examples in English involving strong pronouns and cardinals such as *the two of us* or *the three of them*. As mentioned above in §3.3.2, the presence of the preposition and the position of the quantifier preceding the pronoun can be taken as evidence that Q^0 has raised and K^0 has assigned Case to the pronoun, which in English shows an oblique form (cf. *we two*, *they three*). This is illustrated in the structure below:

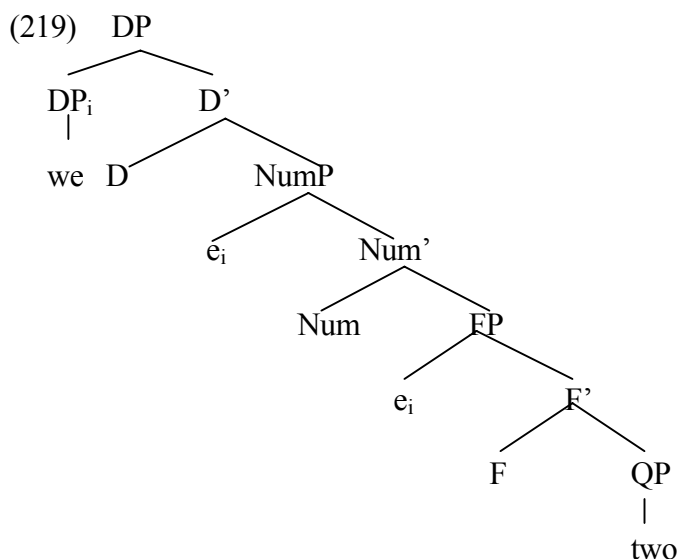
¹⁶⁶ Actually, what happens is that the tense features of T are valued by merging the copular verb given that there is no lexical verb in this structure: notice the lack of a VP projection. For the sake of completeness, note that T has unvalued ϕ -features as well, which get valued through agreement with the DP.



Given that the quantifier is a predicate, it has no $[\pm\text{Spec}]$ feature, so it cannot value the corresponding feature in D^0 as it does in partitives. The only possible goal for the probe D^0 is the pronoun below, which values D^0 feature as $[\text{+Spec}]$. As commonly assumed, specific DPs need to have some lexical material in the top projection DP, but in this structure the pronoun cannot raise to DP as the QP is blocking this movement. The solution is the insertion of a determiner in D^0 , which explains why a definite article must appear in these examples. This article is a default article (a kind of expletive) just to overtly realise the features in DP and satisfy the need for specific DPs to contain lexical material in them.¹⁶⁷

The alternative to QP inversion is to leave the QP in situ and to raise the pronoun up to Spec DP through Spec NumP so that it can get Case from outside the nominal. In this structure there is no KP projectio, but rather NumP is inserted immediately above FP and the DP on top of all:

¹⁶⁷ A piece of evidence for the default status of the determiner would be the fact that no other definite determiner seems to be allowed in this kind of example: **those three of them*. However, in an analysis where the demonstrative is generated lower in the structure, its movement up to DP would probably be blocked as well by the QP in Spec NumP.



The pronoun values the number feature in Num⁰ and the specific feature in D⁰ on its way up. Once in the top DP projection, it gets the external Case assigned to the nominal.¹⁶⁸

These derivations look very plausible under the approach taken in this thesis, but provide no answer to some questions that arise concerning predicative QPs within nominals, first of all, why this possibility of a nominal containing a predicative QP is restricted to personal pronouns and cardinals and why there are no examples with weak quantifiers such as **the many of us* or **we many* or with descriptive DPs such as **the two of the books* or **the books two* (where *many* and *two* are predicates). What is special about pronouns and cardinals that make them the only candidates for predicational structures inside nominals? Moreover, why is it the case that Catalan or Romance languages in general only allow the configuration ‘Pronoun + Q’ (*nosaltres dues* ‘we two_f’, *ells tres* ‘they_m three’) but not ‘the + Q + of + pronoun’ (**les dues de nosaltres* ‘the_f two_f of us’, **els tres d’ells* ‘the_m three of them_m’) in contrast with English? I leave these questions for further research.

3.4.2.2 Predicative QP giving rise to a secondary predicate

In principle, QPs can be predicates only in copular sentences, as shown by example (120b) above (repeated below for convenience), which illustrates the ungrammaticality of predicative QPs as secondary predicates:¹⁶⁹

¹⁶⁸ In (219) it gets nominative, but see examples of accusative and oblique in footnote 122 above.

¹⁶⁹ However, recall Corver and Zwarts (2006: 11), who claim that cardinals can function as secondary predicates (see §3.2.2.4 above, ex. 115c, and also ex. (i) in fn. 78).

(220) (=120b) *{Trobo / Considero} els recursos de què disposem enguany *molt pocs*.

‘I find / consider the resources we have this year *very few*.’

One may wonder why predicative QPs are not licensed as secondary predicates although they can appear in copular sentences. Selectional restrictions seem to be the clue: notice that the predication is selected by a verb in examples like (220) (i.e. *trobar* ‘find’, *considerar* ‘consider’). Thus, the impossibility for the FP containing a predicative QP to appear in a VP headed by a lexical V is probably due to the fact that verbs like *consider*, etc. select for predications with predicates that are APs, PPs or NPs, but not QPs. As mentioned before in this thesis, QPs can function as predicates but in a quite restricted way, so they are allowed to be predicates only in the configuration in (217), where there is no lexical predicate that selects for them but just the insertion of a copula, which serves as a support for tense inflection and has no lexical content in itself.

However, despite the conclusions just reached, there is a type of predicative QP that can be licensed as secondary predicates: those that are related to the DP through a preposition, which corresponds to the overt realisation of the so-called ‘relator’ in Den Dikken’s analysis of predicate structures (F in our analysis). This preposition is generally *a* in Catalan, although in some cases it can be *en* as well. As an illustration, *a* gives raise to the following sequences: *a desenes* (lit. by the ten, ‘many’), *a cents* (‘by the hundred’), *a milers* (‘by the thousand’), *a cabassos* (lit. in baskets, ‘loads of’), *a dolls* (lit. in streams, ‘loads of’), *a munts* (lit. in piles, ‘loads of’), ...; preposition *en* seems to be restricted to cases like *en gran nombre* (‘in large numbers’) and *en (gran) quantitat* or *en grans quantitats* (‘in great quantities’).

Notice that not all quantifiers can become secondary predicates by just merging the preposition in F; this is restricted to nominal quantifiers that denote vague amounts that are usually interpreted as a big quantity, and they tend to be in the plural form. These restrictions probably derive from the selectional properties of the preposition: whereas *a milers* is fine (in the plural and with no modifier that makes the amount more precise), sequences like **a miler* (in the singular) or **a dos milers* (with a modifier) are ungrammatical.

The distribution of this predication FP with an overt F is also quite restricted as far as I have noticed: it seems it is only licensed as an optional secondary predication internal to the VP (thus, related to the internal argument but not the external argument).¹⁷⁰ Observe the following examples, where the QP always predicates of the internal argument: the object of the verb as in (221a,b), or the subject of a passive sentence as in (221c,d), or the subject of an inaccusative verb as in (221e,f)—see also (203b) above.¹⁷¹

- (221) a. *Compra els ous a mils.* [GDLC, *mil*]
 boughts the eggs in thousands
 ‘(S)he buys the eggs by the thousand.’
- b. *despendre els diners a cabassos.* [GDLC, *cabàs*]
 spend the money in baskets
 ‘spend money in great amounts.’
- c. *Els exemplars són copiats en gran nombre.*
 the samples are copied in great number
 ‘The samples are copied in great numbers.’
- d. *Aquests residus es generen en gran quantitat.*
 these waste_{pl} SE generate_{3pl} in great quantity
 ‘This waste is produced in great quantities.’
- e. *Els soldats queien a cents.*
 the soldiers fell_{imperfect.3pl} in hundreds
 ‘The soldiers were falling by the hundred.’

¹⁷⁰ To my knowledge there is no previous study of this type of construction, so more research is needed on Catalan data and other languages for it to be confirmed; however, all the examples I found in Catalan dictionaries and on Google, as well as my intuitions as a native speaker, fit the description I offer here. The only example I found that seems to be an exception, as in it the QP refers to the subject, is from *DCVB, miler*:

(i) *Que el seguexen a milers com un axam.* [Picó Engl. 46]
 that him follow_{3pl} in thousands like a swarm

‘That they follow him by the thousand like a swarm.’ (≡ ‘thousands of them follow him like a swarm’)

¹⁷¹ In contrast, observe the ungrammaticality of (ia), where the QP predicates of the subject of the sentence and the unavailability of the reading of (ib) in which thousands of factories dismissed employees (the only possible reading is that thousands of employers were dismissed):

(i) a. **Els immigrants protestaven a milers.*
 ‘The immigrants protested by the thousand.’
 b. *Les fàbriques han acomiadat treballadors a milers.*
 ‘The factories dismissed employees by the thousand.’

- f. *La gent hi va comparèixer a dolls.* [GDLC, *doll*]
 the people there appeared in streams
 ‘Scores of people were present.’

As before, the predicative QP cannot be selected by verbs like *consider* (probably for the same reasons given above), nor when the F is overtly realised can it appear in copular sentences (the reason for the latter escapes my understanding and calls for more research, which is out of the scope of this thesis). This is shown by the ungrammatical examples below:

- (222) a. *{Trobo / Considero} els recursos de què disposem enguany *a milers*.
 ‘I {find / consider} the resources we have this year *by the thousand*.’
 b. *Els recursos són *a milers*.
 ‘The resources are *by the thousand*.’

How is this type of predication mediated by a preposition to be analysed? Let us focus (for simplicity) on the relevant part of the example (216b) above: *Els colons arribaven a milers* (‘Colonists arrived by the thousand’). In this sequence, the secondary predication takes place between *Els colons* and *milers* through *a*, in an FP within the VP. However, a verb like *arribar* only selects the internal object *els colons*, so in order to reflect the optional status of the predicate QP, I claim that the secondary predication is a VP adjunct: an optional small clause whose subject is PRO. By co-indexation between the internal DP and PRO, the secondary predicate is interpreted as predicating from the DP.¹⁷² Observe the structure below:

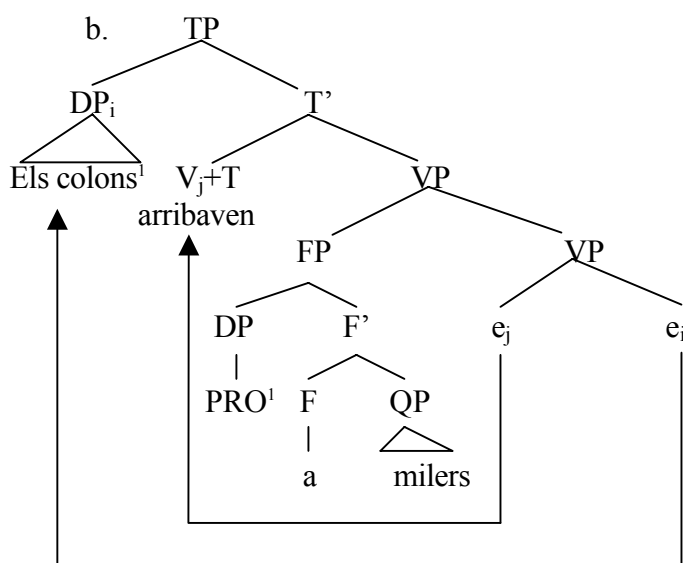
- (223) a. *Els colons arribaven a milers.*
 the colonists arrived in thousands
 ‘Colonists arrived by the thousand.’

¹⁷² However, in the literature there is a line of analysis according to which secondary predicates are not small clauses (do not project into an FP with a subject in Spec FP) but are considered as modifiers: subject oriented adjuncts (they indirectly predicate of the subject) or VP adjuncts (directly predicating of the object) (see, for example, Pérez-Guerra 2003; Rothstein 2004: §5.5 and references herein). It is worth mentioning that these authors are against the intervention of PRO in these predications, which seems to be the reason for their proposals.

An alternative under the small clause approach that allows us to dispense with PRO would be to propose a small clause selected by the verb:

(i) [_{VP} arribaven [_{FP} [_{DP} els colons] a [_{QP} milers]]]

This would have the advantage that the restriction of predicative QPs as ‘object oriented’ could be explained by selectional reasons, but the optional character of these secondary predicates seems to indicate that this is not the right analysis.



Within FP there is a predication relationship between PRO and QP overtly expressed by the preposition *a* in F^0 . PRO has no Case feature to value, so there is no need for extra structure or any movement. All the features of the QP are valued so it stays in situ as well. By co-indexation of PRO with the DP (the internal argument), the predicative QP is interpreted as predicating from the DP *els colons*—this is represented in the structure by a superscript 1.

The rest of the structure and operations in (223b) is, as expected, in a sentence containing an unaccusative verb. The internal DP cannot get Case from the verb, so it needs to look further up for a Case assigner: its Case feature is then valued by T, which assigns nominative to the DP. By the EPP feature, the DP subsequently raises up to Spec TP. As indicated in the structure, the V-to-T movement also takes place.

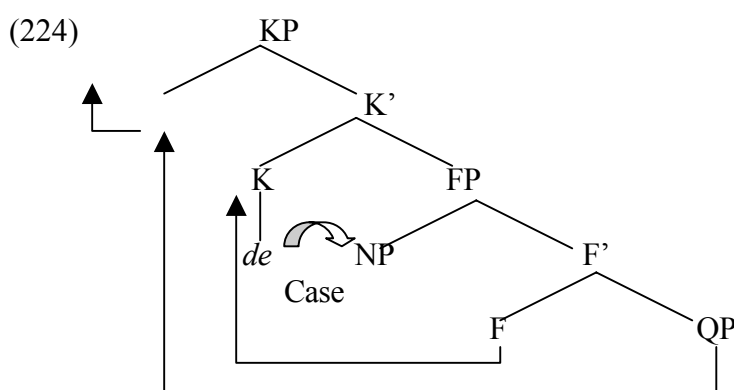
3.4.3 Quantitatives structure and derivation

In §3.4.1 the structure and derivation of partitives was dealt with, and now we turn to the structure and derivation of quantitatives, which display many similarities but also a few relevant differences with respect to partitives.

3.4.3.1 Similarities and differences with partitives

We start the derivation with an FP as in partitives, with the difference being that QP does not select a DP but a lower nominal projection: NP. This NP has valued ϕ -features but an unvalued Case feature. As in the case of partitives, “nominal” QPs have valued ϕ -features but

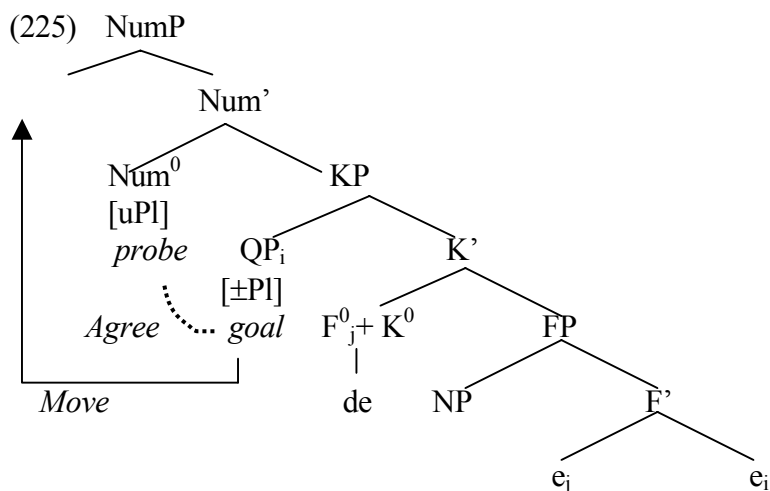
an unvalued Case feature. In contrast, “adjectival” QPs have unvalued ϕ -features, both in number and gender: they pattern with adjectives since like adjectives they agree in gender and also number with the NP. By Concord with the NP, the unvalued gender and number features of the QP get valued within FP (cf. partitives, in which only gender was valued by Concord). K^0 is subsequently merged to FP. The F^0 raising to K^0 and the QP raising to Spec KP turns K^0 into a Case assigner, able to value the unvalued Case of the embedded NP (in Spec FP), just as was valued the unvalued Case feature of the embedded DP in partitives. Observe the representation below (cf. (168) for partitives above):



Then Num^0 is merged in this basic structure with an unvalued number feature, which is valued by the QP number feature (as QP is the closest element with a matching feature). This number feature, once valued, will be the number of the whole partitive nominal (relevant for external agreement). If the QP is nominal, there can be a number mismatch with respect to the embedded NP (the two number values are independent, and the NP does not enter any Agree relationship with Num^0), so the number value of the quantitative nominal is provided by the QP.¹⁷³ If the QP is adjectival, there is no possibility of number mismatch in the quantitative nominal: although the QP is the constituent that establishes an Agree relation with Num^0 through which the number feature in Num^0 gets valued, recall that the number feature of the QP was given by the NP by Concord within FP, so in this case the three elements share the same number value. In both cases, with a non-agreeing QP and with an agreeing QP, an EPP feature attracts the QP to Spec NumP. See the representation in (225), where a NumP has been added to the structure:

¹⁷³ As in partitives, collective nominal QPs can trigger singular agreement (which is the syntactic agreement as the QP is singular) or plural agreement (which is the so-called *ad sensum* agreement) in the verb:

(i) *Un munt de treballadors* {es manifestava / es manifestaven} davant la fàbrica.
 a pile of employees demonstrated_{sg} / demonstrated_{pl} in-front-of the factory.
 ‘Lots of employees were demonstrating in front of the factory.’



As indicated in the structure, Num⁰ has an unvalued number feature —[uPl]— and probes the closest goal with a matching number feature, which is the QP in Spec KP (the NP would be another potential goal, but it is not the closest, so it is not considered for an Agree relation with Num⁰). By Agree, Num⁰ and the QP share the value of the number feature of QP: [+Pl] or [–Pl]. An EPP feature in Spec NumP makes the QP move there, as indicated by the arrow in the tree.

Finally, a top DP projection is merged like it was in partitive nominals since I assume—following Szabolcsi (1987), Stowell (1991) and Longobardi (1994), among others—that all nominal arguments are necessarily DPs.¹⁷⁴ This implies that D is sometimes empty, as not all nominals have determiners.¹⁷⁵

3.4.3.2 Specific versus non-specific indefinite nominals

I take the DP projection as the projection where specificity is encoded (D⁰ can be [+Spec] and [–Spec]) and where the external Case is assigned (D⁰ has an unvalued Case feature that needs to get valued by *v*, T or a preposition). Hence, the difference between a specific nominal and a

¹⁷⁴ However, see another common view in the literature according to which only certain arguments are DPs: those that are definite (Lyons 1999) or that are referential. Indeed, D has often been considered the locus of definiteness and/or referentiality. In these lines, according to Chomsky (2001: 43, fn. 12): “Functional categories lacking semantic features require complication of phrase structure theory (see MI), a departure from good design to be avoided unless forced....D—at least one variant of D—might be associated with referentiality in some sense, not just treated as an automatic marker of ‘nominal category’; nonreferential nominals (nonspecifics, quantified and predicate nominals, etc.) need not then be assigned automatic D (at least, this variant of D)”. See Alexiadou, Haegeman and Stavrou (2007: part II, Chapters 1 and 2) for an overview of the question as to whether arguments are always projected into DPs or not, which is not a trivial point and has generated extensive discussion in the literature.

¹⁷⁵ Here the term ‘determiner’ is understood in a broad sense, including articles, possessives, demonstratives and also quantifiers. The DP projection can be empty because there is no determiner generated in D⁰ or because no determiner type element moves into it (i.e. quantifiers).

non-specific nominal is not a categorial difference (DP vs. a lower projection, probably NumP) but the presence or not of lexical material in the top DP projection: in specific nominals the DP contains overt lexical material whereas in non-specific nominals it does not.

Thus, in ambiguous nominals such as *tres nens* ‘three kids’, the QP raises to Spec DP in the specific reading (just like it does in partitives: QP is [+Spec]), but stays in Spec NumP in the non-specific reading (where QP is [−Spec]).

- (226) a. $[_{DP} tres_i D^0 [_{NumP} e_i \text{ Num}^0 [_{KP} e_i K^0 [_{FP} nens F^0 e_i]]]]$ specific
 b. $[_{DP} D^0 [_{NumP} tres_i \text{ Num}^0 [_{KP} e_i K^0 [_{FP} nens F^0 e_i]]]]$ non-specific

The association between each reading and a different position of the weak quantifier in the structure—higher for specific reading, lower for non-specific reading—is not new in the literature: see Sánchez López (1993), Zamparelli (1996) and more recently Gutiérrez (2008).

Both Sánchez López and Gutiérrez propose two final positions for weak QPs, one above the DP—which is the position where strong quantifiers such as universal quantifiers are generated—and another below the DP, and treat Qs as heads that select for a nominal projection (DP or NP). The structure would be as follows:

- (227) $[_{QP} Q^0 [_{DP} D^0 [_{QP} Q^0 [_{NP} N^0]]]]$

These two authors’ proposals differ in that the high position is achieved by movement according to Sánchez López (for her weak quantifiers all generate in the lower QP: they only raise to the higher QP in the specific reading) whilst Gutiérrez generates weak quantifiers directly in the higher QP or in the lower QP depending on whether the interpretation is specific or non-specific, respectively.

Zamparelli (1996: 256) also suggests two ending positions for weak quantifiers, where the higher one is derived by movement as in Sánchez López whilst the lower one is where weak quantifiers are generated. Zamparelli names these two projections as SDP (Strong Determiner Phrase) and PDP (Predicative Determiner Phrase).¹⁷⁶ A difference with the two other authors is that Zamparelli considers as Q heads only cardinals (generated in PD⁰ or

¹⁷⁶ Zamparelli’s nominal structure is in (i) (where KIP—*Kind Phrase*—contains the noun and modifiers but no determiners):

(i) $[_{SDP} SD [_{PDP} PD [_{KIP} KI \dots [_{NP} N]]]]$

In SDP strong quantifiers are generated as well as articles, so the high QP and DP in Sánchez López and Gutiérrez’s structure are conflated in a single projection in Zamparelli’s nominal structure.

moved to SD⁰) whilst vague quantifiers are QPs in the Spec position of PDP (basic position) or SDP if they move up.¹⁷⁷

What is new in this dissertation is that the quantifier is always phrasal and that it is generated in the same very low position, below the NP. The different readings are obtained because of the different value of the specific feature the quantifier has and the different final position, which is always derived by movement: specific indefinite nominals have a [+Spec] QP that ends up in Spec DP whilst non-specific indefinite nominals have a [-Spec] QP that ends up in Spec NumP.

3.4.3.3 *Definite nominals containing a quantifier*

What is the account in this thesis for examples like *els tres nois* ‘the three kids’, where the quantifier is preceded by a definite article? In this case, the quantifier is neither [+Spec] nor [-Spec]: I will claim that this is an instance of predicative QP which has no specific feature. This claim has the advantage of reflecting that the function displayed by quantifiers in these nominals is similar to that of an adjective but dispensing us with the need of postulating a different category for them, as proposed in analyses that claim that they are adjectives (i.e. Cardinaletti and Giusti 2006, among many others). It has also the advantage of distinguishing between the determiner-like role of non-specific weak quantifiers as in *Necessitem tres cotxes per al viatge, els podem llogar* (‘We need **three cars** for the trip, we can rent them’) and the modifier/adjective-like role of weak quantifiers that are preceded by a determiner, a distinction that is missing in proposals that, unlike Cardinaletti and Giusti (2006), consider the latter quantifiers the same as the former and generate them in the same positions (see Sánchez López 1993, Zamparelli 1996, Gutiérrez 2008).

We had mentioned (recall §3.2.2.6 above) that the semantics of Q in *tres nois* and *els tres nois* is the same, meaning that Q picks out a certain quantity or number of elements of the class denoted by the noun in both cases: in the former case the nominal denotes any group of three kids (belonging or not to a contextualised set of kids, which would yield the specific or

¹⁷⁷ See Zamparelli (1996: §6.3) for the arguments for considering vague numerals as phrasal and cardinal numerals as heads. The structures this author proposes for the weak interpretation of examples such as *two people* and *many people* (preceded or not by an article) are in (ia) and (ib) respectively:

(i) a. [SDP [SD' (the) [PDP [DP' two [KIP people]]]]
 b. [SDP [SD' (the) [PDP [QP many] [DP' PD⁰ [KIP people]]]]

non-specific reading, respectively) whereas in the latter the nominal denotes a particular group of three kids that can be identified thanks to the contribution of the definite article. So, intuitively speaking, *tres* always means ‘three (in number)’ and the presence or not of the article makes the difference between being a definite or an indefinite nominal.

However, as suggested in the first paragraph of this subsection, the role of the quantifier is not exactly the same in the two examples. In the case of Q+N (i.e. *tres nois*), the quantifier behaves like a determiner in the sense that it converts the noun, which is a property, into an entity (an argument): the sequence *tres nois* denotes a group of three kids. This determiner-like function is what is reflected by being attributed a $[\pm\text{Spec}]$ feature. In contrast, in the case of D+Q+N (i.e. *els tres nois*) that is the role the article has, and the quantifier behaves more like a noun modifier, similar to an adjective, so Q in this case does not convert the noun from a property into an entity; it only modifies the noun, which stays as a property: the sequence *tres nois* denotes elements that have the property of being ‘three kids’. In this situation, a D is needed for *tres nois* to become an entity and be able to function as an argument (as a property it could only function as a predicate). Thus, the interpretation of *the three kids* is something like ‘the/those kids that are three’. This is reflected in the analysis defended here by considering Q as a predicative element and hence not having any $[\pm\text{Spec}]$ feature.

Let us describe now the derivation of definite nominals containing a quantifier such as *els tres nois*. Like in indefinite nominals such as *tres nois*, Q raises up to facilitate the Case assignment to the NP *nois*, and it is attracted to Spec NumP as it enters an Agree relation with Num⁰. But given that in this type of nominal Q has no $[\pm\text{Spec}]$ feature, it does not raise further up (it cannot agree with D⁰). As D⁰ has an unvalued $[\text{uSpec}]$ feature to value, the only possibility to get it valued here, given that there is no element in the structure with a matching feature, is through the insertion of a determiner in D⁰: the definite article or a demonstrative. Both are typically $[\text{+Spec}]$ elements, so the nominal usually becomes specific, though in some contexts they can be $[\text{–Spec}]$ (yielding the non-specific reading). Observe the examples below:

- (228) a. M’encantaria ballar amb *els tres nois que han guanyat el Jack & Jill*. [specific]
 ‘I’d love to dance with the three guys that have won the Jack & Jill contest.’
 b. M’encantaria ballar amb *els tres nois que guanyin el Jack & Jill*. [non-specific]
 ‘I’d love to dance with the three guys that win the Jack & Jill contest (whoever they will be).’

In these examples the mood of the verb in the relative clause forces the specific reading (indicative in 228a) or the non-specific reading (subjunctive in 228b).

To finish this section on quantifiers preceded by a determiner, note that interestingly the same restrictions on the type of quantifier apply as those we encountered in nominals where pronouns combine with quantifiers (e.g. *we two* or *the two of us*): only cardinals are allowed.¹⁷⁸ In the case of the pronouns, there was no doubt about the predicative status of the quantifier, given that pronouns, unlike nouns, are referential elements (entities). This can be taken as evidence for a predicative analysis of quantifiers in definite nominals like the ones we are discussing, where quantifiers also co-appear with a referential element (in this case a definite article or a demonstrative), despite the reasons for these restrictions not being clear. A suggestion could be that it is a restriction imposed by referential elements: as this type of element needs to be identifiable, they only admit being modified by precise quantities, such as those denoted by cardinals, but not by vague quantities like those denoted by weak quantifiers such as *many* or *few*.

3.4.3.4 Predicative QP within indefinite nominals

In parallel with QPs that predicate of a DP as in *Els colons arribaven a milers* ‘Colonists arrived by the thousand’, where *milers* predicates of *els colons* through the preposition *a* (recall §3.4.2.2 above), we find examples of predicative QPs that predicate of a NP through a preposition as well: *Arribaven colons a milers* (in this case *milers* predicates of *colons*).¹⁷⁹ Some more examples are given below:

- (229) a. Guanyava diners a cabassos. [DIEC2, *cabàs*]
 earned_{3sg} money in baskets
 ‘(S)he earned money in great amounts.’
- b. N’hi ha a cents, a centes. [GDLC, *cent*; DIEC2, *cent*]
 NE-there has to hundreds_{m,pl} to hundreds_{f,pl}
 ‘There are hundreds (of them).’
- c. En tenen a mils.
 NE have_{3pl} in thousands
 ‘They have thousands (of them).’

¹⁷⁸ Recall the discussion on §3.4.2.1 above.

¹⁷⁹ We had actually seen an example of this type of predicative QP in fn. 171, ex. (ib).

- d. comprar taronges a milers. [DIEC2, *miler*]
 to-buy oranges in thousands
 ‘to buy oranges by the thousand’
- e. Dos homes distribuïen cocaïna en grans quantitats en aquella zona.
 two men distributed_{3pl} cocaine in great quantities in that area

The restrictions mentioned in §3.4.2.2 above on the type of QP that enters this predication relationship mediated by a preposition apply here as well, just as expected: when the preposition is *a*, the quantifier must be plural—e.g. **N’hi ha a mil*—and rejects any modifier—e.g. **N’hi ha a dos mil(s)*—(cf. the well-formed non-predicative counterpart *N’hi ha mil* ‘There’s one thousand (of them)’ or *N’hi ha dos mil* ‘There are two thousand (of them)’). Moreover, the nominal in which this predication takes place is always an internal argument, usually the direct object of a transitive verb but also the subject of unaccusative verbs as in *Arribaven colons a milers*.

However, there is an important difference with respect to the cases where the QP predicates of a DP: given that the subject here is not a DP but an NP (i.e. *colons*), the QP does not give rise to a secondary predicate in the sentence but remains as a predicate within the indefinite nominal: it is a case of internal nominal predication, in which the NP and the QP stay within the nominal and syntactically behave as part of the same constituent. As illustrated by the previous examples (see 229b,c), the NP can be pronominalised by *en* just like in any quantitative nominal, where the QP is not predicative (similarly, we could have *N’arriben a milers*, *En guanyava a cabassos*, *comprar-ne a milers* or *Dos homes en distribuïen en grans quantitats en aquella zona*, where *en* would correspond to *colons*, *diners*, *taronges* and *cocaïna*, respectively). In contrast, the predicative QP cannot be pronominalised independently (see 230) and must immediately follow the NP (see 231), which indicates that the QP is not an independent constituent but part of the object nominal:¹⁸⁰

- (230) a. **Hi arribaven colons*. (where *hi* = *a milers*)
 b. **N’hi tenia*. (where *hi* = *a mils*)
 c. **comprar-hi taronges* (where *hi* = *a milers*)

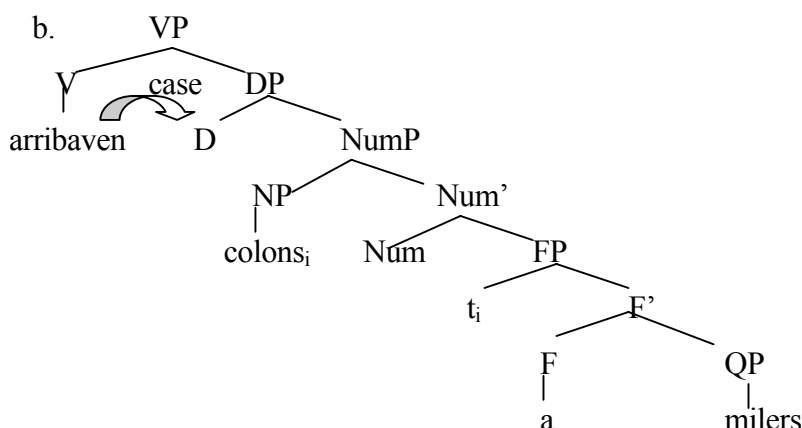
¹⁸⁰ It must be noted that *en grans quantitats* does not have the same behaviour, perhaps because it has become a kind of manner modifier similar to other expressions such as *en abundància* ‘in abundance’ or *abundantment* ‘abundantly’ or even *a l’engròs* ‘wholesale’. Observe the well-formedness of (i) (cf. 231):

(i) Dos homes distribuïen cocaïna en aquella zona *en grans quantitats*.
 two men distributed_{3pl} cocaine in that area in great quantities

- (231) a. *Arribaven *colons a l'oest a milers*.
 arrived_{3pl} colons in the-west in thousands
 ‘In the West arrived colons by the thousand.’
- b. *Compren *taronges cada setmana a milers*.
 buy_{3pl} oranges every week in thousands
 ‘They buy oranges by the thousand every week.’

The starting structure of the nominal is an FP in which the predicate is the QP, the subject is the NP and F⁰ is realised as the preposition *a* or, in some cases, as *en* (i.e. when QP is an expression containing *quantitat* ‘quantity’—as in (229e)—or *nombre* ‘number’—*en gran nombre*). Like before, no KP is merged to the structure, and the QP stays in situ (it has its number and gender features valued and no Case feature to be valued). The NP will need to have its Case feature valued from outside the nominal by the verb (the other features are already valued). But verbs select arguments, which we claim to be always DPs, so before V can be added to the structure, two nominal functional projections must be merged for the FP to become a nominal argument: NumP (it values its number feature by Agree with the NP, the closest goal, which raises to Spec NumP) and subsequently a DP projection on the top. The Case feature of the NP is valued by V through D: V values the Case feature in D and by Agree with NP, the Case feature of the NP becomes valued as well. The whole derivation is represented below:

- (232) a. Arribaven [_{DP} colons a milers]



3.5 Hidden partitives or non-partitives?

In the previous sections an analysis of partitive and non-partitive nominals, reflecting their similarities and their differences, was presented and argued. The two types of nominals are indefinite DPs, where the quantifier is generated very low in the structure, in the complement position of a functional projection FP, and the main difference derives from the selectional properties of the quantifier: QP selects a DP in partitives but an NP in quantitatives, which are inserted in Spec FP. The Case needs of the embedded DP and NP require the presence of an internal Case projection in the structure, whose head is overtly realised as *de/of* obligatorily in partitives and only in some cases in quantitatives depending on various factors. In both types of nominals, QP raises up past the noun to Spec Num and up to Spec DP. However, this latter movement does not always take place: it does in partitives and in a subset of quantitatives, those that yield a specific interpretation; but if the interpretation is non-specific, QP ends up in Spec NumP.

Partitives have thus far been clearly distinguished from quantitatives on the surface because of the presence of an internal definite determiner, which is always preceded by a prepositional element *de/of* in the sequence (e.g. *tres de les postals* ‘three of the postcards’). This contrasts with the lack of a definite determiner in quantitatives and the variation in the presence of *de* (e.g. *tres postals* ‘three postcards’, *un munt de postals* ‘a lot of postcards’).

However, there are nominals that do not look like ordinary partitives (they do not contain an embedded definite determiner preceded by *de*), which nevertheless have been considered by some authors as partitives because of their partitive interpretation: they are in principle instances of the so-called *hidden partitives* or *covert partitives*. Observe the nominals in brackets in the examples below:

- (233) a. Nosal·tres tenim dos cotxes. [Un cotxe] el faig servir jo, l’altre el meu marit.
 we have_{1pl} two cars one car it use_{1sg} I the-other the my husband
 ‘We have got two cars. One car is used by me, the other by my husband.’

- b. Después ayr rebí quatre lletres de vostra senyoria, [les dos] de·II·de abril, ý altra de·VI·ý·altra de·XX·, que...

(*Epistolari d'Hipòlita Roís de Liori i d'Estefania de Requesens* [1525-1549])

'The day before yesterday, I received four letters from your ladyship, two of them [lit. the two] from April 2, another from the 6th and another one from the 20th, that ...'

In (233a), the indefinite nominal *un cotxe* (lit. one car), which has the appearance of a quantitative, is actually interpreted as equivalent to the partitive nominal *un dels cotxes* 'one of the cars' given that in the previous sentence a set of two cars is introduced and *un cotxe* is understood as belonging to it (the nominal *un cotxe* is D(iscourse)-linked to the nominal *dos cotxes*).¹⁸¹ This interpretation as a partitive has led some authors to propose a partitive structure for this nominal, where part of the structure is covert (Cardinaletti and Giusti 2006, Gutiérrez 2008). However, as suggested in Chapter 1, I will claim that this partitive interpretation has only a discursive source and that the structure of *un cotxe* is the one corresponding to a quantitative nominal. The conclusion is then that this is not a case of a hidden partitive, but it is a non-partitive.

In (233b), the definite nominal *les dos* (lit. the two) is interpreted as equivalent to the partitive nominal 'two of them': it denotes a subset of the set *quatre lletres* 'four letters' previously mentioned in the discourse to which it is anaphorically linked. The partitive interpretation of the sequence 'definite determiner + cardinal' is a common phenomenon in old Romance languages, where examples with an overt embedded DP preceded by the preposition *de* are attested as well (they have the form 'D + cardinal + *de* + DP', like ordinary partitives but preceded by a definite determiner). This type of example has been analysed by Bosque and Picallo (2009)¹⁸² as partitive nominals, where the determiner preceding the cardinal is a pronominal that doubles the DP denoting the set from which the subset is extracted: the embedded DP (which sometimes is deleted as in 233b) and also the DP antecedent to which the nominal is linked. I will suggest an alternative analysis in which this determiner is not a pronominal but a specificity marker of the partitive nominal reflecting the [+Spec] feature the partitive quantifier inherits from the embedded DP as

¹⁸¹ Recall the discussion in Chapter 1, §1.1.1. Example (233a) corresponds to example (21b) there.

¹⁸² Example (233b) is taken from Bosque and Picallo (2009), corresponding to their example (1).

suggested in §3.4.1.3 above.¹⁸³ This partitive nominal with an overt specificity marker can have its embedded DP covert as in (233b), in which case it becomes an instance of a hidden partitive.

In the next two sections each type of nominal illustrated in (233) will be described, the previous accounts will be revised and the alternative analysis just outlined will be developed.

3.5.1 Indefinite nominals with a partitive interpretation

In the early years of Generative Grammar there were accounts that attributed an underlying partitive structure for all indefinite nominals, both partitives such as *some of the people* or *three of the cats* and quantitatives such as *some people* or *three cats* (Jackendoff 1968, Selkirk 1970, Bresnan 1973). In the latter, part of the structure was covert: the preposition and the definite article had been deleted in order to obtain the surface string ‘Q+N’. This is known as the Hidden Partitive Hypothesis (HPS).¹⁸⁴

A few years later Selkirk (1977) provided strong arguments for abandoning the HPH, and since her paper, a Simple Noun Phrase Hypothesis (SH) has commonly been adopted in the literature on indefinite nominals, according to which quantitatives have a different structure than partitives and contain no covert definite article and usually no prepositional element either. Her arguments are based on different cases in which deriving quantitatives from partitives yields ungrammatical results (see *a*, *b* and *d* below) or in which a contrast shows up between partitives and quantitatives with respect to extraction that is unexpected if these two types of nominals have the same structure (see *c*):¹⁸⁵

a. Ungrammatical combinations of mass quantifier with countable noun as in (234b) would need ad hoc constraints in an HPH but are instead easily and naturally ruled out in an SH by applying the simple condition on agreement between Q and N: quantifiers and nouns both have to be either countable or mass in quantitatives, but that is not the case in partitives as illustrated in (234a), where Q does not agree with N.

¹⁸³ Gutiérrez (2008: Ch. 4, §4) reaches similar conclusions, although she suggests it is a kind of definiteness marker: according to this author the definite feature of the embedded DP percolates to the top maximal projection in partitive nominals (recall fn. 151 above), which in this case would be overtly realised as the definite article.

¹⁸⁴ This name is attributed to Selkirk (1977).

¹⁸⁵ All examples here are taken from Selkirk (1977) but are only a selection of the data provided in her paper, and in the case of (235-237) and (239) they have been slightly simplified.

(234) a. She doesn't believe *much of that story*.

We listened to *as little of his speech* as possible.

How much of the frescos did the flood damage?

b. *She doesn't believe *much story*.

*We listened to *as little speech* as possible.

**How much frescos* did the flood damage?

b. Ungrammatical combinations of a singular quantifier and a noun that is conjoined, that is a collective noun or that is modified by a semantically plural adjective would not be easily accounted for in the HPH, even if the change from plural to singular number in the noun applies as in deriving *one book* from *one of the books*; in contrast, the SH easily rules them out by applying the simple condition on agreement between Q and N:¹⁸⁶

(235) a. One of her brothers and sisters was arrested for disturbing the peace.

b. *One brother and sister was arrested for disturbing the peace.

(236) a. One of the {cattle/people/womenfolk} was dying of thirst.

b. *One {cattle/people/womenfolk} was dying of thirst.

(237) a. One of the consecutive blasts of the whistle was enough to wake her from a deep sleep.

b. *One consecutive blast of the whistle was enough to wake her from a deep sleep.

c. Ungrammatical extraposition from a N complement in partitives—see (238a)—but not in quantitatives—see (238b)—can also be accounted for more easily in the SH analysis than in the HPH analysis:

(238) a. ?*Two of those reviews have been reprinted *of Helen's first symphony*.

b. Two reviews have been reprinted *of Helen's first symphony*.

¹⁸⁶ The change in number of the noun was suggested by Jackendoff (1968) to avoid ungrammatical examples such as **one books*.

According to Selkirk this contrast is structural and is to be found in the different depth of the N complement of *Helen's first symphony*: in partitives it is “two cycles down” whereas that is not the case in quantitatives. In Chapter 1, §1.3 and especially §1.8.2, we reached the conclusion that the difference between partitives and quantitatives was the presence only in the former of an internal DP, which acts like an island for extraction. In any case there is a syntactic difference between these two types of nominals that invalidates (or at least substantially weakens) any analysis that attributes them the same underlying structure.

d. Ungrammatical sequences of two weak quantifiers preceding the noun as a result of deriving quantitatives from partitives would again require a more complex explanation in the HPH that allows deletion of the embedded definite determiner in some cases as in *many objections* but not in examples like those in (239) (cf. examples in (240); the SH can account for these data by applying a simple constraint on the combination of weak quantifiers in quantitatives.

(239) a. *several twenty of his roses that were sick

b. *three nine planets of the solar system

c. *few many questions

d. *any many answers

(240) a. several of those twenty of his roses that were sick

b. three of the nine planets of the solar system

c. few of her many questions

d. any of their many answers

However, despite all Selkirk's arguments in favour of attributing a different structure to partitives and to quantitatives, there are two recent proposals in the literature that claim an analysis of indefinite nominals of the HPH type: Cardinaletti and Giusti (2006), and Gutiérrez (2008).¹⁸⁷

Recall that Cardinaletti and Giusti (2006) defend the idea that all indefinite nominals, both quantitatives and partitives, are QPs where Q always selects two

¹⁸⁷ They were already briefly described in Chapter 1, §1.1.1.

arguments: a NP and a PP—which they call *partitive PP*. Sometimes one or even both of these arguments is covert (in the case of quantitatives, the PP is always covert). The difference between partitives and quantitatives is captured through the notion of D-linking (Pesetsky 1987): they have the same structure ‘Q+NP+PP’, but they differ in that the partitive PP is D-linked in partitives whereas it is not in quantitatives. This means that whenever an indefinite nominal has a partitive interpretation, it is considered to be a partitive, with a D-linked PP, no matter if the PP is covert as in the nominal *un cotxe* ‘one car’ in (233a) above or if even the NP is covert as well as in *un* in the following example (which is like (233a) except that the noun *cotxe* has been deleted in the nominal *un cotxe*):

- (241) Nosaltres tenim dos cotxes. [Un] el faig servir jo, l’altre el meu marit.
 we have_{1pl} two cars one it use_{1sg} I the-other the my husband
 ‘We have got two cars. One is used by me, the other by my husband.’

By postulating two nouns in the structure of these indefinite nominals, Cardinaletti and Giusti’s (2006) analysis does not generate the ungrammatical examples from Selkirk’s argument **d** as they do not consider the possibility of partial deletion for the partitive PP (this PP can only be deleted as a whole). However, precisely because they have two nouns in the structure, one wonders what the first noun would be given the ungrammaticality of examples in arguments **a** and **b**, especially under their non-distinctness requirement that ensures the lexical identity between the two nouns. In the case of examples in **a**, it has already been noted that Cardinaletti and Giusti do not deal with entity partitives, so we do not know whether they would postulate a double noun structure for this type of partitive as well or how they would treat them. With respect to the examples in **b**, maybe the non-distinctness requirement could allow partial lexical identity if the quantifier is singular: so when there is a coordination of two nouns, N1 could be any coordinated noun (either *brother* or *sister* in 235); in the case of collective nouns, N1 could be a single member of the group denoted by the collective noun (*cow* or *bull* / *person* / *woman* in 236); and in the case of semantically plural adjectives, the idea would be that N1 does not need to be modified. This is illustrated below:

- (242)a. One {brother/sister} was arrested for disturbing the peace.
 b. One {cow/bull/person/woman} was dying of thirst.

- c. One blast of the whistle was enough to wake her from a deep sleep.

The problem would be that the partitive PP could not be overt at the same time as the NP—at least in (242a) and (242b) (in 242c it would in principle be possible but redundant and highly unnatural):

- (243) a. *One {brother/sister} of her brothers and sisters was arrested for disturbing the peace.
 b. *One {cow/bull/person/woman} of the {cattle/people/womenfolk} was dying of thirst.
 c. ?One blast of the consecutive blasts of the whistle was enough to wake her from a deep sleep.

Moreover, Cardinaletti and Giusti's analysis cannot account for the data on extraction from argument *c* given that they propose the same underlying structure, unless they consider that in the ungrammatical partitive example the N complement is extracted from within the PP (it modifies N2) whereas in the grammatical example it is extracted from the NP (it modifies N1). However, if N1 can be modified in quantitatives, we would expect the same N1 to be modified in partitives as well, contrary to fact. Observe the ungrammatical example in (244) (where no extraposition has taken place):¹⁸⁸

- (244) *Two reviews of *Helen's first symphony* of those reviews have been reprinted.

We had already seen that a two-noun structure for partitives was undesirable and highly problematic. In this section we have provided some more arguments to discard it in connection with the proposal of a unitary underlying structure for both partitives and quantitatives.

If we turn to Gutiérrez's analysis, it has the advantage that it only proposes one noun in the structure in both partitives and quantitatives and that two different structures are attributed to these two types of nominals: in partitives Q selects a DP whereas in quantitatives Q selects an NP. However, for all indefinite nominals with a partitive interpretation, Gutiérrez (2008) proposes the same structure as for partitives, so in cases of

¹⁸⁸ Though redundant, the partitive where the N complement modifies N2 is in principle well-formed:

(i) ?Two reviews of those reviews of *Helen's first symphony* have been reprinted.

those that look like quantitatIVES, she assumes that the embedded definite determiner is null or, if only the quantifier is expressed, that the whole embedded DP is null. The structures this author proposes for the so-called hidden partitives are represented below:

- (245) a. [_{QP} Q [_{DP} e NumP]] ex. *un cotxe* with partitive interpretation as in (233a)
 b. [_{OP} Q [_{DP} e]] ex. *un* with partitive interpretation as in (241)

This empty category *e* in the nominal establishes an anaphoric relation with an antecedent in the discourse that denotes the set from which the quantifier picks out the subset (*dos cotxes* in the examples mentioned: 235a and 241). Given that the definite article is not realised, no prepositional *de* is required, and so agreement takes place between Q and the noun in NumP.

However, given Selkirk's arguments against this kind of analysis in the lines of the HPH, Gutiérrez's proposal seems inadequate as it fails to account for the data presented above in arguments **a-d**. Gutiérrez only deals explicitly with the extraction phenomena, but the account is not very explanatory: she attributes the possibility of extraction in hidden partitives to the lack of overt *de*, which she considers as a Case marker, although she suggests that the KP is equally projected; this contrasts with ordinary partitives in which *de* is overtly realised and extraction is not possible. Given that pseudopartitives contain an overt Case marker *de* and extraction is possible in them (see 246a vs. 246b), she suggests that extraction not only depends on the realisation of the Case marker *de* but also on the presence of a DP versus an NP (or NumP).

- (246) a. *A lot of reviews* were published today of *Helen's first symphony*. quantitative
 b. **A lot of the reviews* were published today of *Helen's first symphony*. partitive
- Selkirk (1977: 306)

The conclusion is that although in hidden partitives a DP is present (though with an empty head), *de* is not realised, so extraction is possible: it seems it is the realisation of both the preposition and the determiner which precludes extraction.

However, how can we distinguish between the complete lack of a projection and the presence of a silent projection if the results are the same? Or put it another way, what is the evidence for an empty K but especially for an empty determiner in the so-called hidden

partitives? According to Gutiérrez the empty D requires an anaphoric relation for it to be interpreted, and that accounts for the partitive interpretation of the nominal (nominals with no partitive interpretation would have no empty D). But what would be the conditions in which a determiner could be not realised in a DP? As far as I have observed, there are no other cases of empty Ds that could behave similarly.¹⁸⁹ One also wonders what the anaphoric relation consists of in this particular case, where only part of the nominal, that is, just the determiner, is related to another nominal (the antecedent).

Moreover, the partitive interpretation of these nominals in Gutiérrez's analysis implies that the Q is high in the structure and selects a DP so that it gets a strong interpretation (they are specific). But a closer look at the data shows that the supposed hidden partitives are allowed in existential contexts contrary to partitives, which prove they are not specific.¹⁹⁰

(247) a. Los niños estaban agotados y hubo *algunos* que se fueron pronto a casa.

'The children were exhausted and there were *some* (of them) that went back home early.'

b. Los turistas entraron en el museo. Había *varios* con cámaras de fotos.

'The tourists went in the museum. There were *several* with cameras.'

¹⁸⁹ For example, in definite nominals that refer to previously mentioned constituents such as *les patates* 'the potatoes' in (i), the definite determiner cannot be dropped, no matter if it is understood as coreferential with the antecedent:

(i) —Encara estàs menjant *les patates*? Però si ja et porto la carn...
'You're still eating *the potatoes*? But if I am bringing the meat already...'
—Ja gairebé estic, en dues forquillades m'acabo **(les) patates*.
'I'm almost done; two forkfuls and I'll finish *the potatoes*.'

The verb *acabar-se* 'to finish off' requires a definite object and D must be overt, but even if the verb admitted an indefinite nominal such as *examinar* 'to examine', no definiteness would be implied even if referred to a previous constituent in the discourse:

(ii) *Les dues alumnes alemanyes* van arribar una mica tard a l'examen i l'alumne anglès gairebé al final. El professor va examinar **(les) dues alumnes alemanyes* el mateix dia, però l'alumne anglès un altre dia.
'*The two German students* were a bit late to the exam, and the English student arrived almost at the end of it. The teacher examined *the two German students* on the same day, but the English student on another day.'

The use of a definite DP *les dues alemanyes* in the first sentence implies that there are no other German students in the class, so in the second sentence an empty determiner should be enough to establish an anaphoric relation with the DP and interpret them as definite, contrary to fact.

¹⁹⁰ Examples in (247) are similar to those in (i), which are provided by Gutiérrez (2008: 199, ex. 61) as an illustration of hidden partitives. She considers the nominals in italics in (i) (*algunos* and *varios*) as partitives as they denote a subset of the set introduced in the first part of the sentence (*niños* and *turistas*, resp.):

(i) a. Los niños estaban agotados y *algunos* se fueron pronto a casa.
'The children were exhausted and *some* (of them) went back home early.'
b. Los turistas entraron en el museo. *Varios* llevaban cámaras de fotos.
'The tourists went in the museum. *Several* (of them) had cameras with them.'

However, if *algunos* and *varios* were true partitives as claimed by Gutiérrez, we would not expect (247) to be well-formed, for partitives are rejected in *there*-sentences.

Finally, a strong piece of evidence against analysing these nominals as hidden partitives comes from Catalan data. The heavy restrictions on partitive quantifiers that we find in Catalan as illustrated in (248a,b) do not apply to these apparent hidden partitives: see (248c,d) for nominals with the form Q+N and (248e,f) for nominals with the form Q.

(248) Els nens estaven esgotats. Quan el mestre va tornar a l'aula...

‘The children were exhausted. When the teacher went back to the classroom, ...’

a. Va trobar {**uns deu* / **un munt* / **una desena*} *dels nens* dormint.

‘He found {about ten / a lot (of them) / a ten} of the children sleeping.’

b. **Va trobar pocs dels nens* que estiguessin fent l'activitat.

‘He found few of the children that were doing the exercise.’

c. Va trobar {*uns deu nens* / *un munt de nens* / *una desena de nens*} dormint.

‘He found {about ten children / a lot of children / a ten of children} sleeping.’

d. Va trobar *pocs nens* que estiguessin fent l'activitat.

‘He found few children that were doing the exercise.’

e. En va trobar {*uns deu* / *un munt* / *una desena*} dormint.

‘He found {about ten (of them) / a lot (of them) / a ten (of them)} sleeping.’

f. En va trobar *pocs* que estiguessin fent l'activitat.

‘He found few (of them) that were doing the exercise.’

Notice that in Catalan the pronoun *en* must be used in the last two examples if the noun is not overt, which is further evidence that we are dealing with quantitative nominals, rather than with partitive nominals.

To conclude this section, given Selkirk's strong arguments against the Hidden Partitive Hypothesis plus the two additional arguments I have just presented, I claim that examples of indefinite nominals that look like quantitatives (they have the form ‘Q + NP’) are not partitives no matter if they are interpreted as partitives: they behave syntactically as quantitatives and have a quantitative structure. As it was suggested in Chapter 1, §1.1.1, the notion of partition is not exclusive to the partitive construction but can be expressed by different types of nominals (the *among* construction, or some N modification as in *three children in the class* $\cong$ ‘three of the children in the class group’ or *many books of my private library* $\cong$ ‘many of the books of my library’) or even discursively, as is the case of the examples discussed in this section. Therefore, a partitive interpretation of a nominal is not a

sufficient condition for considering this nominal as a partitive and attribute it a partitive structure.

Finally, note that assuming a quantitative structure for the nominals we have been discussing is a considerably simpler analysis, always preferable from a theoretical point of view, which avoids the need to establish restrictions on empty determiners or extra conditions that allow us to distinguish between partitives and quantitatives in order to account for Selkirk's data.

3.5.2 Definite nominals with a partitive interpretation¹⁹¹

In this section we will discuss the analysis of nominals that contain a definite determiner followed by a cardinal such as *les dos* (lit. the two) but are interpreted in old Catalan as partitives ('two of them'): recall (233b) above, repeated here as (249a) for convenience. Examples (249b-d) show that this partitive interpretation of definite nominals with the form 'article + cardinal' was not exclusive to Catalan but was common in other old Romance languages as well.¹⁹²

(249) a. [OCat] Despús ayr rebí quatre lletres de vostra senyoria, **les dos** de·II·de abril, ý altra de·VI·ý·altra de·XX·, que...

(*Epistolari d'Hipòlita Roís de Liori i d'Estefania de Requesens* [1525-1549])

'The day before yesterday, (I) received four letters from your ladyship, two of them [lit. the two] from April 2, another from the 6th and another one from the 20th, that ...'

b. [OFr] Des trois **les deux** son morts (Corneille, *Horace*)¹⁹³

'Of the three, two of them [lit. the two] are dead'

c. [OIt] Tre specchi prenderai, e **i due** rimovi (Dante, *Paradiso* II, 97)¹⁹⁴

'Three mirrors (you) will take, and two of them [lit. the two] (you) shall remove'

¹⁹¹ All the examples in this section are taken from Bosque and Picallo (2009).

¹⁹² Note that OCat = Old Catalan, OFr = Old French; OIt = Old Italian; OSp = Old Spanish.

¹⁹³ Quoted in Togeby (1982).

¹⁹⁴ Quoted in Rohlfs (1969: 35).

- d. [OSp] ...rasqué todas las paredes y no había blanco más de **las tres**, y **la una** era negra
(Alonso de Contreras, *Discurso de mi vida* [1597])

‘...(I) [scraped] all the walls and there was white on no more than three of them [lit. the three], and one of them [lit. the one] was black’

Examples of partitive nominals preceded by a definite article with an embedded DP (with the form ‘article + cardinal + preposition + DP’) are attested as well in old Romance:¹⁹⁵

- (250) a. [OCat] e fonch-los respost que eren hòmens ben aperssonats: especialment **lo un d’ells** era molt gran de la persona, e havia molt bona cara

(*Curial e Güelfa* [XV cent] 235, 2.104)

‘and answered them that (they) were well-personed men; in particular one of them [lit. the one of them] was very big of person, and (he) had very good face’

- b. [OSp] A la primera arremetida mataron y tomaron a **los dos de los soldados**

(F. Pedro de Aguado, *Historia de Santa Marta y Nuevo Reino de Granada* [1568])

‘At the first attack (they) killed and took two of the soldiers [lit. the two of the soldiers]’

According to Bosque and Picallo (2009), the definite article that precedes the cardinal in all the preceding examples is not a determiner but a pronominal which doubles the DP that denotes the set of elements from which the cardinal picks out a subset. These authors propose a partitive structure in the lines of Eguren (1989), where a Q selects a PP that has a DP complement, but with the particularity that the embedded DP is a ‘big DP’ containing the clitic:

¹⁹⁵ As indicated by Bosque and Picallo (2009) and for the sake of completeness, note that examples with no definite article like in contemporary varieties were also found in old Romance:

(i) a. [OCat] Guanyava’s visitant **dos de les sglésies nomenades**.

‘He gained [INDULGENCIAS] visiting two of the named churches.’

[*Les memòries del cavaller valencià Gaspar Antist*, 254, 19]

b. [OSp] E quando lo supo su padre, llamó a **tres de sus cavalleros** de que fiava mucho.

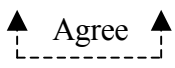
‘And when his father learned of it, he called three of his knights that he trusted a lot.’

[Anonymous, *El baladro del sabio Merlín con sus profecías*, 1313-1498 (ed. Isabel Hernández González, CILUS (Salamanca) 1999)]

(251) [QP cardinal [PP P [BIG DP clitic [D' D NP]]]]

This clitic raises from its basic position in Spec DP to Spec PP and from this higher position, it agrees with the cardinal in gender, number and Case, as represented below:

(252) [QP cardinal [PP clitic_i P [BIG DP t_i [D' D NP]]]]



There is a final movement in the derivation: as this clitic displays the formal features of a determiner, hence a proclitic in these Romance languages, it morpho-phonologically incorporates to the cardinal head, and thus the surface order where the clitic precedes the cardinal is obtained.

The analysis just outlined applies to the examples with an overt PP like (250) but also to the examples where the PP is not realised like (249). In the latter, Bosque and Picallo suggest that a PP-deletion has taken place (similar to VP-deletion in sentential structures) and that the “determiner-pronoun” is anaphorically linked to an antecedent in the discourse which denotes the set of elements from which the partition is made. For the cases in which no article appears in either old or contemporary Romance, they suggest that it is possibly the same construction but with a phonologically null definite pronoun, which could be responsible for the definiteness effect displayed by partitives. In their own words: “Our conjecture may be related to the apparent definiteness triggered by partitives. In fact, the effect might be a straightforward consequence of the syntax of this construction”.

Indeed, the definiteness effect (or actually, the specificity effect)¹⁹⁶ seems to be the key factor for this article’s preceding the cardinal in these partitives: I will propose an alternative analysis according to which this definite article is not a pronominal but a specificity marker under the assumption that all partitive nominals are specific (in Enç’s terms, hence ‘specific’ in the sense of being presuppositional). Such an analysis fits the proposal defended in this thesis perfectly: the overt D would just be the realisation of the [+Spec] feature inherited from the embedded DP (recall that Q inherits the [+Spec] feature from the embedded DP and, by agreement with the top D, the whole DP becomes [+Spec]).

¹⁹⁶ Recall §3.4.1.3 above.

Next some arguments against considering this article as a pronominal will be provided. The arguments by Bosque and Picallo against an analysis as a specificity marker will be revised as well.

First of all, as a pronominal that doubles a DP, it is very striking that it does not share with its “doublee” number nor Case nor even person features contrary to the usual behaviour of clitics with respect to their antecedents: Bosque and Picallo need to stipulate that within the big DP the clitic does not agree with the DP in gender, number nor person and, what is more unexpected, it does not get the Case assigned to the big DP by the preposition.

The following example, involving a personal pronoun, shows that the article and the embedded DP share neither number nor person features:

- (253) [OCat] E axí faç moltes gràcies al senyor rey, qui no volgué que per tan poca cosa **lo**
un de nós se perdés, o per ventura abdosos, car de les coses que són per venir
 Deus tot sol sap la fi. (*Curial e Güelfa* [XV cent] 235, 2.104)
 ‘And this way I make many thanks to the lord king, who did not want that for
 such a small thing one of us [*lit.*: the one of us] got lost, or by chance both,
 because of the things that are to come God alone knows the end.’

In (253) the article *lo* is third person singular just like the cardinal *un* (as indicated by the form of the verb *se perdés*), which contrasts with the first person plural pronoun *nós* in the embedded DP.

Moreover, if this article is really a pronoun, it not only has a very special behaviour with respect to agreement facts as just noted, but it is also peculiar semantically and syntactically: there is no way it can be proved that it refers to an antecedent in the discourse or to the embedded DP on its own, although Bosque and Picallo state that “the determiner is interpreted pronominally. This pronominal reading is salient in examples (1)-(4)” (our 249a-d), where the determiners preceding cardinals are claimed to be anaphorically linked to a the numeral QP or DP previously introduced. The existence of a discourse link between these nominals and the partitive nominals that follow them in the text is not a matter of controversy, but from this link it does not follow that the determiner in these partitives is a pronominal. Also, if these determiners are really clitics that double a DP and they can move outside the PP that selects this DP as suggested in the analysis by Bosque and Picallo, one wonders why they

cannot raise further and cliticise onto the verb, as clitics usually do: why are they syntactically confined within the partitive nominal?

Another question that arises is why examples of partitive nominals preceded by a definite article are only found with cardinals and there are no cases attested with indefinite quantifiers such as *many* or *some*—with the form ‘D + weak Q (+ *de* + DP)’. This reminds us of the examples of quantitatives preceded by a determiner or involving pronouns, which were restricted to cardinals as well (e.g. *els tres nois* ‘the three boys’ vs. **els molts nois* ‘the many boys’; *nosaltres tres* ‘we three’ vs. **nosaltres molts* ‘we many’). Although we did not find a good explanation for this restriction when dealing with these nominals, it seems that the same account would apply to partitives preceded by articles: for some reason, only cardinals can be preceded by a definite determiner, no matter the type of nominal. An analysis of these definite articles as overtly realised Ds in the top DP covers all the cases mentioned: quantitatives and partitives (although in the latter it is not a true determiner but a specificity marker). If in partitives the article is analysed as a pronominal raising from within the embedded DP, the generalisation just stated is invalid (and it cannot be extended the other way around, by analysing all these articles as pronominals: in quantitatives there is no embedded DP that the clitic could double).

For all these reasons, I conclude that the alternative that analyses these determiners as specificity markers in partitives looks more plausible than considering them as pronouns, especially under the proposal defended in this thesis in which the top DP gets the [+Spec] feature from the embedded DP through agreement with Q. Moreover, this account as a specificity marker has the advantage of satisfying anti-uniqueness¹⁹⁷ just like the pronominal account but has none of its problems or peculiarities: given that the article is a specificity marker and, therefore, is not a true D, the anti-uniqueness condition is not violated because this restriction involves only determiners (in Bosque and Picallo’s account it was claimed that anti-uniqueness was not violated because the article was actually a pronoun, so again not a true determiner).

However, as discussed earlier in this thesis, we have to distinguish between specificity in Enç’s terms (according to which all partitives are specific because they presuppose the existence of a set of elements from which the partition is made) and the specific or non-

¹⁹⁷ According to Barker (1998), partitives are anti-unique and therefore they cannot be preceded by a definite article unless they are modified. This property attributed to partitives was revised in Chapter 1, §1.5.1, and it was shown that not all partitives are anti-unique (actually, most of them are not, at least in Catalan); nevertheless, the impossibility of a preceding definite article does hold for all partitives even if they have a strong reading.

specific reading of the quantifier that makes the partition (in the sense of strong or cardinal reading, respectively). We saw that some quantifiers that are allowed in partitives only admit the non-specific reading (e.g. *qualsevol* ‘any(one)’, *cap* ‘no(ne)’) and that even in that case the partitive nominal is specific as a whole (in Enç’s terms) and behaves as such in existential contexts (it is ungrammatical in *there-be* sentences). For even if the subset does not refer to a particular group of items that can be identified, the referential possibilities of the quantifiers are restricted by the DP’s referring to the set of contextualised items, and that is enough for the whole nominal to behave as specific. This is what the ungrammaticality of (254) indicates:

- (254) [CSp] *Hay tres (cualquiera) de las vacas en el prado.
 *there are three (whichever) of the cows in the meadow

Even in the presence of *cualquiera* ‘whichever’, which forces a non-specific reading of the cardinal *tres* ‘three’, the whole nominal *tres cualquiera de las vacas* behaves as specific and yields ungrammaticality in an existential context the same way the partitive nominal *tres de las vacas* does: the existence of a set *las vacas* ‘the cows’ is presupposed in both partitive nominals and “presupposition of existence is incompatible with the assertion of existence” (Enç 1991: 14).

However, Bosque and Picallo suggest that “specificity is not the right notion to appeal to in order to rule out cardinal partitives in existential sentences” based precisely on the ungrammaticality of example (254). According to these authors, if *cualquiera* is present, the partitive nominal is non-specific whereas in its absence the partitive nominal is specific. Even if that were the case, a closer look at data shows that *cualquiera* has a peculiar behaviour and yields ungrammaticality as well with a non-partitive nominal in the existential context. Compare the well-formed (255a) with the ungrammatical (255b):

- (255) a. Hay tres vacas en el prado.
 ‘There are three cows in the meadow.’
 b. *Hay tres vacas cualquiera en el prado.
 ‘There are whichever three cows in the meadow.’

From this I conclude that (non-)specificity can be kept as the right notion to account for the distribution of nominals in existential sentences: (255a) is well-formed because the nominal

tres vacas is non-specific whereas (254) without *cualesquiera* is ill formed because the nominal *tres de las vacas* is specific. In the data involving *cualesquiera* another factor intervenes that causes the ungrammatical results despite the kind of nominal: as shown by Bosque (1999), *cualesquiera* requires a modal environment to be licensed that leaves in suspension the existence of the entities it refers to, but in both (254) and (255b) there is an assertive mood (indicative) that presupposes existence. Compare them to the examples below,¹⁹⁸ where modality has been introduced by just adding a modal verb (*suponer* ‘suppose’)—see the *a* examples—or by converting the sentence into a conditional construction with a non-assertive mood—see the *b* examples:

- (256) a. Suponga que hay tres vacas (*cualesquiera*) en el prado.
 ‘Suppose there are whichever three cows in the meadow.’
 b. Si hubiera tres vacas (*cualesquiera*) en el prado....
 ‘If there were whichever three cows in the meadow...’

- (257) a. *Suponga que hay tres (*cualesquiera*) de las vacas en el prado.
 ‘Suppose there are whichever three of the cows in the meadow.’
 b. *Si hubiera tres (*cualesquiera*) de las vacas en el prado....
 ‘If there were whichever three of the cows in the meadow...’

In the right mood, the presence of *cualesquiera* does not change the results obtained in its absence: as expected, non-partitive nominals are allowed in existential contexts—see (256)—whereas partitives are not—see (257). So the contrast between (254) and (255a) is maintained, and the conclusion is that partitive nominals are always specific and, therefore, are not allowed in existential contexts.

To sum up, in this section we have discussed the analysis of nominals with the form ‘definite article + cardinal’, which are interpreted in old Romance as partitives, and we have reached the conclusion that they are hidden partitives in which the apparent definite article is actually a specificity marker. The same analysis would apply to all partitive nominals—those with a preceding article and overt ‘de + DP’, which were also present in old Romance, and even to contemporary partitives, in which the specificity marker would be always non-overt.

¹⁹⁸ I thank Josep M. Brucart and M. Lluïsa Hernanz for their judgements on *cualquiera* and for providing these Spanish examples.

As has been defended in this thesis, the specificity property that characterises partitives is inherited from the internal DP. The only difference between old Romance and contemporary Romance would be that this specificity property in the upper D^0 has become covert, probably because now the quantifier raises higher in the nominal, up to Spec DP, which is another way of marking specificity and at the same time forces D^0 to be non-overt. We have also provided arguments against an alternative analysis that has been presented recently in the literature, which claims that the article preceding the quantifier in these partitives is a pronominal that doubles the internal DP.

CONCLUSIONS

In this dissertation the syntax of partitives was studied, and the conclusion was reached that this type of nominal is more similar to non-partitive indefinite nominals (or quantitatives, as they were called here) than it seems at first sight and in contrast to what is usually claimed in the literature. Although partitives apparently have a more complex structure and semantics than quantitatives given that they have the form ‘Q + *of* + det + NP’ and denote a partition—a subset of a bigger set (*two of those children, many of my books*) or a part of a whole (*little of the wine, half of the day*)—whereas quantitatives usually have the simple form ‘Q + NP’ and denote amounts (*two children, many books, little wine, half a day*), I argued that these two types of nominals share the same basic structure and that differences between them derive mainly from the lexical properties of the quantifier involved and from the nature of the nominal phrase selected by the quantifier: a determiner phrase (DP) in partitives vs. a noun phrase (NP) in quantitatives.

The Romance languages, and especially Catalan, proved to be very valuable in providing relevant data for the analysis of partitives and indefinite nominals in general.

After the study of the data and revision of previous analyses in the literature, the following conclusions were obtained with respect to partitives:

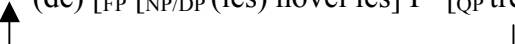
- (1) a. The partitive interpretation is semantically and syntactically determined by the relationship between the quantifier and the noun. Crucially it does not depend on the presence of an empty noun denoting the subset or part of the set or whole, respectively: partitives contain a single noun in their structure, just like quantitatives.
- b. The prepositional element has no lexical content and does not project into a PP inside the partitive construction but is a functional element that appears for licensing requirements related to Case, as it does in some quantitatives.
- c. An external definite determiner is systematically excluded in partitives but not in quantitatives because in partitives the quantifier obligatorily raises to the specifier of the top DP and it is assumed that the DP cannot be doubly filled.

- d. The internal determiner is required in partitives because it is selected by the quantifier and it has to be definite because it must refer to a presuppositional set or stuff from which the quantifier can pick out a subset or portion. It is licensed by the Case marker *de*.

Moreover, with respect to the structure of indefinite nominals in general, it was argued in favour of the following claims:

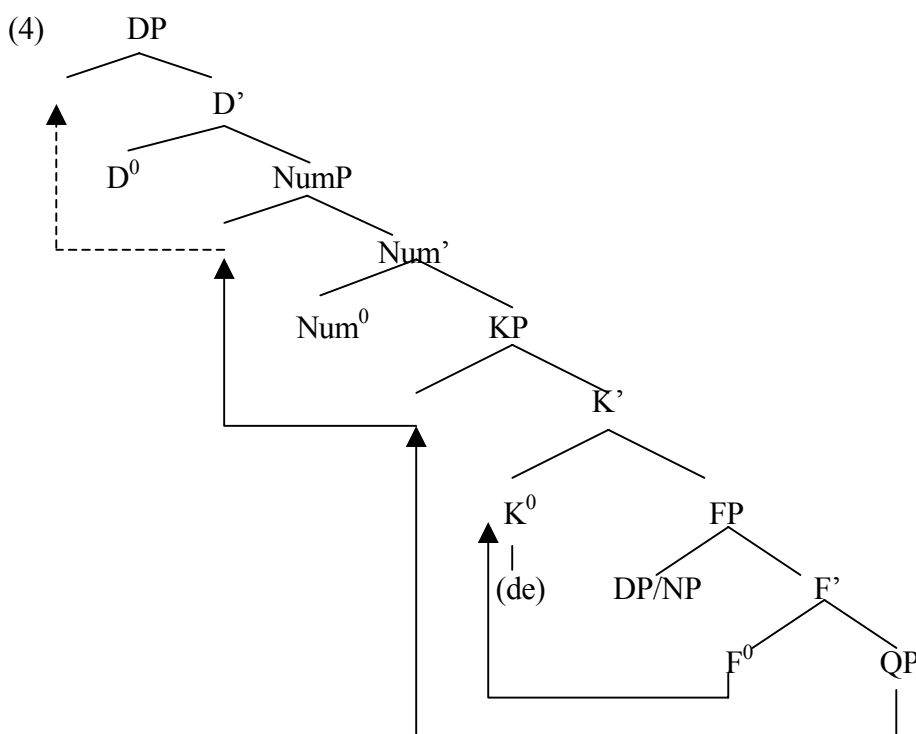
- (2) a. Quantifiers are lexical categories.
- b. There is a lexical selection relationship between quantifiers and the N. In fact, QPs select noun phrases (either NPs in quantitatives or DPs in partitives). The type of quantifier and the projection of the N it selects (NP or DP) are responsible for the partitive or quantitative meaning.
- c. The prepositional element present in partitives and some quantitatives is a functional element that appears merely for licensing conditions in order to satisfy the Case requirement of the embedded noun. This element is always projected in the structure, although sometimes it is not overtly realised.
- d. The quantitative element both in partitives and in quantitatives is generated in a low position in the tree, inside a functional projection FP that provides a position for the QP and the noun phrase selected by QP: the DP or NP is generated as the specifier of FP, and the QP is generated as the complement of F^0 .
- e. In parallel with qualitative predicate inversion within nominals (Kayne 1994, Den Dikken 1998, 2006), QP subsequently raises past the noun to a higher position in the structure, providing the right sequence of words.

This is illustrated with an example in (3), where *tres* selects the NP *novel·les* in the quantitative construction and the DP *les novel·les* in the partitive construction (where *de* must be overtly realised). The QP movement upwards past the NP/DP yields the surface sequence: *tres novel·les* and *tres de les novel·les*, respectively, as represented in (3b).

- (3) a. *tres (de les) novel·les*
 three (of the) novels
- b. [DP  (de) [FP [NP/DP (les) novel·les] F^0 [QP *tres*]]]

Although this is a typical clausal configuration and predication is the usual relationship between two maximal categories as in all the cases studied by Kayne and Den Dikken and as claimed by Corver (1998, 2001, 2009) and Corver and Zwarts (2006) for some quantitatIVES to which they extend Den Dikken's predicational analysis, here it was defended that this is not the only possibility. The lowest functional projection FP accommodates two maximal projections which are semantically related (one selects the other). It is the nature of the lexical constituents that come into relation in FP and the type of semantic relation they have that qualify the configuration: it can be predicational—as in the 'predicate inversion' examples—or it can also be quantificational, as is the case in partitives (and quantitatIVES).

In partitives and quantitatIVES, I argued that three more functional projections are merged above FP: KP (Case Phrase), NumP (Number Phrase) and the top DP (Determiner Phrase). KP is needed to provide the low DP/NP with a Case feature and, as is proposed in the predicate inversion analysis, QP must raise to Spec KP and F^0 must raise to K^0 for the latter to become active as a Case assigner (notice that *de* is a realisation of this Case assigner, which is always required to be overt in front of a DP). Like any nominal, NumP is required and the closest element to get a value for the number feature is the raised QP. Following Longobardi (1994), I considered that all arguments are DPs; thus, a DP top functional projection is added to which QP only raises in the case that it has a specific feature. The entire nominal structure and movements are represented in (4) below:



Partitives and quantitatives then share the structure and the derivation, except for the last movement, which only takes place in specific nominals. Therefore, the differences between these two types of indefinite nominals cannot be structural. Here it was argued that what distinguishes these two types of nominals is the features of the lexical material (QP, and NP or DP) and the different types of agreement relations that take place within FP. The general lines of the Minimalist Program by Noam Chomsky were assumed and especially the notion of feature valuation as the main trigger for syntactic operations. A distinction between two types of agreement operations, Agree and Concord, was introduced within the nominals studied and the notion of feature sharing was used (Frampton and Gutmann 2000).

In partitives I claimed that QP has its own number feature when starting the derivation and it does not agree with DP in FP (there is only gender Concord) but inherits the [+Spec] feature from DP. As Num⁰ above KP gets the value from QP, it is QP that determines the number of the whole nominal, which can be different from the number of the lower DP (this explains the lack of agreement between Q and N in partitives). As QP inherits the [+Spec] feature, it values the top D⁰ as specific as well (which explains why all partitives are specific) and must raise to Spec DP (which precludes the insertion of a lexical determiner in D⁰, under the assumption that DP cannot be doubly filled: either Spec DP or D⁰ can contain lexical material).

In contrast, in quantitatives QP has no number feature of its own but gets the number and the gender both by Concord with NP within FP. Num⁰ above KP gets the value from QP as it did in partitives, but in this case it matches that of NP (this explains why Q agrees with N in quantitatives in both gender and number). The specific or non-specific character of the nominal obtained depends on the value of the QP feature and the position in which it ends up in the structure: a [+Spec] QP raises to Spec DP like in partitives (the nominal is specific) whereas a [–Spec] QP raises only to Spec NumP (the nominal is non-specific, in which case the DP projection ends up with no overt lexical material in it).

Interestingly, quantifiers can be predicates as well in certain contexts, and here it was argued that the same basic structure serves as the starting point of the derivation, although the functional projections above FP vary as expected, especially when the resulting structure is a sentence instead of a nominal. Another crucial difference with respect to partitives and quantitatives is that the predicative QP usually stays in situ. Predicative QPs can predicate of a DP giving rise to a copular sentence as is the case of *molts* / *trenta* / *un munt* in (5a) or a

secondary predicate—see *a milers* / *en gran nombre* in (5b)—or just a nominal if the subject is a pronoun—see *dos* in (5c).

- (5) a. *Els meus estudiants són {molts / trenta / un munt}*.
 ‘My students are {many / thirty / a lot}.’
- b. *Els colons arribaven {a milers / en gran nombre}*.
 the colonists arrived in thousands in great number
 ‘Colonists arrived {by the thousand / in large numbers}.’
- c. *Nosaltres dos* hem de marxar.
 we two have of leave
 ‘We two must be off.’

Following Den Dikken, I claim that in predicational configurations F^0 (the relator) can be overtly realised as the copula—*són* in (5a)—or as a preposition—*a* or *en* in (5b)—or it can be non-overt—as in (5c). The subjects of these predicative QPs in (5a) and (5b) correspond to the subjects of these sentences: the DPs *els meus estudiants* and *els colons*, respectively. In (5c) the subject of the predicative QP, *nosaltres*, stays within the nominal though raises to the top DP. In all examples the predicative QP has no $[\pm\text{Spec}]$ feature and stays in situ, and it is the subject that moves to get its Case feature valued (no KP is merged to the structure). Interestingly, English has an alternative to (5c) in which the predicative QP raises past the pronoun and the subject gets its Case valued in situ by KP, as shown by the presence of *of* and the form of the pronoun: *the two of us* (cf. *we two*).

Predicative QPs can predicate of a NP as well, in which case they give rise to nominals where the QP stays in situ as in (6a), which is parallel to (5b), or moves past the NP as in (6b):

- (6) a. *Arribaven [colons {a milers / en gran nombre}]*.
 arrived colonists in thousands in great number
 ‘There arrived colonists {by the thousand / in large numbers}.’
- b. *[Els tres llibres] són meus*.
 ‘The three books are mine.’

In (6a) no KP is merged in the structure, and the subject *colons* raises to the top DP to get Case from the verb, whereas the QP stays in situ. In (6b) KP is merged and the QP raises to its

Spec to activate it as a Case assigner. As the QP has no $[\pm\text{Spec}]$ feature, it cannot value the corresponding feature in D^0 by Agree, for which the definite article *els* is inserted and value it as $[\text{+Spec}]$.

Importantly, in this dissertation QPs preceded by a determiner like *three* in *the three books* are not considered as adjectives contrary to what is often assumed in the literature: the differences with respect to *three* in *three books* are derived from their lack of the $[\pm\text{Spec}]$ feature—they are predicative QPs, as seen in (6b). Thus, there is no need to postulate a different category membership (A vs. Q).

Finally, this thesis dealt in some degree with the so-called ‘hidden partitives’, nominals that have been analysed in the literature as partitives given their semantics despite their not having the form of a partitive on the surface. There are two types: (a) indefinite, which look like ordinary quantitatives but have a partitive interpretation as they are related to an antecedent: see *un cotxe* in (7a), and (b) definite, which look like definite nominals containing a Q following D but are interpreted as indefinite and have a partitive meaning: see *les dos* in (7b).

- (7) a. Nosaltres tenim dos cotxes. [**Un cotxe**] el faig servir jo, l’altre el meu marit.
 we have_{1pl} two cars one car it use_{1sg} I the-other the my husband
 ‘We have got two cars. One car is used by me, the other by my husband.’
- b. Después ayr rebí quatre lletres de vostra senyoria, [**les dos**] de·II·de abril, y altra de·VI·y·altra de·XX·, que...

(*Epistolari d’Hipòlita Roís de Liori i d’Estefania de Requesens* [1525-1549])

‘The day before yesterday, I received four letters from your ladyship, two of them (lit. the two) from April 2, another from the 6th and another one from the 20th, that ...’

I argued that indefinite nominals like *un cotxe* in (7a) are not partitives but quantitatives despite their partitive interpretation: it was shown that syntactically, they clearly pattern with quantitatives, and it was claimed that the partition is obtained discursively. Moreover, a structure with an empty embedded determiner as proposed in the literature was shown to be problematic.

With respect to nominals like *les dos* in (7b), I argued that they are the only case of true ‘hidden partitives’, in which the definite article is not a true article but an overt realisation of the $[\text{+Spec}]$ feature located in D^0 . The difference with contemporary partitives, where no

definite article precedes the quantifier, is that in old partitives there were two possibilities: once the QP had raised to NumP and valued the top D^0 with the [+Spec] feature inherited from the embedded DP, then it could either raise to Spec DP (in which case no determiner could be inserted, as is the only option nowadays) or stay in Spec NumP (in which case a definite determiner was inserted to overtly realise the [+Spec] feature). I defended the idea that specific nominals need to have overt lexical material in the top DP, whether it is in its specifier (by QP raising) or D^0 (by the definite article insertion).

In summary, in this thesis I defended a unitary analysis of partitives and quantitatives according to which they share the same basic structure, where QP is generated in a very low position and raises past the noun. In particular, I claimed that the QP and the NP or DP are generated inside a functional projection FP: the former in complement position, the latter in Spec FP. Above FP other functional projections are merged: KP, NumP and DP—see (8):

$$(8) [\text{DP } QP_i D^0 [\text{NumP } t_i \text{ Num}^0 [\text{KP } t_i F_j^0 + K^0 (=de) [\text{FP NP/DP } t_j t_i]]]$$

Given they share the structure and derivation, I argued that the differences between partitives and quantitatives are not structural but derive mainly from the lexical properties of the quantifier involved and from the nature of the nominal phrase selected by the quantifier: a determiner phrase (DP) in partitives vs. a noun phrase (NP) in quantitatives.

The same basic structure was defended for predicative QPs: interestingly, they also start within the complement position of an FP (with DP or NP in Spec FP), although the functional categories above FP vary, especially if the resulting construction is a sentence instead of a nominal. The properties of predicative quantifiers are also different from those appearing in partitives or quantitatives.

This analysis has the advantage of covering a great amount of data and relating different types of constructions involving quantifiers within the nominal domain and beyond it as well: it not only relates partitives to other indefinite nominals and provides an account that applies to indefinite nominals in general, but it also accounts for predication uses of quantifiers both within nominals and in the clausal domain as well. Although the analysis was mainly based on Catalan data, the conclusions reached can be extended to other languages such as Romance and Germanic languages.

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CORPUSES:

BNC = British National Corpus (<http://www.natcorp.ox.ac.uk/>)

CWIC = Contemporary Written Italian Corpus, created at Griffith University (Australia) (<http://cwic.sp.com.au>)