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Getting “the most” out of Romance

A dissertation submitted in partial satisfaction  
of the requirements for the degree  
Doctor of Philosophy in Linguistics

by

Nicoletta Loccioni

2018

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## ABSTRACT OF THE DISSERTATION

Getting “the most” out of Romance

by

Nicoletta Loccioni

Doctor of Philosophy in Linguistics

University of California, Los Angeles, 2018

Professor Timothy A. Stowell, Chair

This dissertation argues that despite the lack of overt superlative morphology, Romance languages have *bona fide* superlatives which are (morpho-)syntactically distinguished from comparative structures. In particular, I identify and analyze three different strategies that yield superlative import in these languages. A superlative interpretation can arise as a result of an attributive structure (**Chapter 2**), a predicative one (**Chapters 3, 4 and 5**) or as part of a modal construction (**Chapters 3 and 5**). These three strategies involve different constructions and distinct types of quantifications. Attributive superlatives (such as *il più grasso dei gatti bianchi* [ITA], ‘the fattest of the white cats’) are quality only, individual-based superlatives. Modal superlatives (such as *il più carina possibile* in *Maria voleva essere il più carina possibile* [ITA], ‘Mary wanted to be the prettiest possible’) are degree-based superlatives. I analyze them as free relatives which denote a degree description that functions as a Measure Phrase. Lastly, the predicative strategy is argued to involve quantification over individual-degree pairs. Phrases of this type (such as *lo studente che ha più libri* [ITA], ‘the student who has the most books’) are analyzed as *maximalizing relative clauses* (à la Grosu and Landman 1998) where abstraction over degrees operates in a construction that denotes entities.

In developing a compositional analysis of superlative phrases in Romance, I aim at an accurate account of their morpho-syntax. In particular, very close attention is paid to the properties and the contribution of the definite determiner. It turns out that the different

type of quantification involved in each strategy correlates with distinct properties of the determiner(s) used and with possible variation within the Romance family.

The dissertation of Nicoletta Loccioni is approved.

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2018

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# CHAPTER 1

## Introduction

### 1.1 What this dissertation is about

This dissertation deals with superlative phrases in Romance languages, with particular focus on Italian data. In these languages there is no overt morphological distinction between *more* and *most* and the superlative interpretation seems to arise as a combination of a definite marker and a comparative morpheme only. Take the Italian pair of sentences in (1) as an example of this strategy to form superlatives.

- (1) a. Nino è più alto (di Lenuccia)  
Nino is more tall than Lenuccia  
'Nino is taller (than Lenuccia)'
- b. Nino è il più alto  
Nino is the more tall  
'Nino is the tallest'

In grammar books, the difference between English-type languages and Italian-type languages with respect to this issue is often reported as in Table 1.1, where *tallest* and *il più alto* are described as equivalent.

This simple but not-so-innocent description of the data certainly raises some questions. First, it is perhaps surprising to see a definite determiner inside an adjectival phrase. We may then wonder whether *il più alto* in (1b) is just an adjectival phrase or if - alternatively - it might

Table 1.1: Degrees of ‘tall’ in ENG, ITA and SPA

	POS	CMP	SUP
<b>English</b>	tall	taller	tallest
<b>Italian</b>	alto	più alto	il più alto
<b>Spanish</b>	alto	más alto	el más alto

involve more structure, perhaps a DP structure. More generally we would like to know whether the determiner should be considered as an inherent part of the superlative, which is what the table seems to suggest.

Closer scrutiny also reveals that the most naive version of *tallest* = *il più alto* (which implies that we get a local D in Italian whenever we see *-est* in English), may work for (1b) but does not hold as a general rule. Consider the phrase in (2) and the intended meaning of *the person who makes me happier than anybody else does*. A determiner preceding *più* is incompatible with such an interpretation.

- (2) La persona che mi rende (\*la) più felice  
 The person who me makes the more happy  
 ‘The person who makes me happiest’<sup>1</sup>

More generally, what we observe is that in Italian the definite determiner that we see in superlative phrases is associated with the host DP and is not a specialized form internal to the superlative. This turns out not to be an exclusive property of quality superlatives (that is, superlatives involving adjectival phrases). It also extends to superlatives of quantity words (which I will refer to as *quantity superlatives*) and to adverbial superlatives. To appreciate this general pattern, consider the data below. The attempt to form a superlative by adding a determiner preceding *più* to the comparative cases in (3) results in sharp ungrammaticality (see (4)).

---

<sup>1</sup>Grammatical only with the meaning ‘the person who makes me the happiest one’.

(3) Comparative only

- a. Lina impara più facilmente  
Lila learns more easily  
'Lila learns more easily'
- b. Adele ha più giocattoli  
Adele has more toys  
'Adele has more toys'

(4) \*[ D + COMP ] to get a superlative

- a. \*Lina impara il più facilmente  
Lila learns the more easily  
Int. 'Lila learns the most easily'
- b. \*Adele ha i più giocattoli  
Adele has the more toys  
Int. 'Adele has the most toys'

Superlative import is instead successfully achieved by embedding the comparative inside a necessarily definite relative clause:

- (5)
- a. Lina è quella che impara più facilmente  
Lila is the.one who learns more easily  
'Lila is the one who learns the most easily'
  - b. Adele è quella che ha più giocattoli  
Adele is the.one who has more toys  
'Adele is the one who has the most toys'

This state of affairs may raise the question of whether Italian (and more generally Romance) has real superlatives to begin with. In this dissertation, I provide a positive answer to this question. I claim that Romance has *bona fide* superlatives that are morpho-syntactically distinguished from comparatives inside a definite construction with a covert *than*-clause. I will also show that they come in three main flavors:

- (i) attributive superlatives,

(ii) predicative superlatives

(iii) modal superlatives.

The attributive strategy is available for quality superlatives (adjectives) only and is the subject of **Chapter 2**. Italian prenominal superlatives like (6) are an example of attributive superlatives that I discuss in depth.

(6) il più grosso gatto bianco  
the more big cat white  
'the biggest white cat'

I show that phrases like (6) (and attributive superlatives more generally) are characterized by the adjective form appearing in a left peripheral position, outside the extended projection of the nominal phrase and within the region of numerals. I take this anomalously high position of the adjective to be the result of movement of the adjective to a silent head, SUP, which takes scope over the (possibly null) nominal phrase (NP). The NP (*gatto bianco* in the example) is taken to determine the comparison class for the superlative. This is shown in the oversimplified structure in (7).

(7) [DP il [ SUP [ più grosso ]<sub>i</sub> [NP gatto bianco t<sub>i</sub> ] ] ]

Since the comparison class is overtly specified, these constructions are incompatible with *than*-clauses, as we will see. These morphosyntactic properties of attributive superlatives will motivate a novel semantic analysis that I put forth in §2.5. Oversimplifying again, I compose attributive superlatives in three main steps. First a comparison class is formed (to include white cats in (6)). Second, elements of the comparison class are ordered with respect to each other relative to the property denoted by the adjective (their size in our example). The direction of the ordering is determined by the comparative morpheme (*more* is obviously different from *less*). Lastly, the first-ranked element is picked out.

A critical guiding principle of my approach is to pay close attention to the morpho-syntax of the superlative constructions. This leads me to reject existing semantic analyses that are inconsistent with the morpho-syntax even though they are capable of deriving an appropriate interpretation. In particular, the specific version of the scope theory proposed by Heim 1985, Szabolcsi 1986, Heim 1999 a.o. will be rejected as a satisfactory compositional analysis of attributive superlatives.

Let me be more specific about this point. There is an important difference in nature between comparatives and superlatives. Comparatives establish a *relation* with a so-called *standard of comparison*. Superlative expressions are instead evaluated with respect to a *comparison class* in a *partitive* manner. To clarify the difference, consider the pair of sentences in (8).

- (8) a. Sale is the fatt**est** white cat *Sale is a white cat*  
 b. Pepe is fatt**er** [ than the white cats ] *Pepe is not one of the white cats*

What we infer from (8a) is that Sale is a white cat. In contrast, (8b) implies that Pepe is not part of the relevant group of white cats. Now, (8a) can be paraphrased using a comparative *plus* some mechanism to make sure that Sale is included in the set of relevant white cats. (9) successfully shows that.

- (9) Sale is fatt**er** than any other white cat.

But even though (8a) and (9) are *truth-conditionally* equivalent, they are not *morpho-syntactically* equivalent. For instance, they differ in definiteness. The superlative expression is definite whereas its comparative paraphrase is not. In Chapter 2, the scope theory will be dismissed as I claim that it is an analysis of the comparative paraphrase in (9), rather than an account for the superlative structure in (8a). On similar - yet not identical - grounds, Romero's (2013) account of modal superlatives will be rejected in Chapter 3 and Chapter 5.

The second main strategy for deriving superlative interpretations uses (some form of) relativization as a core ingredient. I refer to this as the *predicative* strategy. It will be widely discussed in Chapters 3, 4 and 5 with respect to a variety of Romance constructions. It turns out that languages like Italian and Spanish extensively use relativization to obtain superlative import and not only for quality superlatives. Quantity and adverbial superlatives mainly result from a predicative structure, as I show in **Chapter 5**. The relative clauses in (5a) and (5b) are precisely examples of these two types of superlatives.

Predicative quality superlatives are the focus of **Chapters 3** and 4, which constitute the main contribution of this dissertation. An example of this predicative case is (2) (repeated in (10)). I also analyze postnominal superlatives in Romance like (11) as belonging to this class. In particular, I argue that they are predicative reduced relative clauses.

(10) La persona che mi rende (\*la) più felice  
The person who me makes the more happy  
'The person who makes me happiest'

(11) il gatto bianco più grosso  
the cat white more big  
'the biggest white cat'

The claim that quality superlatives can function like predicates (i.e. that they can be assigned a purely predicative construal) is controversial. It goes against a tradition of taking the presence of a definite determiner as evidence for the presence of a (null) nominal projection and consequently as evidence supporting an attributive analysis of these adjectival superlative constructions (see Matushansky 2008 and Alexiadou 2014). In Chapter 3, I reject this implication and I show that many instances of quality superlatives do not embed a nominal phrase. For convenience, I illustrate this point with an English example. Consider (12) with the intended meaning, as indicated below.

(12) Monday is the day when I am the busiest

≈ Monday is a day when I am busier than any other day

An attributive construal for the superlative would require the projection of a null noun as shown in (13). Not only would this be hard to justify semantically since it is unclear what the content of that noun phrase would be; it would also be syntactically unmotivated, as an overt nominal element would be incompatible with the desired interpretation, as shown in (14).

(13) Monday is the day when I am the busiest N

(14) Monday is the day when I am the busiest one

≠ Monday is a day when I am busier than any other day

≈ Monday is the day when I am busier than any other person

Having rejected the implicit assumption that the presence of the determiner entails the existence of a mandatory nominal projection, I adopt a different view. Much in the spirit of Krasikova 2012, I claim that determiners in superlative phrases can have (at least) two distinct functions. They can reflect the definiteness of the DP (as in (6) and more generally with all attributive cases), or they can mark the definiteness of the Degree Phrase. The second definite article in (14) is of the former type whereas the second definite article in (12) is of the latter type.

This distinction between the two functions of the determiner will be crucial in order to capture the variation that we see in Romance between Italian-type languages (including Spanish, Catalan and Middle French) and Modern French. As we will see the two types of languages differ in the pronunciation (*vs.* non-pronunciation) of the definite determiner in certain cases (such as (16) and (17)) but not in others (15).

(15) a. il più grosso gatto [ITA]

- b. le plus gros chat [FRE]  
 ‘the biggest cat’
- (16) a. il gatto (\*il) più grosso  
 b. le chat \*(le) plus gros  
 the cat the more big  
 ‘the biggest cat’
- (17) a. Adele è quella che ha (\*i) più giocattoli  
 b. Adele est celle qui a \*(le) plus de jouets  
 Adele is the.one who has more toys  
 ‘Adele is the one who has the most toys’

In particular, it turns out that variation is only attested when the determiner is internal to the superlative, as part of a Degree Phrase. This is the case in (16) and (17), that I analyze as predicative cases. No difference is ever found in attributive constructions such as (15), where the determiner heads a DP and embeds an NP. All the Romance languages discussed pattern together in this latter case.

Relative clauses such as (16) and (17) (as well as (2) and (5a)) are analyzed in this dissertation as *maximizing* relative clauses (à la Grosu and Landman 2013). I show that they share important features with other complex DPs such as *the books that there were on the table*. In particular, in both cases abstraction over degrees operate in a construction that denotes entities (books, a female person or a cat) rather than a degree or number. They are also both characterized by a CP-internal interpretation of the head noun, as we will see. A compositional analysis of these phrases is provided in Chapter 3 for predicative quality superlatives (like (16) and (2)) and in Chapter 5 for quantity superlatives (like (17)).

**Chapter 4** introduces another type of relative clause involving superlative adjectival predicates. I refer to these phrases as *di*-free relatives, given the mandatory presence of the preposition *di*.



- (18) a. quello che ho di più prezioso [ITA]  
 b. ce que j'ai de plus précieux [FRE]  
 That that I.have of more valuable  
 ≈ 'the most valuable thing I have'

This type of free relative will be added to the class of *maximalizing* relative clauses. I will show, however, that it involves a peculiar syntactic derivation which is responsible for some distinctive properties. For example these *di*-free relatives do not show the variation between Italian and French w.r.t. the overt realization of D that other predicates do. That is, French does not exhibit polydefiniteness in these cases, as shown in (19).

- (19) Ce qu' il y a de/ \*du plus beau  
 that that there is of of.the more beautiful

The last kind of superlative phrase that I discuss in detail is the modal superlative. Cases involving adjectival predicates like those in (20) are analyzed in §3.3 whereas quantity modal superlatives like that in (21) will be discussed in Chapter 5.

- (20) a. Maria voleva essere il più carina possibile [ITA]  
 Maria had.to be the.SG.M. more pretty.SG.F. possible  
 b. María quería estar lo más guapa (que fuera) posible [SPA]  
 Maria wanted to.be it.M.S. more pretty.7s.f. that was possible  
 'Maria wanted to be the prettiest possible'
- (21) Nous inviterons le plus de collègues possible [FRE]  
 We invite.FUT the more *de* colleagues possible  
 'We will invite the most colleagues possible'

I reject components of both Schwarz's (2005) and Romero's (2013) analyses and I argue that modal superlatives involve an amount relative which denotes a degree description and whose semantic contribution is similar to that of a Measure Phrase. In Romance, for instance, they look suspiciously similar to other (free) amount relatives, like the ones that are normally

taken to denote single degrees (see (22)).

- (22) Susana es más guapa de [*FreeRC* lo que lo es María ]  
Susana is more pretty of the that it is Mary  
'Susana is prettier than Mary is'

As we will see, modal superlatives have unique properties. They are the only type of superlative where maximalization and the uniqueness test happen in immediate succession and at the degree level only. This results in peculiar semantic and syntactic properties that will be discussed mainly in Chapter 3.

## 1.2 Outline of the work

This dissertation is structured as follows. In **Chapter 2**, I discuss and analyze a strategy of forming quality superlatives (and quality superlatives only) that I refer to as *attributive*. I look at three types of superlative constructions, focusing on data from Romance (mainly Italian): (i) prenominal superlatives, (ii) elliptical DPs and (iii) partitive constructions. In **Chapter 3**, I discuss quality superlatives in Romance that have a purely predicative construal. That is, I look at cases where the superlative does not embed a nominal phrase; rather, it is part of a relative clause construction. Modal cases involving adjectival phrases are also examined and accounted for. In this chapter, a great deal of attention is also paid to synchronic and diachronic variation in Romance w.r.t. definiteness in superlative constructions. In **Chapter 4**, I introduce and analyze what I refer to as *di*-free relatives. They are an interesting case of free relatives with a stranded predicate with - perhaps surprisingly - superlative import. Quantity and adverbial superlatives are the focus of **Chapter 5**. Lastly, **Chapter 6** concludes the dissertation.

## CHAPTER 2

### Attributive superlatives in Romance

#### 2.1 Introduction

In this chapter, I will discuss one strategy that is available in Romance as well as in other languages to form quality superlatives and quality superlatives only<sup>1</sup>. I will refer to it as the *attributive* strategy and I will claim that it is the strategy in place in (at least) three constructions in Romance (exemplified with Italian): prenominal superlatives as (1), elliptical DPs as (2) and partitive constructions as (3).

- (1) Sale è [ il più grosso gatto bianco ]  
Sale is the more big cat white  
'Sale is the biggest white cat'
- (2) Sale è [ il più grosso ]  
Sale is the more big  
'Sale is the biggest'
- (3) Sale è [ il più grosso dei gatti bianchi ]  
Sale is the more big of.the cats white  
'Sale is the biggest of the white cats'

Despite the fact than Italian lacks the morphological distinction of the *more/most* type, these constructions are unambiguously superlative in their interpretation. Sentence (1) for

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<sup>1</sup>It is not available for quantity and adverbial superlatives.

example cannot mean *Sale is the white cat who is bigger*. I claim that this results from a syntactic structure where the adjective moves to a position higher than the possibly null nominal phrase, which I take to determine the comparison class for the superlative. Since the comparison class is overtly specified, these constructions are incompatible with *than*-clauses, as we will see.

The chapter is organized as follows. In Section 2.2 I discuss prenominal superlatives like (1) and I show that superlative forms of adjectives can appear in a higher position than their ordinary or comparative counterpart. I will claim that that is the result of movement of the adjectival phrase to the position of the silent morpheme SUP which is base-generated in the region of numerals. In Sections 2.3 and 2.4 I turn to elliptical superlatives which, I claim, involve a covert partitive structures and to superlatives with overt *of*-partitive constructions such as (3). In Section 2.5 I show that attributive superlatives do not yield so-called relative readings and I provide a compositional analysis for them that takes the morpho-syntactic properties of these constructions very seriously. In Section 2.6 I show that this proposal makes attributive superlatives in Romance fully compatible with Bobaljik's (2012) containment hypothesis. Section 2.7 concludes the chapter.

## 2.2 Prenominal superlatives

In §2.2.1 I show that the syntactic behavior of superlatives does not parallel that of ordinary positive adjective. Superlatives can be prenominal even when positive or comparative forms cannot. This does not follow from Cinque's (2010) system of adnominal modification unless superlatives are given some additional movement possibilities. In §2.2.2 I defend a movement analysis of prenominal superlatives that is intended to derive their apparently anomalous behavior.

## 2.2.1 Superlatives and Cinque’s two domains theory of nominal modification

Here I briefly review Cinque’s (2010) dual source model and the predictions made by such a system under the naive expectation that superlatives should have the same distribution as ordinary adjectival forms.

### 2.2.1.1 Background on Cinque’s (2010) dual source model

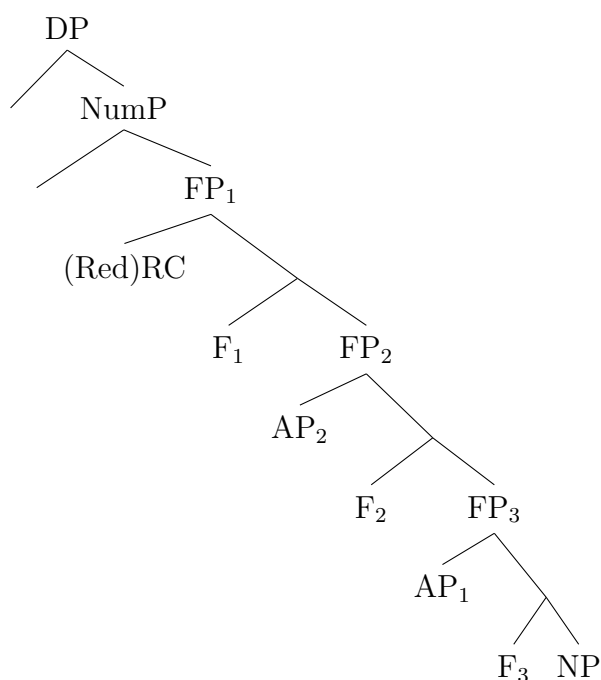
Building on the English data and analysis presented by Larson in a series of papers and lectures (Larson 1998; Larson 2000a; Larson 2000b a.o.), Cinque 2010 argues that adnominal modifiers can enter the structure of the DP in two distinct and independent ways: either as direct modifiers or as indirect modifiers<sup>2</sup>. Direct modification adjectives are analyzed as phrasal specifiers of dedicated functional heads of the extended projection of the noun. They are structurally closer to the noun and are semantically associated with individual-level, nonrestrictive, absolute readings. AP<sub>1</sub> and AP<sub>2</sub> in (4) exemplify the position of direct modification adjectives.

Indirect modification adjectives on the other hand are merged above the functional projections hosting direct modification adjectives. They are predicates of reduced relative clauses and are semantically associated with intersective, relative and stage-level readings (but they are also compatible with individual-level interpretations).

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<sup>2</sup> The distinction between “direct” and “indirect” modification adjectives was first introduced by Sproat and Shih 1988).

(4) **Cinque's (2010) dual source model of adnominal modification**



In this system, modifiers are merged in a rigid order w.r.t. each other: indirect modifiers are always merged higher than direct ones:

(5) Order of Merge:

[D ... [ AP<sub>ind</sub> ... [ AP<sub>ind</sub> [AP<sub>dir</sub>... [AP<sub>dir</sub>... NP ] ] ] ] ]

According to Cinque 2010, different conditions on NP movement and extraposition derive the surface orders of the languages of the world (see Cinque 2005). In the case of Romance for example, only direct modification adjectives are able to appear prenominal, whereas the postnominal position is ambiguous between the two interpretations. English displays the opposite pattern: the postnominal position (when available) can only host indirect modification adjectives.

(6) a. Italian: [D ... AP<sub>dir</sub> NP AP<sub>dir</sub> AP<sub>ind</sub> ]

b. English: [D ... AP<sub>ind</sub> AP<sub>dir</sub> NP AP<sub>indir</sub> ]

To illustrate the contrast between between English and Italian, take as an example the available interpretations of the modifier *possible* and those of its Italian counterpart. Larson 2000a noted that in English only prenominal *possible* is ambiguous between a regular modifier reading (that can be paraphrased using ‘potential’) and an implicit indirect relative clause reading. Cinque 2010 reports that in Italian the situation is the exact opposite: only the postnominal position is ambiguous.

- (7) English Larson 2000a
- a. Mary interviewed every possible candidate  
*Direct*: “Mary interviewed every potential candidate”  
*Indirect*: “Mary interviewed every candidate that it was possible for her to interview”
- b. Mary interviewed every candidate possible  
 #*Direct*: “Mary interviewed every potential candidate”  
*Indirect*: “Mary interviewed every candidate that it was possible for her to interview”
- (8) Italian Cinque 2010
- a. Maria ha intervistato ogni possibile candidato  
*Direct*: “Mary interviewed every potential candidate”  
 #*Indirect*: “Mary interviewed every candidate that it was possible for her to interview”
- b. Maria ha intervistato ogni candidato possibile  
*Direct*: “Mary interviewed every potential candidate”  
*Indirect*: “Mary interviewed every candidate that it was possible for her to interview”

These facts can be generalized with the following one way implications for the two families of languages:

- (9) a. [ROMANCE] If prenominal → direct modification source.  
b. [ENGLISH] If postnominal → indirect modification source.

### 2.2.1.2 The case of superlatives

Superlative forms of adjectives can also appear either before or after the noun. A priori, one would expect them to follow the generalization in (9a) that holds for ordinary forms. This is especially expected if the adnominal position of the superlative form is taken to be the result of the same type(s) of DP-internal movement(s) that we see for ordinary forms and nothing more (see Cinque 2005 on the parameters of DP-internal movement).

What we observe, however, is that (9a) does not hold in the case of superlatives, which can be in a prenominal position without bearing the cluster of interpretative properties associated with direct modification adjectives.

I will make this point using two examples of adjectives that can occur prenominally in Italian: (i) *numeroso* ‘many/with many members’ and (ii) *povero* ‘pitiable/poor’. As predicted by Cinque’s dual source model, prenominally they can only have the former direct modification interpretation as shown in (10) and (11).

- (10) Le numerose famiglie che si erano presentate  
‘The many families that had come’  
#‘The large families that had come’ adapted from Cinque 2010

- (11) Una povera ragazza  
‘A pitiable girl’  
#‘A poor girl’



Unlike the ordinary forms, the prenominal superlative forms of *numeroso* and *povero* can have the indirect modification interpretations ‘with many members’ and ‘poor’, as shown in (12) and (13) respectively:

- (12) Le tachichinine costituiscono una delle più numerose famiglie di peptidi  
the Tachykinin.pl constitute one of the more *numerose* families of peptides  
presenti negli organismi animali.  
present in animal organisms  
‘Tachykinin peptides are one of the largest families of peptides found in animal  
organisms’

(from <https://it.wikipedia.org/wiki/Tachichinina>)

- (13) Liverpool [...] dall’ 84 è tra le più povere città europee  
Liverpool form ’84 is among the more *povere* cities European  
‘Since 1984, Liverpool is among the poorest European cities’ (from  
www.repubblica.it)

The reason why the interpretative properties of prenominal *numeroso* and *povero* are not available in the case of prenominal superlatives probably has to do with the fact that these readings are not compatible with scalar or gradable interpretations in the first place. Some other adjectives are able to retain their prenominal interpretation, even when superlatives, arguably because the interpretation of the adjective is compatible with a scale. An example of that is prenominal *vecchio* ‘longtime, of long-standing’ (as opposed to the postnominal interpretation ‘old, aged’):

- (14) il mio più vecchio amico  
the my more old friend  
‘my oldest friend’

For the sake of the present discussion, what is really crucial is not that some readings are

not available for superlative form, rather that postnominal interpretations are sometimes available prenominally. That is, the fact that prenominal *più povere* in (13) means ‘poorest’. This fact is not expected and calls for an explanation.

To sum up, since superlative forms of indirect modification adjectives can appear prenominally in Italian, superlatives do not obey the generalization in (9a), repeated here:

(15) [ROMANCE] If prenominal  $\rightarrow$  direct modification source.

The dual source model of adnominal modification presented by Cinque 2010 does not predict the possibility for indirect modification adjectives to appear prenominally in Romance, unless additional assumptions are made. In §2.2.2, I will spell out the additional assumption that is needed in order to derive the prenominal position of superlative forms of direct modification adjectives (as (13)). I will claim that superlatives can appear in higher positions than their ordinary or comparative counterparts as a result of movement to a left peripheral position. I will identify that position as belonging to the region of numerals.

### 2.2.2 A movement analysis of prenominal superlatives

In the previous section, I showed that superlatives challenge Cinque’s generalization about the unambiguousness of the prenominal position in Romance in that superlative forms of indirect modification adjectives can appear prenominally even if the ordinary forms cannot. I interpret this fact as evidence that superlative adjectives can appear higher than ordinary ones.

This idea is not new in the literature. Kayne 2008 reports that, in Persian, superlative adjectives end up in prenominal position (whereas ordinary adjectives and comparatives are generally postnominal). Also, for Romance superlatives - and superlatives only - Kayne

posits a ‘superlative preposing’ operation, which is shown in (16):<sup>3</sup>

(16) [ [D la ] [ [ più bella ]<sub>i</sub> [ C [SC [ ragazza ] t<sub>i</sub> ] ] ] ]

Cinque 2010:32 also reports that the otherwise somewhat rigid (unmarked) order of adjectives in languages like English can be altered when one of them is in the superlative form:

- (17) a. a long white plane (vs. #a white long plane)  
b. the whitest long plane (that I saw) (vs. \*?the long whitest plane)

He does not interpret these cases as counterexamples to the idea that there is a rigid order of Merge and suggests that the lower adjective in (17b) is attracted by the superlative morpheme to a higher position. This claim is very much in agreement with the analysis I will put forth.

I will proceed as follows. I am going to show that prenominal superlatives are associated with a high position within the DP, which is external to the extended nominal projection. I will then show how such a high position is obtained and discuss what motivates movement. Finally, I will discuss the case of prenominal possessives, which can appear higher than superlatives even if they seem to fall under their scope.

### 2.2.2.1 The position of prenominal superlatives in the DP

I assume the order of Merge argued for by Cinque 2005 in (18) and I will locate superlatives w.r.t. this order, discussing their position relative to other DP-internal modifiers:

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<sup>3</sup>For a short review of Kayne 2008, see Chapter 3

- (18) Order of Merge:  
 [Q<sub>univ</sub> ... [Dem ... [Num<sub>ord</sub> ... [RC ... [ Num<sub>card</sub> ... [A... NP ] ] ] ] ]

**Demonstratives** Demonstratives are not compatible with (prenominal) superlatives:<sup>4</sup>

- (19) \*quella più bella ragazza  
 that more beautiful girl

This fact does not come as a surprise given the incompatibility of superlatives with deixis, as nicely argued by Zamparelli 1998:

“demonstratives presuppose for the sensory context to have played a role in restricting their argument to a supremum-containing set, which is why [...] demonstratives do not go with superlatives (?? ‘He is that tallest man on Earth’): these phrases already denote a unique entity, so no deixis can make them any more specific.” Zamparelli 1998

(20) on the other hand is grammatical and can have superlative import because *quella* in (20) is a pronominal element and no deixis is involved. I will discuss cases like (20) in Chapter 3.

- (20) quella più bella  
 the.one more beautiful  
 ‘the most beautiful one’

**Ordinal numbers** The co-occurrence of ordinal numbers with superlatives is an innovation in standard Italian<sup>5</sup> that not every speaker appears to accept (see Grasso 2007). For the

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<sup>4</sup>(19) is bad under the intended superlative interpretation. It can marginally have a comparative interpretation (‘that more beautiful girl’).

<sup>5</sup>According to Grasso 2007 (21) represents a case of syntactic *calque* from English. The conservative way of expressing (21) in Italian would be using the construction in (i)

speakers who accept it, the natural order is the same as in English with the superlative following the ordinal number.

- (21) la seconda più alta montagna che sia mai stata scalata  
 the second more high mountain that is.SUBJ never been climbed  
 ‘the second highest mountain that was ever climbed’ ORD > SUP

The opposite ordering (ORD > SUP) is not impossible but it would convey a different, somewhat odder interpretation, where only *second mountains that were climbed* are compared, instead of *mountains that were climbed*.

- (22) la più alta seconda montagna che sia mai stata scalata  
 the more high second mountain that is.SUBJ never been climbed  
 ‘the highest second mountain that was ever climbed’ SUP > ORD

This reading will turn out to be totally expected given the scopal properties of the superlative w.r.t. the constituent that determines the comparison class of the superlative.

**Cardinal numbers** Cardinal numbers can either follow or precede pronominal superlatives. The position of the numeral w.r.t. to the superlative has an effect on the interpretation.

- (23) a. le due più lunghe presentazioni CARD > SUP  
 the two more long presentations  
 ‘the two longest presentations’
- b. le più lunghe due presentazioni SUP > CARD  
 the more long two presentations  
 ‘?the longest two presentations’

---

(i) La seconda montagna per altezza  
 the second mountain for height

In fact, when a cardinal number follows the superlative expression in (23b), presentations are paired up and pairs of presentations of some length are compared. When the cardinal number precedes the superlative (as in (23a)), individual presentations are instead compared.<sup>6</sup>

The two phrases are semantically distinguishable: whereas (23a) will necessarily pick up the two presentations that are longer than all the remaining presentations, (23b) simply refers to a pair of presentation that, as a twosome, is the longest. In a conference where presentations are paired up by the organizers as in (24), (23a) will necessarily refer to Jesse’s and John’s presentations, which are the longest ones. (23b) will pick out Session A’s presentations: Nico’s and Iara’s, even if individually they are not the longest.

- (24) Presentations at the conference this afternoon
- a. Session A: Nico’s presentation (35’) and Iara’s presentation (40’)
  - b. Session B: John’s presentation (45’) and Margit’s presentation (20’)
  - c. Session C: Jesse’s presentation (50’) and Meng’s presentation (20’)

**Relative Clauses** If we assume that NPIs and subjunctive mood inside relative clauses such as (25) are licensed by the superlative morpheme and that in order to do so it must be in a *c*-commanding position w.r.t. the relative clause, then we must conclude that superlative forms can be structurally higher than relative clauses.

- (25) la più bella ragazza che io abbia mai visto  
 the COMP beautiful girl that I have.SUBJ ever seen  
 ‘the most beautiful girl I’ve ever seen’ SUP > RC

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<sup>6</sup>Sharvit 2015 reports a related fact about English. She argues that “both (ia) and (ib) may be used to describe a situation where John and Bill are, individually, heavier than any boy outside {John, Bill}. But only (ia) may be used to describe a situation where Bill weighs less than Fred, yet Bill and John, as a twosome, weigh more than any other twosome of boys”:

- (i) a. John and Bill are the heaviest two boys individual/twosome  
 b. John and Bill are the two heaviest boys individual

**Prenominal possessives** Superlatives tend to follow prenominal possessives as shown in (26):

- (26) il mio più grande sbaglio  
the my COMP big mistake  
'my biggest mistake'

Prenominal possessives are discussed in §2.2.2.3.

**Summary** Adapting (and expanding) the order of Merge argued for by Cinque 2005, I argue that attributive superlatives are associated with the position(s) in (27):

- (27) Order of Merge:
- a. [D ... [Num<sub>ord</sub> ... [ Num<sub>card</sub> ... **Sup** [ (RC) [Cl ... [A... NP ] ] ] ] ]
  - b. [D ... [Num<sub>ord</sub> ... **Sup** [ RC [ Num<sub>card</sub> ... [ (RC) [Cl ... [A... NP ] ] ] ] ] ]

In the next section I discuss how and why superlatives end up outside the extended projection of the noun phrase.

### 2.2.2.2 The derivation of prenominal superlatives

We have seen that, in several languages, superlatives are able to appear in a higher position than ordinary modifiers. Why should that be? I am going to suggest that it results from their *quantificational component*, which can attract the adjectival part to a scopal position outside the extended nominal projection (which provides the comparison class overtly).

In the case of Romance, superlative forms are not morphologically distinguished from comparative forms. Despite that, I take the high position of prenominal superlatives to be

informative about the internal make up of superlatives. In particular, it suggests that an ordinal-like element is active in Romance even if it is not morphologically overt. I label it SUP and I assume it to be merged in this left-peripheral position:

(28) [DP the [ SUP [FP [ AP [NP ] ] ] ] ]

Nothing new has to be said about how the adjectival phrase enters the derivation. In particular other syntactic material can be merged between the (comparative form of the) adjective and SUP. Relative clauses are examples of such interveners:

(29) [DP the [ SUP [FP [CP (relative clause) ] [ AP [NP ] ] ] ] ]

The position of the superlative form of the adjective is then the result of movement of the AP, which is attracted to the position of SUP. The final order is the result of DP-internal movements of the usual type (NP movement and extraposition).

### 2.2.2.3 The case of prenominal possessives

I argued that prenominal superlatives in Italian are pronounced in what appears to be their scope position, that is outside the nominal projection that provides the comparison class overtly. In (30a), for instance we are comparing white cats that Gianni saw.

- (30) a. il più grosso gatto bianco che Gianni abbia mai visto  
           the more big cat white that Gianni have ever seen  
           ‘the biggest white cat Gianni has ever seen’
- b. il SUP più grosso [FP gatto bianco che Gianni abbia mai visto ]
- c. *C*:  $\approx$  white cats that Gianni saw



A potential problem for this claim is created by prenominal possessives, which precede the superlative even though they clearly participate in the calculation of the comparison set. (26) repeated in (31) is an example of that: the superlatives compares ‘mistakes of mine’ and not simply ‘mistakes’ despite the fact that the superlative follows the possessive. The same issue clearly arises in English.

- (31) il mio più grande sbaglio  
 the my more big mistake  
 ‘my biggest mistake’

This tension between the position of prenominal possessives and their interpretative properties can be easily resolved once we assume that possessives end up prenominally as a result of movement from a lower position, as suggested by Cardinaletti 1998. This would allow one to interpret the possessive in the base (pre-movement) position, in the extended projection of the NP and within the scope of the superlative. Let me show how that would work in the framework of Cardinaletti’s (1998) account.

First, possessive pronouns can overtly have a prenominal and a postnominal position in Italian, as shown in (32a) and (32b):

- (32) a. la casa sua  
 the house his/her  
 b. la sua casa  
 the his/her house  
 ‘his/her house’

Cardinaletti 1998 followed Kayne 1975 in assuming that (32a) and (32b) are transformationally related and she analyzed them as in (33a) and (33b) respectively:

- (33) a. [DP *la* [XP ... [YP *casa<sub>k</sub>* [NP *sua* [ *t<sub>k</sub>* ...  
 b. [DP *la* [XP *sua<sub>i</sub>* ... [YP *casa<sub>k</sub>* [NP *t<sub>i</sub>* [ *t<sub>k</sub>* ...
- Cardinaletti 1998

Once we adopt this analysis, all we have to say to account for the interpretative properties of (31) is that the possessive has to be interpreted in the premovement (trace) position, which is under the scope of the superlative:

(34) [DP *il* [XP *mio<sub>i</sub>* ... [ZP *più grande* [YP *sbaglio<sub>k</sub>* [NP *t<sub>i</sub>* [ *t<sub>k</sub>* ...

### 2.2.3 Summary

In this section, I argued that prenominal superlatives are attributive superlatives where the adjectival phrase ends up outside the extended projection of the nominal phrase as a result of movement. Movement was justified based on the quantificational force of superlatives. I took this left-peripheral position to suggest that an ordinal-like element (that I labeled SUP) is active even in languages like Italian where it is not morphologically overt. I further claimed that the extended nominal projection provides the comparison class for the superlative overtly (see Section 2.5 for the compositional analysis). In order to maintain this claim, a movement analysis of prenominal possessive was also adopted.

For reasons that need to be understood, only a subclass of adjectives can be attracted to this high position. This class is slightly larger than the class of adjectives that can end up prenominally in the ordinary form. More work needs to be done to properly isolate the properties of the members of this class. I leave this issue to future research.

## 2.3 Elliptical superlatives

In this section I show that elliptical superlatives such as (35) are attributive modifiers where the non-pronunciation of the nominal phrase is licensed by partitivity. This means that the elided constituent is the one that determines the comparison class for the superlative, *white cats* in the example.

- (35) il più grasso (gatto bianco)  
 the more fat cat white  
 ‘the fattest (white cat)’

*C*: white cats

The section is organized as follows. In 2.3.1 I show that, in Italian, superlatives are compatible with two types of omissions of the nominal phrase but that only the one in (35) corresponds to an attributive structure. The other one should be assimilated to a predicative structure, which will be the focus of Chapter 3. In 2.3.2 I show that elliptical structures do not simply involve prenominal superlatives *plus* omission of the NP. Finally, in 2.3.3, I further show that elliptical superlatives are morpho-syntactically attributive superlatives, whose relevant licensing property is partitivity, and are therefore incompatible with an overt *than*-phrase.

### 2.3.1 Two types of omission of the NP

In Italian, superlatives are compatible with two types of omissions of the nominal phrase. I follow Sleeman 1996, in referring to them as the *il*-construction (for cases like (36a)) and the *quello*-construction (for (36b)).

- (36) [talking about *gatti bianchi*, ‘white cats’]

- a. il più grasso  
 the more fat  
 ‘the fattest (one)’
- b. quello più grasso  
 the.one more fat  
 ‘the fattest (one)’

In agreement with Sleeman 1996, I take (36a) to correspond to an attributive structure where ellipsis is licensed by partitivity. (36b) on the other hand corresponds to a pred-

icative construction where the superlative does not play any role in licensing the omission of the nominal phrase. Ordinary adjectives for instance are perfectly acceptable in *quello*-constructions, even if they are not *il*-constructions.

- (37) a. quello rosso/ arrabbiato/ stanco/ grasso  
           that red angry tired fat  
           ‘the red/ angry/ tired/ fat one’
- b. \*il rosso/ arrabbiato/ stanco/ grasso  
           the red angry tired fat

In Chapter 3 I will discuss predicative superlatives and I will adopt the analysis put forth by Sleeman 1996 for *quello*-constructions, providing new evidence for it coming specifically from superlative constructions. I will analyze (36b) as a construction composed of a pronominal element *plus* a predicate. As such, it will be fully assimilated to postnominal superlatives.

In what follows I turn to *il*-constructions and I show that the superlative plays a crucial role in licensing ellipsis. Superlative forms in fact license *il*-ellipsis, even when the ordinary form of the adjective does not.

As reported by Cinque 2010, only a small class of direct modification adjectives are possible in elliptical DPs introduced by the definite article in Italian. *Altro* ‘other’, *precedente* ‘former’, *principale* ‘main’, *probabile* ‘probable’ belong to this class, as shown in (38).

- (38) Le altre/ precedenti/ principali/ (più) probabili  
       the other former main most probable  
       ‘The other/ former/ main/ most probable ones’  
       (understood *conseguenze* ‘consequences’)

Cinque 2010, p.51

Indirect modifiers (39a) and full relative clauses (39b), on the other hand cannot appear in these types of elliptical DPs:



class w.r.t. which the superlative is evaluated. Ellipsis will be argued to follow movement to a left peripheral position as in Ntelitheos 2004.

### 2.3.2 Two asymmetries between *il*-constructions and prenominal superlatives

The idea that elliptical DPs are simply prenominal structures where the nominal projection below the superlative is left unpronounced turns out to be too naive. There are two points where elliptical structures and prenominal ones differ and *il*-ellipsis turns out to have more in common with PP-partitives (such as *the tallest of the boys*) that will be the focus of Section 2.4.

First, only a small class of adjectives can be prenominal in Italian, even when superlative. This means that for some reason (that needs to be better understood) only a quite restricted class of adjectives can be attracted to the scope position in left periphery of the DP I argued for in Section 2.2. An example of an adjective that can never be prenominal is *arrabbiato*, ‘angry’, as shown here:

- (42) ??/\* la più arrabbiata madre  
the more angry mother

On the other hand, virtually *any* adjective in the superlative form licenses ellipsis. And *arrabbiato*, ‘angry’ is no exception. (40a) is repeated below:

- (43) La più arrabbiata  
the more angry.F  
‘the angriest’

Similarly, the superlative form of any adjective can participate in the partitive construction:

- (44) la più arrabbiata delle invitate  
 the more angry.SG.F. of.the.PL.F. invited.PL.F.  
 ‘the angriest of the guests’

If *il*-constructions are simply prenominal structures where the noun phrase is omitted (as in (45)), this fact would be mysterious. We would have to say that when the NP is omitted, the adjective can move in a way that is not possible otherwise. But why would the omission of the noun make a difference in the ability of the adjective to move?

- (45) La più arrabbiata madre

What this suggests is that what licenses ellipsis in Italian (and also in English) is not the possibility of occurring in prenominal position but some different mechanism which is also playing a role in the derivation of partitive constructions such as (44).

The second difference between elliptical superlative DPs and simple prenominal superlatives has to do with the acceptability of a co-occurring preceding possessive pronoun.

Recall from Section 2.2, that possessives can precede prenominal superlatives in Italian:

- (46) Il mio più grande errore  
 The my more big error  
 ‘my biggest error’

Also, like superlatives, prenominal possessives are able to license ellipsis in Italian:

- (47) a. Il più grande  
 The more big  
 ‘The biggest’ (understood *errore* ‘error, mistake’)
- b. Il mio  
 The mine  
 ‘Mine’ (understood *errore* ‘error, mistake’)

But when prenominal possessives and superlatives are combined (as in (46)), ellipsis of the nominal phrase is surprisingly significantly degraded.

- (48) ??/\* Il mio più grande  
The mine more big  
*int.* ‘The biggest one of mine’

Once again elliptical superlatives pattern with partitive constructions, as shown by ungrammaticality of (49).

- (49) \*Il mio più grande de.gli errori  
The mine more big of.the error  
*int.* ‘The biggest one of the mistakes of mine’

Given the movement analysis of prenominal possessives that I adopted in 2.2.2, the data in (48) and (49) raise the question of what prevents possessive raising from happening in elliptical and partitive constructions.

If nominal ellipsis is analyzed as involving raising of the NP to a left-peripheral position as suggested by many scholars,<sup>7</sup> then the ungrammaticality of (48) may result from the interaction between the two movement operations (raising of the possessive and raising of the remnant NP).

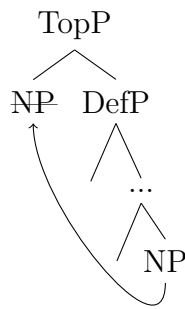
One particular implementation of a movement analysis of ellipsis is defended by Ntelitheos 2004. He argued that nominal ellipsis involves movement of the DP-internal constituent to a Topic position where it then undergoes phonological deletion as shown in (50). This analysis will be adopted here.

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<sup>7</sup>For evidence supporting this analysis, see Cinque 2012 and references therein.



(50)



In the case of an elliptical superlative like (47a), this would result in the (oversimplified) derivation below.

(51) [ [ errore ]<sub>i</sub> [ il [ più grande [ [ t<sub>i</sub> ] ] ] ] ]

The hypothesis is then that the ungrammaticality of (48) is the result of the interference between raising of the possessive and further movement of the remnant constituent (the constituent targeted by deletion), as shown in (52).

(52) [ [ errore t<sub>j</sub> ]<sub>k</sub> [ il [ mio<sub>j</sub> ... [ più grande t<sub>k</sub> ] ] ] ]

In Italian *unico*, ‘only’ and ordinal numbers behave in a very similar way to superlatives. They allow ellipsis (as shown in (53)) but not in the presence of a prenominal possessive (as shown in (54)).

- (53) a. L’ unico (errore) (che ho fatto)  
the only error that I made  
‘the only one/error (I made)’
- b. Il primo (errore) (che ho fatto)  
the first error that I made  
‘the first one/error (I made)’

- (54) a. Il mio unico ??/\* (errore)  
 the my only error
- b. Il mio primo ??/\* (errore)  
 the my first error

On the other hand, this incompatibility between the presence of a prenominal possessive and ellipsis does not seem to arise in the case of cardinal numbers, where a similar derivation is fully acceptable.

- (55) i miei tre (errori) sono più gravi  
 the my three errors are more serious

Arguably (55) and the examples in (54) or (48) do not differ w.r.t. possessive raising, that is, a parallel derivation can be assumed for (55) as the one in (52).

- (56) [ [  $\text{errori } t_j$  ]<sub>k</sub> [ i [ miei<sub>j</sub> ... [ tre t<sub>k</sub> ] ] ] ]

The crucial difference between superlatives and cardinal numbers has to do with their interpretation. In particular, the numeral in (55) does not perform the same ‘partitive’ function as the superlative and the possessive does not need to be interpreted in the premovement position.

Prenominal superlatives (such as (46) repeated in (57a)) and partitives introduced by superlatives (such as (57b)) have very similar interpretations, despite the fact that the possessive pronoun appears in different positions in the two structures. As I argued in 2.2.2.3, the possessive is clearly part of the constituent that determines the comparison set for the superlative and (57a) cannot have the intersective interpretation in (58).

- (57) a. Il mio più grande errore  
 The my more big error  
 ‘My biggest error’

- b. Il più grande dei miei errori  
 The more big of.the my errors  
 ‘The biggest of my errors’

(58) (57a)  $\not\approx$  The error which is biggest and mine.

The same does hold true for cardinal numbers. To see this, compare (55) with a partitive construction introduced by the cardinal number:

- (59) (\*i) tre dei miei errori  
 the three of.the my mistakes  
 ‘(\*the) three of my mistakes’

The partitive structure introduced by the cardinal number (59) is not a rough synonym of (60). (60) describes a better scenario where the total of my errors is three, whereas in (59) three is only a proper subset of the mistakes I made, which are understood to be more than that.

- (60) I miei tre errori  
 the my three mistakes  
 ‘my three mistakes’

To conclude, DP-internal ellipsis is incompatible with possessive raising only if the possessive has to be interpreted in the ellipsis site. That is the case for superlatives (as well as *unico* ‘only’ and ordinals) but not for cardinal numbers. I accounted for this based on the fact that what is elided in these superlative constructions is the phrase that determines the comparison class. For this reason, no element in the extended projection of the NP can be left overt in elliptical superlatives:

- (61) il più grasso \*(gatto) bianco  
 the more fat cat white

### 2.3.3 Ellipsis and comparatives

We established that superlatives license ellipsis in Italian (as well as in many other languages). In agreement with Sleeman 1996, I argued that the relevant licensing property is partitivity, to be understood as proper inclusion in a set. On these grounds, one would expect comparatives not to be able to license ellipsis of the relevant type. This prediction is borne out.

Ellipsis of the nominal projection is not licensed with an indefinite (compare (62) to (35) repeated in (63)).

(62) \*un più grasso  
a more fat  
*int.* ‘a fatter one’<sup>8</sup>

(63) il più grasso  
the more fat  
‘the fattest (one)’

Turning to definite elliptical structures such as (35) (repeated in (64)), they are only compatible with superlative interpretations.

(64) il più grasso  
the more fat  
‘the fattest’

---

<sup>8</sup>The fact that ‘uno più grasso’ is grammatical and can have a superlative interpretation does not undermine the claim made here. As shown by Sleeman 1996, “uno” is a pronoun and not as a determiner. Omission of the nominal phrase following “uno” is quite unconstrained. For instance, it is possible with ordinary adjectives: *uno alto/ bello/ rosso* ‘A tall/beautiful/red one’. The same difference applies to *quel* and *quello* as I will discuss in Chapter 3. They participate in two different constructions: an attributive structure in the former case and a predicative one in the latter case.

This is clearly shown by the impossibility of a comparative coda:

- (65) \*Il più grasso { di Sale/ di tutti gli altri gatti }  
the more fat than Sale than all the other cats  
*int.* ‘The one who is fatter than Sale/ any other cat’

### 2.3.4 Summary

In this section, I showed that Italian has a type of omission of the nominal phrase which is licensed by the attributive position of the superlative. What gets elided in these structures is the extended projection of the nominal phrase, which is roughly what determines the comparison class  $C$  for the superlative. It is not surprising that (i) comparatives do not license this type of ellipsis and that (ii) any modifier which is understood to take part in the calculation of  $C$  cannot be left overt in an elliptical structure.

## 2.4 Partitive constructions

As shown repeatedly above, Italian superlatives participate in partitive constructions where the superlative seems to take a *di*-complement.<sup>9</sup>

- (66) Il più grasso de- [i gatti bianchi] è Sale.  
The more fat of- the cats white is Sale  
‘The fattest of the white cats is Sale’

For partitive constructions, I adopt the analysis that they always contain two nominals (as originally suggested by Jackendoff 1977 and more recently defended by Zamparelli 1998, Sauerland and Yatsushiro 2004, Sauerland and Yatsushiro 2017, and Sleeman and Ihsane

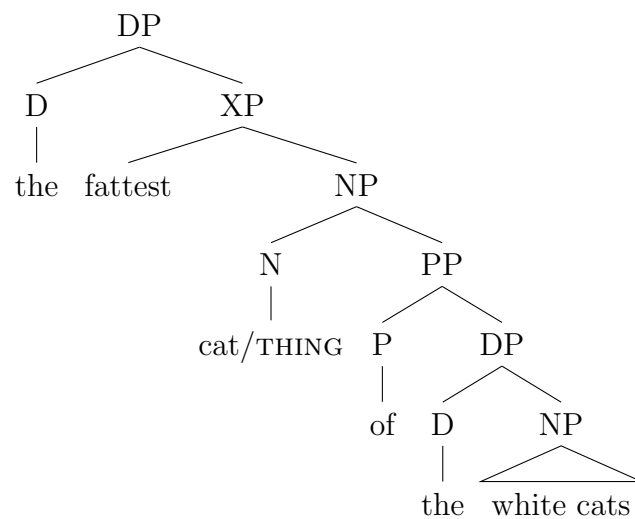
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<sup>9</sup>Here, I only take into account *of*-partitives, leaving on the side *among*-partitives and left dislocated ones. There are reasons to believe that they do not have the same properties. On this point, see Cardinaletti and Giusti 2006.

2016 a.o.).

In the case of partitive constructions like (66) the first occurrence is phonologically deleted. According to Sauerland and Yatsushiro 2017, the silent noun can either have the same lexical content as the overt noun in the structure or it could be a functional noun such as THINGS or MASS. Below I use English for convenience and I adapt their analysis to partitives introduced by superlatives, which they do not discuss.

(67) the fattest ~~eat/~~ THING of the white cats



The main evidence for the “two noun” analysis comes from the morpho-syntactic properties of partitive constructions rather than their semantics. In fact, in the compositional analysis I will propose in Section 2.5, the silent noun will not play any significant role in the semantic calculation. In the rest of the section, I briefly mention two facts supporting a “two-noun” story. For a more detailed discussion, I refer the reader to the references cited above (see in particular Sleeman and Ihsane 2016).

First, as often reported in the literature about quantified partitive constructions, it is sometimes acceptable to have two overt nouns. For instance, when the PP-internal DP contains a pronoun instead of a nominal, the higher noun can be overt. This extends to superlative partitives as well:

- (68) Il più bel ritratto di quelli presenti alla mostra è senza dubbio  
 the more beautiful portrait of those present at.the exposition is without doubt  
 il suo  
 the his  
 ‘The most beautiful portrait of those shown at the exposition is without any doubt  
 his’

Second, Sleeman and Ihsane 2016 show that gender mismatch is sometimes possible in French superlative partitives, as shown in (69). They claim that a silent noun which fails to agree with the overt noun is responsible for the mismatch.

- (69) la plus jeune de mes gentils professeurs est malade  
 the.F.SG most young of my.PL kind.M.PL professor.PL is sick.SG  
 ‘The youngest of my kind professor is sick’

I find the same mismatch possible in Italian as well:

- (70) la più dotata dei dieci ballerini ammessi è  
 the.F.SG COMP gifted.F.SG of-the.PL ten dancer.M.PL admitted.M.PL is  
 sicuramente Maria.  
 surely Maria  
 ‘The most gifted of the ten admitted dancers is without doubt Maria’

Lastly, the fact that the higher nominal has to be a (partial) copy of the lower one is suggested by the fact that two different nouns cannot occur.

- (71) \*la più bella ragazza delle mie studentesse  
 the more beautiful girl of.the my students.F

Here, I leave the question open of what specific type of copying operation is active in partitive constructions.

## 2.5 The semantics of attributive superlatives

### 2.5.1 Attributive superlatives are absolute only

Descriptively speaking, attributive superlatives in Italian are individual-based superlatives. They cannot associate with focus and yield relative readings as I am going to show (on absolute vs. relative readings see Szabolcsi 1986, Heim 1985, Heim 1999, Sharvit and Stateva 2002, Pancheva and Tomaszewicz 2012, Bhatt and Pancheva 2012, Sharvit 2015 a.o).

In order to appreciate why the Italian data below will be informative I need to say few words about (i) definiteness effects in environments such as the object of *relational have* and (ii) clitic-left dislocated constructions in Romance and their focus properties.

Szabolcsi 1986 takes the behavior of relative readings of superlatives in *relational have* sentences as one of the diagnostic tests for their semantic indefiniteness (despite their morphological definiteness). Unlike definite DPs such as (72b) and absolute interpretations of superlatives such as (72c), relative readings of superlatives are available in such syntactic position (as shown in (72d)). Szabolcsi considers focus (or alternatively a *wh*-operator) as a licensing and necessary factor for comparative readings.

- (72)
- a. John has a sister
  - b. \*John has the sister
  - c. \*John has the smartest sister
  - d. JOHN<sub>F</sub> has the smartest sister

The relative reading of (72d) can be paraphrased as *John has a smarter sister than anybody else does*. Informally speaking there is no smartest sister, *per se*, but only a smartest-sister-having person. The reader should keep this reading in mind because it is the one that I claim to be unavailable in the Italian examples below.



Whether focus is actually necessary and/or sufficient for relative readings is unclear and remains an open question that I don't aim to solve here (see Pancheva and Tomaszewicz 2012 a.o for discussion). Szabolcsi 1986 shows that in Hungarian, relative readings only obtain in the presence of syntactically-marked focus. In English, focus clearly at least facilitates disambiguation in favor of relative readings. It is less obvious whether it necessitates such interpretations. The same is true for Italian, where using a clitic left dislocated structure with the subject in a postverbal position is a natural way to focus-mark the subject of a transitive sentence. This is shown in (73).

- (73) La torta, l'ha finita Gianni  
 The cake it.has finished Gianni  
 ≈ GIANNI<sub>F</sub> finished the cake

What we notice is that even if we make sure that the subject is in a focused postverbal position, attributive constructions with pronominal superlatives do not allow relative readings. Therefore attributive superlatives in the object position of *relational have* are deviant. This is shown for pronominal superlatives (74a), elliptical structures (74b) and partitive constructions (74c).<sup>10</sup>

- (74) a. #Il più grasso gatto bianco, ce l'ha Betta.  
 The more fat cat white, CE it.has Betta  
*int* 'BETTA<sub>F</sub> has the fattest white cat'
- b. #Il più grasso, ce l'ha Betta.  
 The more fat, CE it.has Betta  
*int* 'BETTA<sub>F</sub> has the fattest (one)'
- c. #Il più grasso dei gatti bianchi, ce l'ha Betta.  
 The more fat of.the cats white, CE it.has Betta  
 #'BETTA<sub>F</sub> has the fattest of the white cats'

Note that the predicative/postnominal counterparts of (74a) and (74b) are perfectly accept-

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<sup>10</sup>The claim that pronominal superlatives are not compatible with relative interpretations in Italian was first made by Cinque 2010.

able because they are compatible with relative readings. These constructions will be the focus of the next chapter. Partitive constructions on the other hand don't have a parallel predicative construction that could be tested.

- (75) a. Il gatto bianco più grasso, ce l'ha Betta.  
 The cat white more fat CE it.has Betta  
 'BETTA<sub>F</sub> has the fattest white cat'
- b. Quello più grasso, ce l'ha Betta.  
 The.one more fat CE it.has Betta  
 'BETTA<sub>F</sub> has the fattest one'

The fact that the subject is postverbal in all the clitic left dislocated examples above is relevant. Inversion of the subject is what allows focalization, as claimed by Belletti 2001. Belletti 2008 argues specifically that the postverbal subject position is in vP peripheral focus position as show here:

- (76) [TP *pro* è ... arrivato [TOPP ... [FOCP Gianni [TOPP [vP ]]]]]

A preverbal subject in a clitic left dislocated construction would not be able to yield a relative reading, not even in a predicative/postnominal construction. Compare (75a) with (77):

- (77) \*Il gatto bianco più grasso, Betta ce l'ha  
 The cat white more fat Betta CE it.has

### 2.5.2 Background on adjective gradation

Any theory of superlatives employs some notion of degrees. So called degree-based accounts in particular take degrees to be semantic primitives, that is distinct entities in the semantic ontology. The introduction of degrees in the semantic ontology comes from Cresswell 1976.

He takes degrees to be equivalence classes of individuals equal relative to a relevant gradable property. As an example, the degree of Hilda's tallness is defined by the set of all the entities that are exactly as tall as Hilda.

Cresswell 1976 suggests that degrees are introduced in semantic representations as arguments of gradable adjectives. His idea is that a gradable adjective like *tall* expresses a relation between individuals and degrees, as shown in (78). When the degree slot is saturated, (78) returns a set of objects that are *d*-tall.

$$(78) \quad \llbracket \text{tall} \rrbracket = \lambda d. \lambda x. \text{tall}(x, d)$$

This characterization of gradable adjectives is widely adopted in current theory (von Stechow 1984, Heim 1985, 1999, Gawron 1995 among many others) and will be assumed here.

Within this framework, it is normally assumed that if Pasquale is exactly six feet tall, he is also 5 feet tall or 4 feet tall. Thus the formula  $\text{tall}(x, d)$  is to be read as 'x is tall at least to degree d' (and not as 'x's height is exactly d'. In more technical terms, gradable predicates are treated as downward monotonic functions, as defined in (79).

$$(79) \quad \text{A relation } R \text{ between objects and degrees is } \underline{\text{downward monotonic}} \text{ iff} \\ \forall x, d, d' [R(x, d) \ \& \ d > d' \rightarrow R(x, d')] \quad \text{Heim 1999}$$

As we will see, this allows one to develop a semantics for comparatives such that *John is taller than Bill* means that John is tall to some degree to which Bill is not. Similarly, the superlative *John is the tallest boy* means that John is a boy who is tall to a degree to which no other boy is.

### 2.5.3 Previous accounts of absolute readings

When (80) is interpreted in its absolute interpretation, the superlative compares cities w.r.t. their sizes *simpliciter*. As a result, if the domain is not contextually restricted to a smaller set of relevant cities, (80) refers to the boy who visited Shanghai.

- (80) the boy who visited the largest city  
 $\approx$  the boy who visited Shanghai.

The absolute reading of a superlative phrase is normally taken to be the non-surprising case and it is often discussed only in comparison with the more interesting relative reading(s). I will briefly review three different accounts that have been proposed in the literature to deal with absolute interpretations of superlatives: (i) a Scope Theory using a three-place lexical entry for *-est* (Heim 1985, Szabolcsi 1986, Heim 1999 a.o.) (ii) a Scope Theory using a two-place lexical entry for *-est* (see Heim 1999, Romero 2010 Romero 2013 a.o.) and (iii) the analysis put forth by Krasikova 2012.

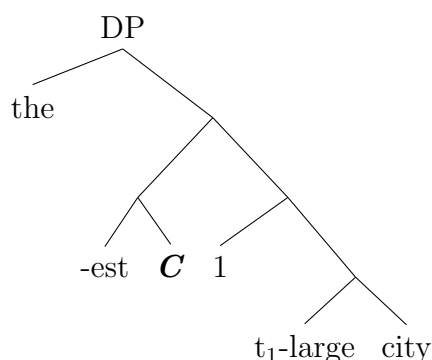
#### 2.5.3.1 Scope Theory and a three-place lexical entry for *-est*

The three-place lexical entry of *-est* is given in (81). It takes three arguments: (i) a set of individuals  $\mathbf{C}$  (the comparison class), (ii) a gradable predicate  $P$  and (iii) and individual  $x$  and says that  $x$  is  $P$  to a degree  $d$  that no other member of  $\mathbf{C}$  is. It comes with the presupposition that  $x$  is itself part of the comparison class and the lexical requirement that  $\mathbf{C}$  only includes objects of which the adjective can be sensibly predicated.

- (81) a.  $\llbracket -est \rrbracket = \lambda \mathbf{C}_{\langle e,t \rangle} . \lambda P_{\langle d,et \rangle} . \lambda x_{\langle e \rangle} . \exists d (P(x,d) \ \& \ \forall y \in \mathbf{C} [y \neq x \rightarrow \neg P(y,d)])$   
 b. Presuppositions: (a)  $x \in \mathbf{C}$ ; (b)  $\forall y [y \in \mathbf{C} \rightarrow \exists d [D(d)(y)]]$

The absolute interpretation is derived by scoping *-est* DP-internally, as shown below. In (83), I show the meaning of the first two arguments of the superlative morpheme as well as the final denotation of the DP.

(82)  $[\text{DP the } [ [ \text{-est } \mathbf{C} ] \text{ 1 } t_1\text{-large city } ] ]$



- (83)
- $\mathbf{C} = \{ x: \exists d[x \text{ is a } d\text{-large city}] \}$
  - $P = \lambda d \lambda x [x \text{ is a } d\text{-large city}]$
  - $\llbracket \text{DP} \rrbracket = \iota x_{\langle e \rangle}. \exists d (\text{large}(x,d) \ \& \ \forall y \in \mathbf{C} [y \neq x \rightarrow \neg \text{large}(y,d)])$   
 = the unique  $x$  s.t. there is a degree  $d$  s.t.  $x$  is a  $d$ -large city and no other individual in the comparison class of cities is a  $d$ -large

### 2.5.3.2 Scope Theory and Heim's two-place lexical entry for *-est*

Heim's (1999) two-place lexical entry for *-est* is given in (84). I am using the version reported by Howard 2014 because he spells out the heimian semantics in a more detailed way.<sup>11</sup> The superlative morpheme takes two arguments: (i) a set of degree properties  $\mathbf{Q}$  (the comparison class) and (ii) a degree property (which is presupposed to be part of  $\mathbf{Q}$ ).

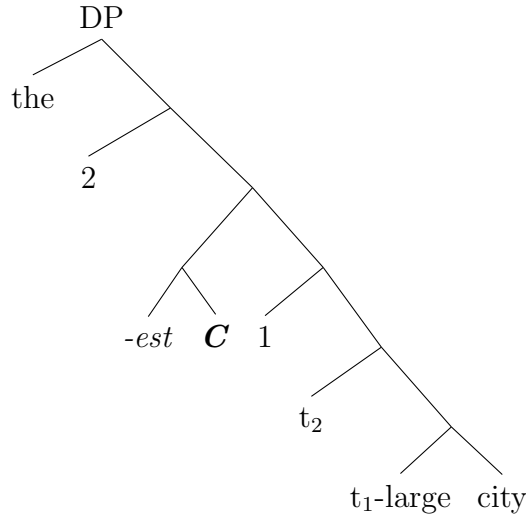
The LF and meaning of the absolute interpretation of *the largest city* is spelled out below.

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<sup>11</sup>Note that focus semantic plays a big role in shaping the comparison class under this analysis, but I do not take that into account here for simplicity.

- (84) a.  $\llbracket \text{-est} \rrbracket = \lambda \mathbf{Q} \langle d \langle st \rangle, t \rangle. \lambda P \langle d, st \rangle. \exists d [P(d) \ \& \ \forall Q \in \mathbf{Q} [Q \neq P \rightarrow \neg (Q(d))]]$   
 b. Presuppositions: (a)  $P \in \mathbf{Q}$ ; (b)  $\exists Q [Q \in \mathbf{Q} \ \& \ P \neq Q]$

- (85)  $\llbracket \text{DP the} [2 [ [ \text{-est } \mathbf{C} ] [1 [ t_2 [ t_1\text{-large city} ] ] ] ] ] \rrbracket$



- (86) a.  $\mathbf{C} = \{\lambda d \lambda w. y \text{ is a } d\text{-large city in } w \mid y \in D_e\}$   
 b.  $P = \lambda d. \lambda w. x \text{ is a } d\text{-large city in } w$   
 c.  $\llbracket \text{DP} \rrbracket = \iota x \exists d [\lambda w. x \text{ is a } d\text{-large city in } w] \ \& \ \forall Q \in \{\lambda d \lambda w. y \text{ is a } d\text{-large city in } w \mid y \in D_e\} [Q \neq [\lambda d. \lambda w. x \text{ is a } d\text{-large city in } w] \rightarrow \neg (Q(d))]$

### 2.5.3.3 Krasikova 2012

The lexical entries in (81) and (84) are not specific to the absolute interpretation. The advantage of the Scope Theory is that the difference between absolute and relative readings does not rest on the ambiguity of any particular morpheme. It is rather the result of different scopal configurations (*plus* some mechanism to derive their semantic indefiniteness from their morphological definiteness).<sup>12</sup> To the best of my knowledge Krasikova 2012 is the only one to suggest that the two readings involve two different kinds of degree binding. I turn to a

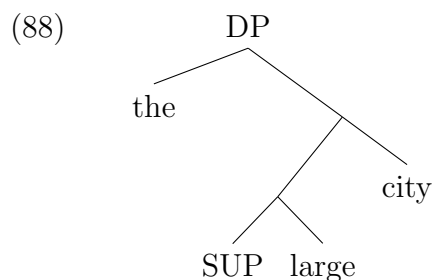
<sup>12</sup>For discussion of relative readings and how they are derived under a Scope Theory, see Chapter 5.

quick review of her account for absolute interpretations next.

She claims that absolute interpretations involve an abstract superlative degree modifier (SUP) which is licensed by the uninterpretable superlative morphology on the adjective. The meaning of SUP is given in (87): it takes three arguments. (i) A gradable adjective A (*large* in our example), (ii) a predicate P (*city*) and (iii) an individual x. It says that x has the property P and it is A to a degree that no other individual with property P is.

$$(87) \quad \llbracket \text{SUP} \rrbracket = \lambda A \in D_{\langle d, et \rangle}. \lambda P \in D_e. P(x) \ \& \ \exists d[A(d)(x) \ \& \ \forall y[P(y) \ \& \ y \neq x \rightarrow \neg A(y, d)]]$$

The absolute reading of *the largest city* has then the structure and meaning below.



$$(89) \quad \llbracket \text{DP} \rrbracket = \iota x. \text{city}(x) \ \& \ \exists d[\text{large}(d)(x) \ \& \ \forall y[\text{city}(y) \ \& \ y \neq x \rightarrow \neg \text{large}(y, d)]]$$

“the unique city x which is d-large, that is no city other than x is d-large”

In her analysis the comparison class is provided directly by the head noun, which is something that I will adopt. This makes **C** fairly context-independent. As a result, the presupposition in (81) is not required.

#### 2.5.3.4 Discussion and comparison

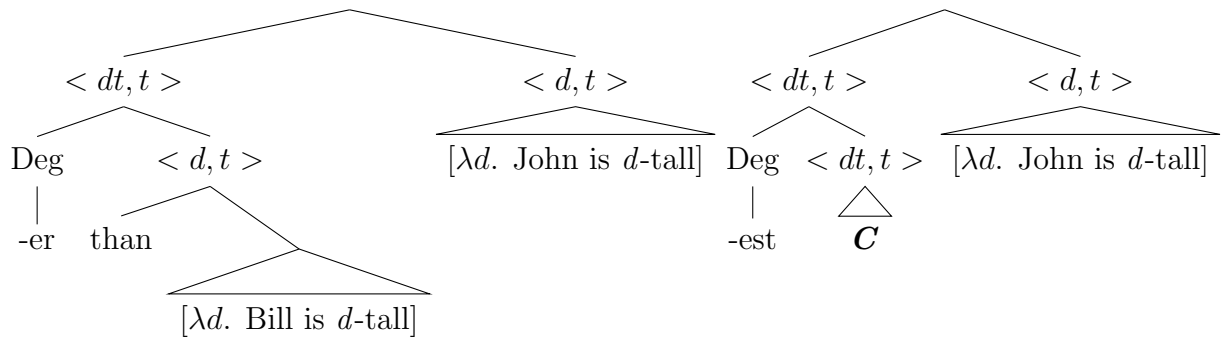
The two LFs in (84) and (81) for *-est* have two corresponding lexical entries for the comparative morpheme *-er*, which have been defended in the literature. All the lexical entries as

well as the associated LFs for the sentences in (90) are given below.

- (90) a. John is taller than Bill  
 b. John is the tallest

(91) 2-place lexical entries of *-er* and *-est*

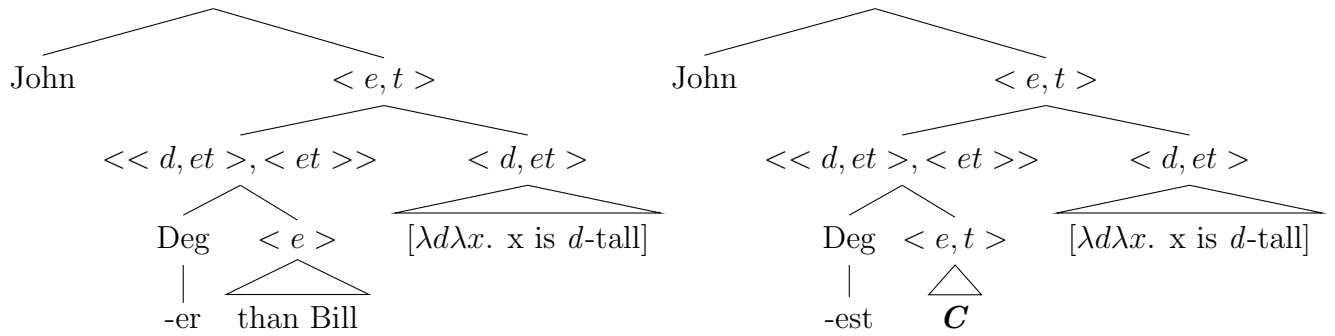
- a.  $\llbracket -er \rrbracket = \lambda P_{\langle d,t \rangle} . \lambda Q_{\langle d,t \rangle} . \exists d [Q(d) \wedge \neg P(d)]$   
 b.  $\llbracket -est \rrbracket = \lambda Q_{\langle dt,t \rangle} . \lambda P_{\langle d,t \rangle} . \exists d [P(d) \ \& \ \forall Q \in \mathbf{Q} [Q \neq P \rightarrow \neg (Q(d))]]$  Romero 2010



(92) 3-place lexical entries of *-er* and *-est*

- a.  $\llbracket -er \rrbracket = \lambda x_{\langle e \rangle} . \lambda P_{\langle d, et \rangle} . \lambda y_{\langle e \rangle} . \exists d [P(y, d) \wedge \neg P(x, d)]$  Bhatt and Takahashi 2011  
 b.  $\llbracket -est \rrbracket = \lambda Y_{\langle e,t \rangle} . \lambda P_{\langle d, et \rangle} . \lambda x_{\langle e \rangle} . \exists d (P(x, d) \ \& \ \forall y \in Y [y \neq x \rightarrow \neg P(y, d)])$





One can easily notice that under these treatments, the superlative is *de facto* treated as a comparative with a universally-quantified *than*-clause. This means that (90b) is actually analyzed as its comparative paraphrase:

(93) John is taller than anybody else.

To address this point clearly, let me remind the reader of the crucial difference between the *partitive* nature of superlatives and the *relational* nature of comparatives introduced in the first chapter. This difference is reflected in the following facts. The comparison class w.r.t. which the superlative in (94a) is evaluated includes John. We therefore infer that John is a physics student. The standard of comparison of the comparative in (94b) cannot include John. For this reason, John is not understood as part of the group of relevant physics students.

- (94) a. John is the tallest **est** physics student *John is a physics student*  
 b. John is taller **er** [ than the physics students ] *John is not one of the physics students*

Now, (95) shows that we can convey the meaning in (94a) using a comparative morpheme *plus* a universally quantified *than*-clause with some mechanism to make sure that John is understood as included in the set of relevant physics students ('other' would do the trick).

(95) John is taller than any other physics student

But even if (94a) and (95) (as well as (93) and (90)) are truth-conditionally equivalent, it does not mean that they are not morpho-syntactically equivalent and that they should be assigned the same analysis. On the contrary, I believe that a proper treatment of superlatives should take into account their morpho-syntactic properties.

When it comes to the the attributive constructions discussed in this chapter, there is convincing evidence to suggest that they are *bona fide* superlatives, morphologically distinguished from comparative constructions, in that

- a. They are incompatible with *than*-clauses and
- b. The comparison class is overtly specified.

In §2.5.5, I will put forth a compositional analysis of attributive constructions that take their morphosyntactic properties into account. This will result in *the tallest boy* as being analyzed as something closer to *the (only) first one among boys ranked w.r.t. their heights* rather than *a/the boy taller than any other boy*. From Krasikova's account we will only adopt the idea that the comparison class is provided directly by the nominal projection. From Cresswell 1976, Klein 1980 (a.o), I take the notion of equivalence classes. Let me briefly introduce the main ideas before turning to the compositional account.

#### 2.5.4 Degrees as equivalence classes

In §2.5.2, I introduced Cresswell's (1976) idea that degrees are equivalence classes of individuals who are indistinguishable with respect to some gradable property. Tallness degrees for instance can be thought of as sets of objects, of semantic type  $\langle e,t \rangle$ . Let me show how these classes can be constructed and consequently related to each other, building a scale. On the exposition of these ideas, I rely heavily on von Stechow 2008.

We start off with the relation  $\succ_{tall}$ , which is empirically given.  $F(\succ_{tall})$  denotes its field. Using this transitive and anti-symmetric relation, we can define the relation  $\simeq_{tall}$  ‘exactly as tall as’ as in (96).

$$(96) \quad \forall x, y \in F(\succ_{tall}) [ x \simeq_{tall} y \text{ iff } ( \forall z \in F(\succ_{tall}) ) [ x \succ_{tall} z \text{ iff } y \succ_{tall} z ] \& [ z \succ_{tall} x \text{ iff } z \succ_{tall} y ] ] \quad \text{von Stechow 2008}$$

We can now partition the domain of individuals according to  $\simeq_{tall}$  and define the tallness degree of an individual  $x$  (notated as  $[x]_{tall}$ ) as the set of all the objects (a subset of  $F(\succ_{tall})$ ) that stand in the  $\simeq_{tall}$  relation to  $x$ , as stated in (97). In other words,  $x$ ’s tallness degree is its equivalence class relative to  $\simeq_{tall}$ . If Mary is exactly 5 feet tall, Mary’s tallness degree ( $[mary]_{tall}$ ) can be identified with all the objects which are 5 feet tall.

$$(97) \quad \forall x, y \in F(\succ_{tall}) [x]_{tall} = \{ y : y \simeq_{tall} x \} \quad \text{von Stechow 2008}$$

Now that we have constructed the equivalence classes, it is possible to order them using a second order relation, i.e. a relation between degrees, as defined below:

$$(98) \quad \forall d, d' \in Deg_{tall} [ d \succ_{tall} d' \text{ iff } \forall x \in d, \forall y \in d' [ x \succ_{tall} y ] ]$$

To sum up, once we partition the domain using some equivalence relation (‘exactly as tall as’ in our example’), we are able to order the resulting classes with respect to each other. A partition here is a collection of equivalence classes arising from some equivalence relation. In more general terms, it is defined by Mendia 2017 as in:

$$(99) \quad \textit{Partition:} \text{ Let } A \text{ be a non-empty set. A partition is a collection of subsets of } A \text{ iff (i) for any two subsets } X \text{ and } Y, X \cap Y = \emptyset \text{ and (ii) the union of all subsets of } A \text{ equals } A.$$

Partitions are defined in (99) as disjoint subsets: equivalence classes resulting from some equivalent relation do not share members. Note that this requires a non-monotonic notion of degrees (contrary to what we saw in §2.5.2). To accommodate this, the lexical entry (78) could be replaced with (100)

$$(100) \quad \llbracket \text{tall} \rrbracket = \lambda d. \lambda x. \text{HEIGHT}(x) = d$$

That is, equivalence classes are constructed based on the maximal tallness degree of objects. If John is 6 feet tall and Mary 5 feet tall, John would not be part of the partition of the domain including Mary.

### 2.5.5 The compositional analysis of attributive superlatives in Romance

In this subsection, I provide a compositional analysis for the three types of attributive superlatives I presented in this chapter: (i) prenominal superlatives, (ii) elliptical structures and (iii) partitive constructions. They will be evaluated w.r.t. to the context depicted by Figure 2.1. In the discourse there are four relevant cats: Chloe, Sale, Romeo and Pepe. They have the physical properties shown in the picture.

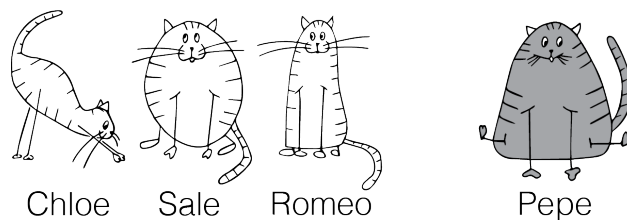


Figure 2.1: The relevant cats in the context

### 2.5.5.1 Prenominal superlatives

I start with the prenominal superlative in (101):

- (101) il più grosso gatto bianco  
the more big cat white  
'the biggest white cat'

Step 1 The first step is the calculation of the comparison class, which is roughly determined by the extended nominal projection  $[_{NP}$  white cats ]. The properties denoted by the nominal phrase and by the modifier can be assumed to combine through Heim and Kratzer's (1998) Predicate Modification. The result is that we are comparing white cats. Therefore Pepe is not relevant.

- (102)  $[[\text{gatto bianco}]] = \lambda x.\text{white}(x) \ \& \ \text{cat}(x) = \{ \text{Chloe, Sale, Romeo} \}$

Step 2. I claim that the second main step is the creation of a total ordering.

When part of a superlative structure, the comparative morpheme *plus* the adjective move outside the extended projection of the nominal phrase, as shown in (103).

- (103)
- 
- ```
graph TD
    DP["DP/(101)"] --- il["il"]
    DP --- XP["XP"]
    XP --- SUP["SUP"]
    XP --- YP["YP"]
    YP --- grosso["grosso"]
    YP --- NP["NP"]
    NP --- gatto["gatto"]
    NP --- bianco["bianco"]
```

Semantically, *più* takes two arguments. It combines with the gradable adjective *grosso* first and with the set denoted by the NP last. It then returns an ordered set (list) of equivalence classes where:

- (i) the individuals in every class are indistinguishable with respect to their size
- (ii) sets are strictly and totally ordered w.r.t. the size of their members.

This second order relation was defined in (98) and it is repeated here:

$$(104) \quad \forall d, d' \in \text{Deg}_{\text{tall}} [ d \succ_{\text{tall}} d' \text{ iff } \forall x \in d, \forall y \in d' [ x \succ_{\text{tall}} y ] ]$$

This results in the following denotation for  $[\text{YP } \text{più } \text{grosso } \text{gatto } \text{bianco}]$ :

$$(105) \quad \llbracket \text{YP} \rrbracket = \llbracket \text{più} \rrbracket(\llbracket \text{grosso} \rrbracket)(\llbracket \text{gatto bianco} \rrbracket) = \langle \{ \text{Sale} \}, \{ \text{Romeo} \}, \{ \text{Chloe} \} \rangle$$

Otherwise *grosso* has the meaning in (106a), whereas the meaning of the NP was given in (102). The presupposition in (i) ensures that the predicate can be sensibly predicated of the members of the set denoted by the NP (which I refer to as  $\mathbf{C}$ ). In our particular example it ensures that we are only considering *sized* objects.

$$(106) \quad \begin{array}{l} \text{a. } \llbracket \text{grosso} \rrbracket = \lambda d. \lambda x. \text{big}(x, d) \\ \text{b. } \text{Presupposition } \forall y [ y \in \mathbf{C} \rightarrow \exists d [ D(d)(y) ] ] \end{array}$$

In the particular context we set up (the one depicted in Figure 2.1), every (white) cat is a different size. Therefore, we end up with a list of singletons. In order to see why using a list of sets (as opposed to a list of individuals) is advantageous, we have to consider a modified context, where at least two cats are the same size. To see that, let's add Romeo's twin brother to the context, Matisse. Since, Matisse and Romeo are equally big, it is not possible to linearly order them with respect to their size. This is because it is not the case

either that *Matisse is bigger than Romeo* or that *Romeo is bigger than Matisse*. Still, we are able to linearly order the set of cats sharing the same size, as in (107).

$$(107) \quad \llbracket \text{più} \rrbracket(\llbracket \text{grosso} \rrbracket)(\llbracket \text{gatto bianco} \rrbracket) = \langle \{ \text{Sale} \}, \{ \text{Romeo}, \text{Matisse} \}, \{ \text{Chloe} \} \rangle$$

Step 3: SUP picks the first member of the list.

SUP denotes a function that takes a list of sets as input and return the first element of the list. Thus, the phrase  $[\text{XP SUP più grosso gatto bianco}]$  denotes a set, whose members are the biggest equally sized white cats. In our context, it denotes a singleton whose only member is Sale.

$$(108) \quad \llbracket \text{XP} \rrbracket = \llbracket \text{SUP} \rrbracket(\llbracket \text{più grosso gatto bianco} \rrbracket) = \{ \text{Sale} \}$$

Step 4: the definite determiner *il* in (101) performs a uniqueness test. It has the meaning in (109). It returns the unique member of a set  $P$  if there is exactly one. Otherwise  $\llbracket \text{il} \rrbracket(P)$  is undefined.

$$(109) \quad \llbracket \text{il} \rrbracket = \lambda P. \iota x. P(x)$$

In our context, the presupposition of the definite determiner is satisfied. There is only one referent that satisfies the superlative description and (101) returns that individual.

$$(110) \quad \llbracket (101) \rrbracket = \text{Sale}$$

This account correctly predicts that (101) would fail to refer (to Sale) in case of a tie. If we added another white cat to the domain of relevant cats which was as big as Sale, then the first member of the list denoted by *più grosso gatto bianco* would not be a singleton and the

entire phrase would be predicted to be undefined.

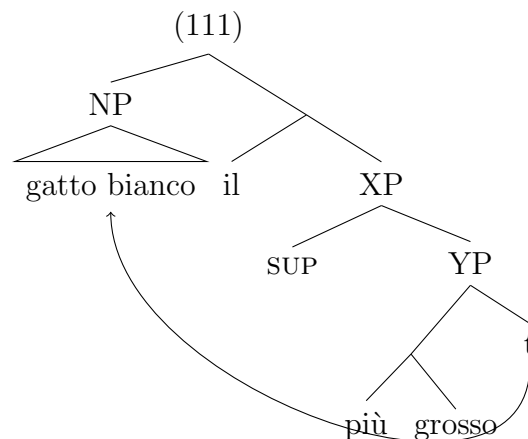
### 2.5.5.2 Elliptical superlatives

The semantic derivation of the elliptical structure (111) in a context in which (i) the elided material is understood as referring to white cats and (ii) the relevant cats are the ones in Figure 2.1 will be very similar to the compositional analysis I gave to (101).

- (111) il più grosso  
 the more big  
 ‘the biggest one’

In Section 2.3, I assumed a movement analysis of the elided constituent to a left peripheral position. This movement for (111) is shown in (112). The moved phrase is then phonologically deleted.

- (112)



The semantic compositional analysis of (111) requires the moved nominal phrase to be computed in the premovement position. This makes it virtually identical to the derivation of



(101).

### 2.5.5.3 Partitive constructions

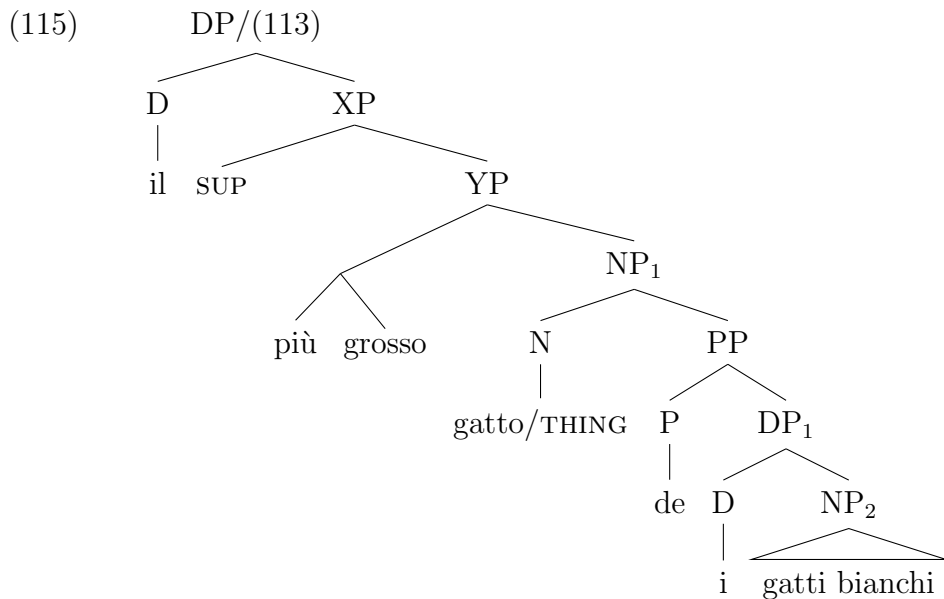
I turn next to the semantic analysis of partitive constructions that were discussed in Section 2.4. In particular, I derive the meaning of the phrase (113).

(113) Il più grosso dei gatti bianchi  
The more big of.the cats white  
'The biggest of the white cats'

Recall that I adopted a 'two noun' account where the first occurrence of the nominal is phonologically deleted but semantically active. Also this nominal is taken to be less specified than the nominal phrase in the PP-internal DP. As a result, it always denotes a superset of the latter. In our example, the higher nominal is taken to be [<sub>N</sub> cat ] (or alternatively an even more generic noun such as [<sub>N</sub> THING ]), whereas the lower nominal is a modified one (*gatti bianchi*. 'white cats').

(114) [ il [ più grasso ] [ ~~gatto~~/THING [ de [ i gatti bianchi ] ] ] ]

The input structure for the semantic composition of (113) is given here.



We need to deal with the difference between singulars and plurals. For that, I am going to assume the following traditional and somewhat simplified semantics: singular nouns denote sets of atomic individuals, while plural nouns denote a set of plural individuals (pluralities), arranged in a semi-lattice structure where entities are partially ordered by mereology as shown in Figure 2.2 (see Link 1983 a.o).

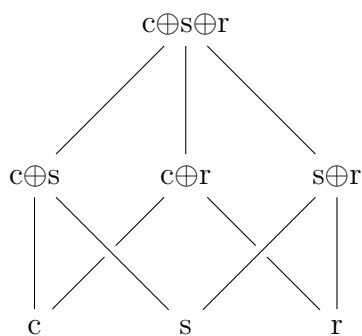


Figure 2.2: Semilattice structure of *gatti bianchi*

This gives us the denotation of  $[_{NP2} \text{ gatti bianchi}]$  in (116b). The denotation of the singular NP was given in (102) and it is repeated below for convenience:<sup>13</sup>

---

<sup>13</sup>Note that I included the atoms in (116b). One could argue that atoms should not be included in the denotation of plural nouns. I leave this issue open as it does not really affect the semantic calculation here.

- (116) a.  $\llbracket \text{gatto bianco} \rrbracket = \{ \text{Chloe, Sale, Romeo} \}$  or  $\{c, s, r\}$   
 b.  $\llbracket \text{gatti bianchi} \rrbracket = \{ c, s, r, c \oplus s, c \oplus r, s \oplus r, c \oplus s \oplus r \}$

The plural definite determiner ‘i’ then takes the plural NP as an argument and returns the maximal (t.i. greater) element of (116b):

(117)  $\llbracket \text{DP}_1 \rrbracket = \llbracket i \rrbracket(\llbracket \text{gatti bianchi} \rrbracket) = \text{MAX}((116b)) = c \oplus s \oplus r$

For the preposition *di* ‘of’, I adopt the lexical entry from Pancheva 2006 (also see references therein). *di* combines with a definite description and returns a property of individuals. In particular, it takes a sum (in our case the greater sum) and gives back the atoms of that sum. In our case it takes the referential expression  $[_{DP} i \text{ gatti bianchi}]$  as an input and returns the property of being part of that plurality, that is being one of the contextually relevant white cats. This property holds of three individuals in our model: Chloe, Romeo and Sale.

- (118) a.  $\llbracket di \rrbracket = \lambda x \lambda y. y \text{ is part of } x$  adapted from Pancheva 2006  
 b.  $\llbracket di \rrbracket(\llbracket \text{DP}_1 \rrbracket) = \lambda y. y \text{ is part of } c \oplus s \oplus r = \{c, s, r\}$

The PP then combines with the nominal  $[_N \text{ gatto/THING}]$  though predicate modification. Since the silent noun phrase denotes a superset of the PP-internal NP, this derivational step won’t affect the calculation. As I discussed in Section 2.4, the motivation for a null noun here was not due to semantic considerations.

(119)  $\llbracket \text{NP}_1 \rrbracket = \lambda y. y \text{ is a cat/THING \& } y \text{ is part of } c \oplus s \oplus r = \{c, s, r\}$

The rest of the semantic derivation will parallel the previous attributive cases, as shown in (120)

- (120) a.  $\llbracket \text{XP} \rrbracket = \llbracket \text{più} \rrbracket(\llbracket \text{grosso} \rrbracket)(\llbracket \text{NP}_1 \rrbracket) = \langle \{ \text{Sale} \}, \{ \text{Romeo} \}, \{ \text{Chloe} \} \rangle$   
 b.  $\llbracket \text{YP} \rrbracket = \llbracket \text{SUP} \rrbracket(\llbracket \text{YP} \rrbracket) = \{ \text{Sale} \}$   
 c.  $\llbracket (113) \rrbracket = \llbracket \text{il} \rrbracket(\llbracket \text{YP} \rrbracket) = \text{Sale}$

### 2.5.6 Summary

A compositional analysis of the attributive superlatives has been proposed with the following key steps. First, the comparison class is overtly specified by the nominal projection. Second, the comparison morpheme is responsible for creating an ordering between equivalence classes (partitions of the domain of objects that are identical with respect to some gradable property). Third, the superlative morpheme is responsible for picking out the first-ranked class (type *et*). Lastly, the determiner tests this set for uniqueness. That is, it returns the only member of that class, if there is one. Otherwise the phrase would be undefined.

## 2.6 Comparative morphology and compositionality

Superlatives are clearly complex expressions that should be decomposed into several pieces. *How many and which ones?* In the case of the Romance languages discussed here the visible pieces are (i) a definite marker and (ii) the comparative form. This raises the questions of how the superlative interpretation is obtained. In particular:

- (i) should additional silent morphology be posited?
- (ii) does the definite determiner play a special role (i.e. it encodes the superlative interpretation, it forms a unit with the comparative morpheme)?

In this chapter I provided a positive answer to question (i) and a negative one to (ii). I argued that for Romance attributive superlatives a covert morpheme SUP should be posited. In particular, I took the position of the adjective to provide evidence for the existence of such a piece of meaning. On the other hand, I claimed that nothing special has to be said about

the definite determiner in these constructions, which was argued to play its usual role.

I will now briefly evaluate the current proposal w.r.t. to Bobaljik’s (2012) containment hypothesis.

### 2.6.1 Bobaljik’s (2012) Containment Hypothesis and Comp+Def languages

Bobaljik 2012 investigated the internal make-up of adjectives in their (i) positive (*young*) (ii) comparative (*younger*) and (iii) superlative (*youngest*) forms in over 300 languages and found strikingly robust patterns. In many languages the comparative grade is formed using a base that is *suppletive*, even if the affix is the same as in regular forms. This is true for a handful of English adjectives: the comparative form of *good* is *bett-er* and not *good-er*. What Bobaljik found is the following:

- (i) whenever the comparative degree is suppletive (i.e. *better*), the superlative is also suppletive (i.e. *best*);
- (ii) whenever the comparative degree is regular (derived from the positive root, as *bigger* in English), the superlative is also regular (*biggest*).

In other words, the following two logically possible patterns are unattested:

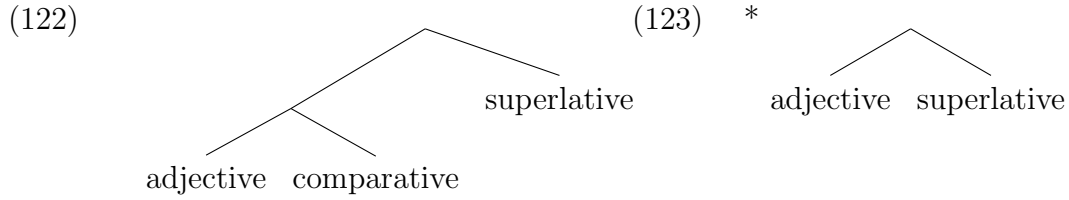
| POSITIVE    | COMPARATIVE    | SUPERLATIVE     |                  |
|-------------|----------------|-----------------|------------------|
| <b>good</b> | <b>bett-er</b> | <b>good-est</b> | excluded by (i)  |
| <b>good</b> | <b>good-er</b> | <b>b-est</b>    | excluded by (ii) |

This patterning led him to the formulation of the *Containment Hypothesis*:

- (121) **The containment Hypothesis** (Bobaljik 2012):  
the representation of the superlative properly contains that of the comparative.

“I contend that no language has a true superlative morpheme that attaches to

adjectival roots. Apparent examples, such as English -est, in fact have a richer structure, where the superlative-forming element always embeds a comparative. Bobaljik 2012, p.1.”



The nesting structure that is predicted by this hypothesis is transparently shown by many languages. Persian is such a language where the superlative form (c) embeds the comparative (b):

- (124) a. **kam** ‘little’  
 b. **kam-tar** ‘littler’  
 c. **kam-tar-in** ‘littlest’ Bobaljik 2012:31

The same transparent nesting is clearly not visible in Romance and in other languages lacking a dedicated superlative morpheme. Bobaljik 2012 leaves the question open as to how comp+definiteness languages should be analyzed. The proposal I defended in this chapter is fully compatible with the containment hypothesis in a non-trivial way and my semantic treatment of superlatives is an explicit attempt to provide a compositional analysis in two separate steps (the creation of a ordered set and the selection of the first ranked element).

## 2.7 Conclusion

In this chapter I discussed three types of superlatives in Italian

- (i) prenominal superlatives

(i) elliptical structures

(i) *of*-partitive constructions

I argued that they are *bona fine* superlatives, morpho-syntactically distinguished from comparative structures. These constructions are unambiguously superlative in their interpretation and syntactically incompatible with the presence of *than*-clauses. They are characterized by the fact that the comparison class is overtly specified by the nominal phrase and the superlative form takes scope above it, moving to the base-generated position of silent SUP. This results in the adjective form appearing in a unusually high position within the DP, which I identified as belonging to the region of numerals.

Semantically, attributive cases are definite, individual-based superlatives that do not associate with focus to yield relative readings. That is, in these constructions, the determiner plays the canonical role of reflecting uniqueness at the DP level. Compositionally, I defended an analysis where the superlative morpheme functions like an ordinal-like element that returns the first-ranked equivalence class (a set of objects equal with respect to some measure) in a linear order of classes. The definite determiner would then perform the uniqueness test and return the only member of the first ranked class, if there is one.

## CHAPTER 3

### Predicative superlatives

#### 3.1 Introduction

In Chapter 2, I focused on a particular type of quality superlatives that I referred to as *attributive superlatives*. They are characterized by the following properties: (i) the superlative form is in a position higher than an (extended) NP; (ii) the (possibly null) NP roughly provides the comparison class for the superlative and (iii) the definite determiner plays its usual role of combining with an extended NP projection. We also saw that they are semantically only compatible with absolute interpretations. An example of an attributive superlative and its structure is given in (1).

- (1) a. il più grasso (gatto bianco)  
the more fat cat white  
'the fattest (white cat)'
- b. [DP il [ SUP [ più grasso ]<sub>i</sub> [NP <gatto bianco t<sub>i</sub> > ] ] ]

For ordinary forms of adjectives, a distinction is normally assumed between *attributive* modifiers and *predicative* ones (see Bolinger 1967, Sproat and Shih 1988, Cinque 1993, Alexiadou and Wilder 1998, Cinque 2010 a.o.). How to properly characterize this distinction and whether it is a categorical one (or rather one type of adjective can ultimately be reduced the other) is a debated issue in the literature that we set aside here. A test that is often assumed for predicativity (see Alexiadou and Wilder 1998 and Cinque 2010 a.o.) is the fol-



lowing. If a modifier can occur as the predicate of a copular clause (either at the sentential level or inside a relative clause) retaining the same meaning, it is predicative. If it cannot, it is nonpredicative (also referred to as: direct modification, attributive, inner modifier). We observe that the adjective *young* passes the test whereas *main* does not.

(2) Predicative modifier

- a. The *young* pope
- b. The pope is *young*
- c. The pope who is *young*

(3) Nonpredicative modifier

- a. The *main* cause
- b. \*The cause is *main*
- c. \*The cause which is *main*

When it comes to superlative forms, as we will see, the situation is partly obfuscated by their compositional complexity. For our purposes, the distinction between attributive and predicative is to be understood as follows.

- a. Attributive structures have the properties and structure mentioned above. They are cases where the superlative is part of a DP-structure, where it roughly sits between the D area and a nominal phrase. The (possibly unpronounced but semantically understood) NP plays the crucial role of providing the comparison class.
- b. Predicative structures refer to cases where the superlative is a predicate of a main clause, relative clause or reduced structure. It does not embed a nominal phrase and the determiner preceding the superlative, if there is one, also does not embed a nominal projection.

It has been claimed that superlatives can never be assigned a predicate construal. That is, they cannot function like predicates but only like attributive modifiers. Matushansky 2008 is the main advocate of this position, which will be reviewed in §3.2.1. In this chapter, I argue against this view and I show that a variety of superlative constructions in English and Romance are better analyzed as predicative.

The chapter is organized as follows. In §3.2 I start off by discussing and arguing against the claim that superlatives are attributive only (*pace* Matushansky 2008). I then introduce the cases that I will analyze as predicates using English data as a starting point. I also make some preliminary remarks on the function of the definite determiners in these constructions. Section 3.3 discusses modal superlative predicates (*the prettiest possible*) in Romance and provides a novel analysis for these constructions. In Section 3.4, I look at two other types of predicative superlatives that turn out to be possible in English and in some Romance languages (such as French) but not in others (Italian and Spanish). They are sentential level cases (*(Of all the days of the week), John is the definitely the busiest on Monday*) and cases of NPIs occurring in relative superlatives (*Yesterday, Mary was the kindest she has ever been*). Postnominal superlatives in Romance are the topic of Section 3.5. They are analyzed as *maximalizing* reduced relative clauses. The difference between my account and existing ones (mainly Kayne 2008 and Alexiadou 2014) is also discussed and the basic facts about the Romance variation w.r.t. definiteness in superlatives is presented. In Section 3.6 I go back to English data and I show that definite comparatives in English lack the predicative construal discussed in this chapter. Section 3.7 concludes.

## 3.2 Superlatives can function as predicates

In this section, I argue that superlatives can function as predicates and they do not necessarily need to embed a nominal projection. The section is organized as follows: in §3.2.1 I briefly review Matushansky's (2008) arguments for the opposite claim, namely that superlatives are attributive only. In §3.2.2, I show examples of predicative superlatives in English and in

§3.2.3 I make some preliminary remarks on the presence of the definite determiner in the case of predicative superlatives.

### 3.2.1 Matushansky 2008

Matushansky 2008 claims that, in all languages, adjectival superlatives can only be attributive and can never function as predicates. She argues that unlike absolute or comparative forms of adjectives (as in (4)), when superlatives appear in predicate position without an overt noun as in (5a), they modify a null head noun, as shown in (5b).

(4) This story is good/ better (than the other)

(5) a. This story is the best

b. This story is the best N

Matushansky 2008

She offers compelling cross-linguistic syntactic evidence to show that superlatives *can be* and often *are* attributive but she maintains that the main reason for the obligatory attributive nature of the superlative morpheme comes from their semantics. She argues that the NP that the superlative AP modifies provides an overt comparison class argument. She claims that this is also able to account for all morphosyntactic properties that superlatives have in the languages she discusses. I will here briefly review two of the properties that she takes as evidence for her claim.

1. The presence of the definite determiner in superlatives such as (5a) above would be hard to justify without the presence of a nominal projection. Even more challenging are cases such as (6a), where the French determiner is inflected for gender in a language where PPs do not inflect for gender.

- (6) a. Quelle maison est la plus à gauche?  
 which house.F is the.F CMP to left  
 ‘Which house is the leftmost?’ Matushansky 2008
- b. Quel livre est le plus à gauche?  
 which book.M is the.M CMP to left  
 ‘Which book is the leftmost?’

2. Concord vs. agreement in languages like German. In German, adjectives in predicate position do not agree with the subject (7a), whereas adjectives in attributive position show agreement with the head noun (concord), as shown in (185a). Matushansky reports that German superlatives in predicate position show attributive marking (see (7c)):

- (7) a. Diese Schlange ist schön(\*-e)  
 this snake is beautiful-agr  
 ‘This snake is beautiful’
- b. Das ist eine schön\*(-e) Schlange  
 this is a.F beautiful-agr snake  
 ‘This is a beautiful snake’
- c. Diese Schlange ist die schönst\*(e)  
 this snake is the-f beautiful-sup-(agr)  
 ‘This snake is the most beautiful’ Adapted from Matushansky 2008

I agree with Matushansky 2008 that many occurrences of superlatives appearing without an overt nominal projection should be analyzed as attributive elliptical constructions. Our results in Chapter 2 further supported that. I showed that Italian is among the many languages where superlatives do license null nominals. In contrast with Matushansky 2008, however, I argue that instances of superlatives that can be assigned a truly predicative structure exist. In §3.2.2 I introduce these cases starting with English. In particular, I show that relative interpretations of predicative superlatives correlate with the absence of a nominal projection and a predicative construal. In these cases, when a definite article is present, it will be taken to be part of a degree phrase and not to embed a nominal structure.

This last point is the object of §3.2.3.

### 3.2.2 Examples of predicative superlatives in English

In this section, I introduce three cases that I analyze as purely predicative in English: (i) some relative readings of quality superlatives occurring without a nominal, (ii) cases of NPIs occurring in relative reading superlatives and (iii) modal superlatives. I will turn to the available Romance counterparts of these examples in the next sections of this chapter.

Let me first briefly and informally remind the reader of the difference between *absolute* and *relative* interpretations of superlative expressions (see Heim 1985, Szabolcsi 1986, Heim 1999, Sharvit and Stateva 2002, Bhatt 2002 among many others for discussion).<sup>1</sup>

Absolute The comparison class is determined on the basis of denotation of the DP containing the superlative (in a given context) only.

Relative Other constituents in the sentence play a role in determining the comparison set.

The difference can be illustrated using a famous example from Heim 1999.

- |     |                                                         |           |
|-----|---------------------------------------------------------|-----------|
| (8) | Who wrote the largest prime number on the blackboard?   | Heim 1999 |
|     | a. Nobody, of course. There is no largest prime number! | ABSOLUTE  |
|     | b. John did. His was the only one above 100.            | RELATIVE  |

In the absolute interpretation of the superlative in (8), *the largest prime number* is interpreted as an independent constituent, paraphrasable with *a prime number that is larger than any other*. Now, such a thing does not exist and (8a) reflects a possible answer to this inter-

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<sup>1</sup>The reader should be made aware that this simplified way of presenting the difference between absolute and relative interpretations is not theory neutral and implicitly favors a scope-based treatment of the absolute/relative superlative ambiguity.

pretation of (8). The superlative in (8) can however be assigned a different interpretation where only numbers which were written on the board are compared. This interpretation is normally referred to as the *relative* interpretation. (8b) constitutes an appropriate answer to this reading of (8).

When such a constituent cannot be interpreted in isolation, the absolute interpretation is not available. Since there is not such thing as “the fewest letter”, for example, (9) can only have a relative interpretation, which is paraphrased below. This is a general property of quantity superlatives such as (9). They lack an absolute interpretation (see Chapter 5 for discussion).

- (9) Who got the fewest letters? adapted from Szabolcsi 1986  
 ≈ who got fewer letters than anybody else got?

Now we can appreciate the fact that relative interpretations of superlatives in predicate position also exist, in addition to the expected absolute ones. Not only can (10) have an interpretation where John is compared to other people who are angry at Mary (the absolute interpretation). (10) can also compare John’s level of anger towards different people. Similarly, (11) can have a relative interpretation. It can mean that Mary was prettier yesterday than she was on other days.<sup>2</sup>

- (10) John is (the) angriest at Mary Heim 1999  
 ✓ ABS ≈ John is angrier at Mary than anyone else is  
 ✓ REL ≈ John is angrier at Mary than he is at anyone else

---

<sup>2</sup>**Note on the optionality of the definite article** The great majority of my trusty American English informants accepted both interpretations for both variants of (10) (the one with and the one without the definite article). *Some* speakers didn’t. What is interesting and fully consistent with my analysis below is that *all* speakers accepted the absolute interpretation for the version with definite article and the relative interpretation for the one without. Those who found the determinerless version of (10) ambiguous agreed that the (b)-reading is more accessible.

- (11) Mary was (the) prettiest yesterday  
 ✓REL        ≈ Mary was prettier yesterday than on any other relevant day

Importantly, relative interpretations are incompatible with the presence of an overt noun. When a noun is present, in fact, an absolute interpretation is obligatory, as shown below.

- (12) Mary was the prettiest one yesterday  
 ✓ABS        ≈ Yesterday Mary was prettier than any other relevant girl/person  
 ✗REL        ≈ Mary was prettier yesterday than any other relevant day

I take this fact to suggest that relative interpretations correlate with the absence of a nominal projection. To further support this correlation, note that when the predicative superlative appears in the precopular position (as in the inverse sentence in (13)), the relative reading becomes unavailable:

- (13) The angriest at Mary is John.  
 a. [The one who is angrier at Mary than anyone else is ] is John  
 b. \*[The one who is angrier at Mary than he is at anyone else] is John

Here is the line of explanation I pursue. The fact that fronted predicative superlatives in English inverse copular sentences are not ambiguous follows from a more general restriction on what types of predicates can be raised in inverse copular sentences. Adjectival phrases in particular are generally banned, as shown in (14). It is therefore reasonable to assume that in order to be raised, the phrase *the angriest at Mary* in (13) cannot have a predicative construal and has to contain a null head noun instead. This makes it attributive (as in (15)) and absolute in its interpretation as a result.

- (14) a. \*Tall is John.  
b. \*Taller than Peter is John.

(15) The angriest N at Mary is John.

I take the facts that we have seen to indicate that quality superlatives in predicate position can have another structure in addition to the attributive one defended by Matushansky. I call this structure *predicative* and I claim that it is characterized by the lack a nominal projection. The relative interpretations discussed in this section will be argued to have such an underlying structure.

In English, these kinds of relative readings are also available using a different strategy, where the comparison class can be expressed overtly by a relative clause containing NPIs. This brings us to the second type of predicative superlatives I introduce in this section. An example is provided in (16), which is a close synonym of (11).

(16) Yesterday, Mary was the prettiest she has ever been

These types of sentences are analyzed by Howard 2014. In his work, Howard does not discuss predicative cases, focusing on quantity and adverbial superlatives such as (17), but his main observations also extend to sentences such as (16).

- (17) a. John read the most books (that) anyone in the class has ever read.  
b. Mary sang the loudest (that) anyone in the group has ever sung.

The third and final case that I argue to involve a purely predicative construal is the case of modal superlatives that is, superlatives forms which are accompanied by adjectives like *possible*. (18) provides an example of this.



(18) She wanted to be the prettiest possible.

The relevant reading of (18) is paraphrasable using an equative construction ‘as pretty as possible’ (see Larson 2000a, Romero 2013 a.o. for discussion). This is a general property of so-called *amount* or *degree*-relatives and will play an important role in the analysis of this construction. What matters here is that the reading associated with (18) does not compare different individuals, which is something that we would expect from an attributive structure.

### 3.2.3 Some preliminary remarks on the function of definite determiners

I argued that quality superlatives are not obligatorily attributive. In particular, I claimed that a purely predicative structure is available and it correlates with the readings discussed in the previous section. We note that despite the lack of a nominal projection, these cases of predicative superlatives (can) contain a definite determiner. This is perhaps surprising. In Matushansky 2008 and more generally in the DP literature, the presence of an article is in fact usually taken as evidence for the presence of a nominal projection (also see Alexiadou 2014 for discussion of the same perspective).

Consider (11) (repeated in (19)) once again:

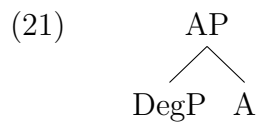
(19) Mary was (the) prettiest yesterday  
     $\approx$  Mary was prettier yesterday than any other relevant day

Also recall from the discussion in §3.2.2 that the relevant reading is not compatible with the presence of an overt noun phrase. That is, (20) cannot mean ‘Mary was a prettier girl yesterday that she was on any other relevant day’.

(20) Mary was the prettiest girl yesterday

These facts suggest that the determiner in (19) may be of a different sort. In particular they seem to support the proposal put forth by Krasikova 2012 with respect to determiners in superlative phrases. She claims that the definite article can play two different functions in these constructions. It can reflect the definiteness of the DP (like in the attributive cases discussed in Chapter 2), or that of the Degree phrase. In this latter case, the definite article would not pick a unique individual but a unique maximal degree.

If we assume the classical view where the degree phrase is an argument of the gradable adjective (as in Heim 2000 and shown in (21)), the attributive and the predicative case can be given the structures in (22a) (definiteness at the DP-level) and (22b) (definiteness at the DegP-level) respectively. In the former case, the determiner is taking the extended projection of the noun phrase as a complement, whereas in the latter case it is part of the degree phrase.



- (22) a. [DP **D** [ [AP ... ] N ] ] *Attributive*  
 b. [AP [DegP **D** -est DEGREE ] A ] *Predicative*

I claim that the structure in (22b) is the one associated with the predicative structures discussed in this chapter.

The different structures and distinct positions of the determiners are illustrated with the two examples (details are omitted for simplicity) below. In the attributive case, the determiner embeds an extended NP. In the predicative case, on the other hand, it is internal to the degree phrase. Informally, we can think of the first one as referring to a unique individual, whereas the second one picks out a maximal degree.

- (23) *Attributive*
- a. I met the prettiest girl.
  - b. [DP the [ [ pretti-est ] girl ]

- (24) *Predicative*
- a. Mary was the prettiest last night
  - b. [AP [DegP the -est DEGREE ] pretty ]

In the next sections I will discuss Romance facts which will turn out to be very relevant for the present discussion on definiteness in superlative phrases. I will show that in languages like Italian, the two functions of the definite determiner shown in (22) are marked differently. In particular, whereas agreeing determiners can only appear in attributive structures like (22a), null or non-agreeing ones are used to express definiteness at the degree level. I will also show that further evidence for the double role played by the determiner comes from the variation within Romance (both diachronically and synchronically). Variation (e.g. Italian *vs.* French) is in fact only attested when the determiner is performing the function in (22b). In attributive structures, Romance languages pattern together.

### 3.3 Modal cases in Romance

Let me now turn to the Romance counterparts of the predicative cases discussed in §3.2.3. The first case I take into account is the one of modal superlatives corresponding to the English example (18) (which is also repeated in (25)):

- (25) She wanted to be the prettiest possible.

This section is organized as follows: First, I show what the Romance facts are. Then I discuss some peculiar properties of the interpretation of these constructions that make them

unique among all the superlative constructions addressed in this dissertation. In §3.3.3 I review the relevant existing literature on modal superlatives. Finally, in §3.3.4, I spell out my own proposal for Romance.

### 3.3.1 The data

In Italian, modal predicates allow omission of the determiner or the use of a non-agreeing form. Gender mismatch is shown in (26a) whereas number mismatch is shown in (26b)). An agreeing form of the determiner is marginally accepted by some speakers.<sup>3</sup>

- (26) a. Maria doveva essere  $\emptyset$ / il/            ??la      più    carina      possibile  
           Maria had.to be            the.SG.M. the.SG.F more pretty.SG.F. possible  
           ‘Maria had to be the prettiest possible’
- b. Cercate di essere  $\emptyset$ / il            più    gentili      possibile  
           Try        of be            the.SG.M. more kind.PL.M. possible.SG  
           ‘Try to be the kindest possible’

The adjective, however, must agree with the external argument in gender and number:

- (27) \*Maria doveva essere (il)            più    carino      possibile  
           Maria had.to be        the.SG.M. more pretty.SG.M. possible

Also note that *the -est possible* can form a unit in Italian to the exclusion of the adjectival predicate. This is not possible in English.

- (28) a. Maria voleva essere carina il    più    possibile  
           Maria wanted to.be pretty the more possible  
       b. \*Maria wanted to be pretty the most possible

---

<sup>3</sup>Judgements are somewhat murky when it comes to determiner agreement here. I personally do not accept the occurrence of an agreeing form in (26a)

Moreover, the wh-word *quanto* ('how much') can be used instead of the determiner, but they cannot cooccur.

- (29) Dovevo essere quanto (\*il) più carina possibile  
had.to be how.much the.SG.M. more pretty possible  
'I had to be the prettiest possible'

In Spanish the neuter/ pronominal form of the determiner *lo* has to be used. Unlike Italian, omission is judged ungrammatical.

- (30) María quería ser/ estar \*(lo) más guapa posible  
Maria wanted to.be to.be it.M.S. more pretty.7s.f. possible  
'Maria wanted to be the prettiest possible'

Also note that the copula *estar*, as well as *ser*, is an option in (30). As I will argue later, this fact will provide further evidence that *lo más guapa posible* is a predicate. This conclusion will be based on the fact that *estar* cannot take nominals in the postcopular position (see §3.5.2.2 for the relevant discussion).

I turn to French next. When the superlative is accompanied by *possible*, French always requires an overt definite determiner preceding *plus*.

- (31) Elle voulait être \*(la) plus belle possible  
She wanted to.be the more beautiful possible  
'She wanted to be the prettiest possible.'

When a non-agreeing form is possible in French is less clear and subject to speaker variation which I will not investigate here, leaving the question open for future research. It seems that the more the adjective is inflected for gender features, the less likely speakers are to accept

a mismatching determiner.<sup>4</sup>

- (32)
- a. Marie veut être { \*le/ la } plus belle possible  
M. wants to.be the.M. the.F. more beautiful possible  
'Marie wants to be the prettiest possible'
  - b. Marie veut être { ?le/ la } plus heureuse possible  
M. wants to.be the.M. the.F. more happy possible  
'Marie wants to be the happiest possible'
  - c. Marie veut être { le/ ?la } plus autonome possible  
M. wants to.be the.M. the.F. more autonomous possible  
'Marie wants to be the most autonomous possible'
  - d. Marie veut être { le/ \*la } plus à l'aise possible  
M. wants to.be the.M. the.F. more at ease possible  
'Marie wants to be as at ease as possible'

On the other hand, a mismatching determiner would definitely not be possible in attributive constructions, nor in postnominal ones.

- (33)
- a. Marie veut être { \*le/ la } plus heureuse du quartier.  
M. wants to.be the.M. the.F. more happy of.the neighborhood  
'Marie wants to be the happiest of the neighborhood'
  - b. Marie veut être la fille { \*le/ la } plus autonome de la classe  
M. wants to.be the girl the.M. the.F. more autonomous of the class  
'Marie wants to be the most autonomous girl in her class'

### 3.3.2 A note on the interpretation of modal superlatives

Before turning to the discussion of the existing literature on modal superlatives, I want to point out a few additional facts about this construction. First of all, the relevant reading of (25) (and of its Romance counterparts) is roughly paraphrasable using the equative construction.

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<sup>4</sup>Examples are kindly provided Philippe Côté-Boucher, the judgements are from Dominique Sportiche and Philippe.

- (34) She wanted to be the prettiest possible.  
≈ She wanted to be as pretty as possible

This is a typical feature of so-called *amount relatives* (also referred to as *degree relatives*), that is relatives which are interpreted as a property of amounts or degrees. Two famous examples of this type of relatives are given in (35) and (36) (see Carlson 1977a, Heim 1987, Grosu and Landman 1998 Grosu and Landman 2013, a.o for discussion):

- (35) It will take us years to drink the champagne that they spilled that evening.  
≈ It will take us years to drink as much champagne as they spilled that evening

adapted from Heim 1987

- (36) John put in his bag [every book he could].  
≈ John put in his bag as many books as he could          Grosu and Landman 2013

The sentence (35) is most naturally interpreted as referring to an *amount* of champagne and not to a specific champagne, even if an *object* interpretation is available. Same for (36), which on its most natural interpretation, says that John put in his bag as many books as he could fit in.

Among superlatives, modal ones are unique in this respect. None of the other (degree-based) superlative constructions presented in §3.2.3 are paraphrasable using an equative construction. All of them have stronger truth conditions that do not allow ties. The same will turn out to be true for postnominal superlatives that I will discuss in Section 3.5. To see this point, consider the examples (37a) and (37b).

- (37) a. Yesterday, Mary was the kindest she has ever been  
≈ Mary was kinder yesterday than she was at any other relevant time





### 3.3.3 Previous accounts

In the literature, there are three main accounts of English modal superlatives: (i) Larson 2000a, (ii) Schwarz 2005 and (iii) Romero 2010, 2013. They all focused on DPs with a nominal projection (like (41a) below) and did not discuss predicative cases like (25). Arguably, full DPs with this modal interpretation are just more complex cases which always involve a predicative (degree-based) superlative *plus* a full nominal structure. So what was discussed in the literature would either apply to cases like (25) as well or just not be relevant. In what follows only the relevant features of previous accounts are discussed.

Larson 2000a analyzed the modal predicate *possible* in (41a) as a postnominal reduced relative clause with an infinitival complement. This is shown in (41b). The elided clause contains an antecedent-contained deletion (ACD) gap  $\blacktriangle$  (shown in (41c)) that is resolved extracting the noun phrase containing the ellipsis site from the antecedent and reconstructing  $\blacktriangle$  with an infinitive form of the matrix clause (as in (41d)).

- (41) a. John bought the largest present possible  
 b. John bought the largest present [RC possible for him to buy  $t$  ]  
 c. John bought the largest present [RC possible  $\blacktriangle_{ACD}$  ]  
 d. [DP <sub>$i$</sub>  the largest present [ Op <sub>$i$</sub>  possible [ for John to buy  $t_i$ ]]] [ John bought  $t_i$  ]

The different linear order available in (42a) is then derived through promotion of the adjective to a prenominal position.

- (42) a. John bought the largest possible present  
 b. John bought the largest possible <sub>$i$</sub>  present [RC  $t_i$   $\blacktriangle$  ]

Larson 2000a does not provide a semantic account for (41a) and seems to have in mind a standard individual-based relative clause for postnominal *possible*. That would not be able

to account for the predicative cases we are discussing in this chapter (*the prettiest possible*), where no nominal head is present. A way to adjust Larson’s analysis to extend to these data is to interpret [*possible* ▲ ] as an amount relative clause. As we will see that is exactly what Romero 2013 proposes. Before turning to her account, let me briefly review the second approach to modal superlatives, which is due to Schwarz 2005.

On the basis of German data that I do not discuss here, Schwarz 2005 argues that *-est possible* should be treated as a non-decomposable lexical item, which occupies the specifier position of A, just like bare *est* in a non-modal superlative would do:

$$(43) \quad [_{AP} [_{DegP} \textit{est possible} ] [_{A'} \textit{large} ] ] \quad \text{Schwarz 2005}$$

Semantically *-est possible* is taken to denote a degree operator with the meaning in (44). P ranges over intensional degree properties; w and w’ range over possible worlds; and R is an accessibility relation between possible worlds.

$$(44) \quad \llbracket \textit{est possible} \rrbracket^w = \lambda P_{\langle s, dt \rangle}. [ \forall d [ \exists w' [ wRw' \ \& \ P(w')(d) = 1 ] \rightarrow P(w)(d) = 1 ] ]$$

Since (41a) is assigned the LF in (45a) (where A is the abstract indefinite determiner associated by Szabolcsi 1986 to relative interpretations of superlatives), it produces the truth conditions (45b). It says that in no other accessible world John bought a present larger than what he bought in w.

$$(45) \quad \begin{array}{l} \text{a. } [_{DegP} \textit{est possible} ] \lambda_1 [ \textit{John bought A } [_{AP} e_1 \textit{large} ] \textit{present} ] \\ \text{b. } \forall d [ \exists w' [ wRw' \ \& \ \textit{John bought a d-large present in w'} ] \rightarrow \textit{John bought a d-large present in w} ] \end{array}$$

Schwarz’s (2005) machinery can be used to derive the meaning of our predicative cases. I will show this using an English example for convenience. In particular, I take into account

the version of (25) in (46), which I have simplified to avoid the complications of the control structure of *want*. The logical form and truth conditions of (46) are given in (47a) and (47b).

(46) Mary was the prettiest possible

- (47) a.  $[_{DegP} \text{ est possible } ] \lambda_1 [ \text{Mary was } [_{AP} d_1 \text{ pretty } ] ]$   
 b.  $\forall d [ \exists w' [ wRw' \ \& \ \text{John was a d-pretty in } w' ] \rightarrow \text{Mary was d-pretty in } w ]$

This derives truth conditions equivalent to ‘(at least) as pretty as possible’. Note that this is due to the stipulated meaning that Schwarz 2005 assigned to *est possible*. As he puts it, *-est possible* “has equative force” that cannot be compositionally derived from bare *est*, for which he assumes the meaning in (48) instead.<sup>5</sup>

(48)  $[-\text{est}] = \lambda P_{\langle d, st \rangle}. \exists d [ P(d) \ \& \ \forall Q \in \mathbf{Q} [ Q \neq P \rightarrow \neg (Q(d)) ] ]$

Ideally, the denotation of *-est possible* (including its “equative force”) should be derived compositionally from the meaning of *-est* and the meaning of *possible*, but Schwarz 2005 assumes that such a derivation “is unlikely to succeed”. As we will see, Romero’s analysis is an attempt to provide such a compositional analysis. I turn to her account next.

In her analysis of modal superlatives, Romero 2013 builds on both Larson 2000a and Schwarz 2005. First, she follows Larson 2000a in taking *possible* to head a reduced relative clause with a ACD gap, but she interprets the constituent  $[ \text{possible } \blacktriangle ]$  as a relative clause ranging over degrees and not over individuals:

(49)  $[ \lambda d [ \text{possible } \blacktriangle_{ACD} ] ]$

---

<sup>5</sup>The lexical entry in (48) is similar to the two-place lexical entry discussed in Chapter 2. The crucial difference is that here  $\mathbf{Q}$  is a *contextually determined* set of properties of degrees, rather than the first argument of the degree operator.

Second, she claims that a shifted version (see below) of (49) overtly expresses the comparison class argument of *-est*, which is its first argument. For the superlative morpheme, she uses the two-place lexical entry borrowed from Heim 1999 in (50b)<sup>6</sup> (see Romero 2010 for discussion of why a two-place lexical entry may be preferable).<sup>7</sup>

- (50) a. Let  $P$  be a degree set and  $\mathbf{Q}$  be a set of sets  
 $\text{-est}(\mathbf{Q}, P) \leftrightarrow \exists d [P(d) \ \& \ \forall Q \in \mathbf{Q} [Q \neq P \rightarrow \neg (Q(d))]]$   
 b.  $\llbracket \text{-est} \rrbracket = \lambda \mathbf{Q}_{\langle dt, t \rangle}. \lambda P_{\langle d, t \rangle}. \exists d [P(d) \ \& \ \forall Q \in \mathbf{Q} [Q \neq P \rightarrow \neg (Q(d))]]$

The SHIFT operation spelled out in (51) takes the set of degrees  $[\lambda d \text{ [possible } \blacktriangle]]$  and turns it into a set of upper-bound degree sets ( of type  $\langle dt, t \rangle$ ), making it into a suitable argument for *-est*:<sup>8</sup>

$$(51) \quad \text{SHIFT}_{\langle d, t \rangle \rightarrow \langle dt, t \rangle}^{\downarrow} = \lambda D_{\langle d, t \rangle}. \lambda D'_{\langle d, t \rangle}. \exists d' [D(d') \ \& \ D' = \lambda d'' . d'' \leq d']$$

Lastly, the DegP [ *-est* 1 possible  $\blacktriangle$  ] moves out of the host NP to gain sentential scope, as shown in tree structure below for the example sentence in (52). In this way the ACD gap is

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<sup>6</sup>Note that this lexical entry is not identical to the one introduced in Chapter 2. Crucially, in (50b), quantification is over degree sets and not over degree properties. Using degree properties instead would fail to derive an appropriate meaning for modal sentences. See the end of the current subsection for discussion.

<sup>7</sup>Importantly, Romero does not adopt the presupposition in (i):

- (i)  $\llbracket \text{-est} \rrbracket(\mathbf{Q}, P)$  is defined only if  $P \in \mathbf{Q} \ \& \ \exists Q [Q \in \mathbf{Q} \ \& \ P \neq Q]$

This has important consequences for the meaning that her account generates. In particular, it has the effect of deriving the weaker interpretation *at least as d as possible* as opposed to the stronger *as d as possible and no more*. Thanks to Yael Sharvit for clarifying this point.

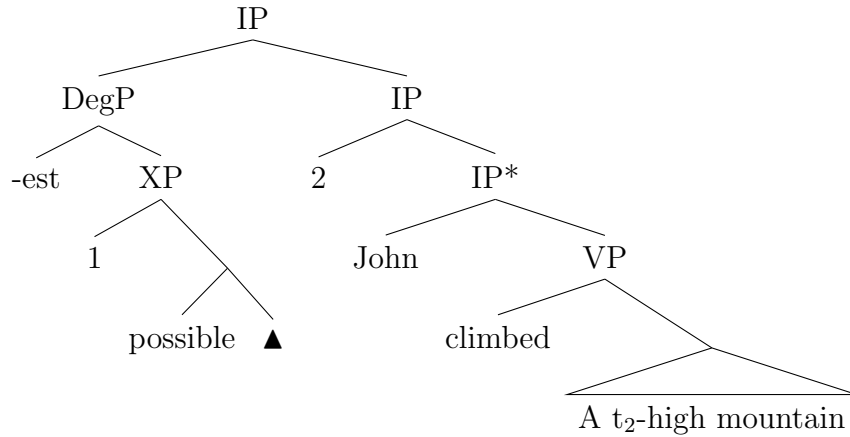
<sup>8</sup>This SHIFT operation is the (superlative) counterpart of the function that convert the degree denoted by a definite free relative (as in the Spanish example (i) into a suitable argument for *-er*, that is a degree set.

- (i) Juan es más alto de [*FreeRC* lo que lo es María ]  
 John is more tall of the that it is Mary  
 ‘John is taller than Mary is’

Romero 2010

resolved and a suitable second argument for *-est* is created.

(52) John climbed the highest possible mountain



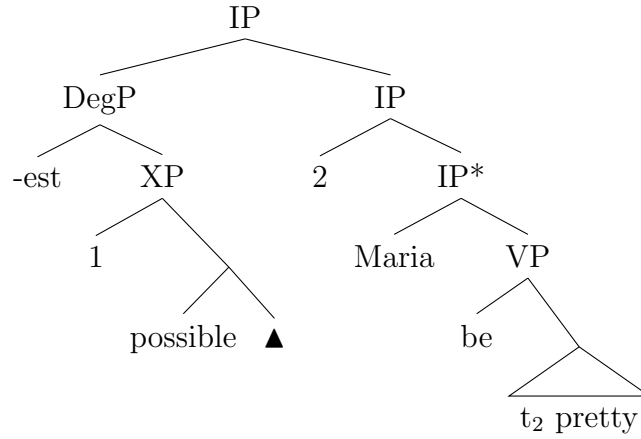
Romero's LF for (52) is given in (53a) and the corresponding truth conditions in (53b)

- (53) a. [-est [1 possible <for John(/him) to climb A  $t_1$ -high mountain> ]] [ 2 John climbed a  $t_2$ -high mountain]
- b.  $\llbracket (52) \rrbracket = 1$  iff
- $$\exists d[\exists x[\text{mount}(x) \ \& \ \text{climb}(j,x) \ \& \ \text{high}(x,d)] \ \& \ \forall D' [(\exists d'[\diamond \exists x[\text{mount}(x) \ \& \ \text{climb}(j,x) \ \& \ \text{high}(x,d')]]) \ \& \ D' = \lambda d".d" \leq d'] \ \& \ D' \neq \lambda d.\exists x[\text{mount}(x) \ \& \ \text{climb}(j,x) \ \& \ \text{high}(x,d)]] \rightarrow \neg D'(d)] ]$$
- “There is a degree (of height)  $d$  s.t. John climbed a  $d$ -high mountain and there is no degree higher than  $d$  s.t. it is possible for John to climb a mountain of that height”

Romero's machinery can be used quite successfully to derive the meaning of our predicative cases. To illustrate how this works, I will consider (46) (repeated in (54)) once again.

(54) Mary was the prettiest possible

In this case the first argument for *-est* would be the shifted version of [ 1 possible < for Maria/one to be  $t_1$  pretty > ] and the second argument would be the set of degrees [ 2 Maria is  $t_2$  pretty ]. This is shown below.



(55) **LF:** [ [-est [1 possible < for Maria/one to be  $t_1$  pretty > ] ] [ 2 Maria is  $t_2$  pretty ] ]

- (56)
- $\llbracket 2 \text{ Maria is } t_2 \text{ pretty} \rrbracket = \lambda d. \llbracket \text{pretty}(m,d) \rrbracket$
  - $\llbracket \langle \text{for Maria/one to be } t_1 \text{ pretty} \rangle \rrbracket = \llbracket \text{pretty}(m, g(1)) \rrbracket$
  - $\llbracket \text{possible} \langle \text{for Maria/one to be } t_1 \text{ pretty} \rangle \rrbracket = \diamond \llbracket \text{pretty}(m, g(1)) \rrbracket$
  - $\llbracket 1 \text{ possible} \langle \text{for Maria/one to be } t_1 \text{ pretty} \rangle \rrbracket = \lambda d. \diamond \llbracket \text{pretty}(m, d) \rrbracket$
  - SHIFT ( $\llbracket 1 \text{ possible} \langle \text{for Maria/one to be } t_1 \text{ pretty} \rangle \rrbracket$ ) =  $\lambda D'. \exists d' \llbracket \diamond \llbracket \text{pretty}(m, d') \rrbracket \& D' = \lambda d'' . d'' \leq d' \rrbracket$
  - $\llbracket (46) \rrbracket = 1$  iff  $\exists d \llbracket \text{pretty}(m, d) \rrbracket \& \forall D' \llbracket (\exists d' \llbracket \diamond \llbracket \text{pretty}(m, d') \rrbracket \& D' = \lambda d'' . d'' \leq d' \rrbracket \& D' \neq \lambda d. \llbracket \text{pretty}(m, d) \rrbracket \rrbracket \rightarrow \neg D'(d)$   
 “There is a degree  $d$  s.t. Mary is  $d$ -pretty and there is no degree higher than  $d$  s.t. it is possible for Mary to be *that* pretty”

Intuitively, we have derived an appropriate interpretation. (54) is true if Mary in the actual world is pretty to a degree such that it is not possible for her to be prettier than *that*. That is, in no accessible world is Mary prettier than she is in the actual world. In some of these

worlds, however, she could be as pretty as she is in @.

This particular interpretation is the result of the fact that quantification is taken to be over degree sets (see footnote 6). Quantification over degree properties (as in the 2-place lexical entry introduced in Chapter 2) would not be able to derive the “equative force” of modal superlatives. Let me quickly show why quantification over degree sets is successful. In a scenario where Mary is as pretty in  $w_0$  as she is in  $w_4$ , the *-est* in (50b) would not be able to distinguish between the following (extensionally identical) sets of sets:

- (57) a.  $\lambda d.$ Mary was d-kind in  $w_0$   
b.  $\lambda d.$ Mary was d-kind in  $w_4$

Assume that  $w_0$  is the actual world. If (57b) is identical to  $[\lambda d.$ Mary was d-kind in  $w_0]$ , then  $\forall D' \in \{\lambda d.$ Mary was d-kind in  $w' : w' \in \text{Acc}(w_0)\}$   $[ D' \neq [ \lambda d. [\text{Mary is d-kind in } w_0] \rightarrow \neg D'(d) ]$

will not apply to (57b).<sup>9</sup>

This treatment has the welcome result of allowing ties.

### 3.3.4 My proposal

Both Schwarz 2005 and Romero 2013 are able to derive the desired “equative” interpretation of modal superlatives, but they do so at the expense of having some *ad hoc* components in their analysis. In the case of Schwarz 2005, *-est possible* is considered a non-decomposable degree operator, whose meaning is unrelated to the meaning of bare *-est*. This does not seem a desirable component of the analysis. In the case of Romero 2013, a more familiar meaning for *-est* is assumed but with a particular type of quantification (over degree sets) that could not be extended to other non-modal superlatives.

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<sup>9</sup>For discussion on this point, see Howard 2014.

Also, they both inherit a well-known problem shared by any Heimian scopal theory of superlatives, which is that the definite determiner is not interpreted in the usual way. In the semantic composition above, it has merely existential force. This is particularly surprising in the case of Romance modal superlatives, given the data I presented in §3.3.1 (and later in this chapter in §3.5.1). As I will show, modal superlatives turn out to be the only case of predicative superlatives that allows the presence of an overt definite determiner in languages like Italian and Spanish. Two relevant examples from Italian and Spanish respectively are repeated here:

- (58) a. Maria voleva essere il più carina possibile  
 Maria had.to be the.SG.M. more pretty.SG.F. possible
- b. María quería estar lo más guapa (que fuera) posible  
 Maria wanted to.be it.M.S. more pretty.7s.f. that was possible  
 ‘Maria wanted to be the prettiest possible’

Note that the modal superlatives in (58) look suspiciously similar to other (free) amount relatives in these languages, like the Spanish ones in (59) that are normally taken to denote single degrees. For instance, they both appear with the neutral/pronominal form of the determiner, *lo*.

- (59) a. Susana es más guapa de [<sub>FreeRC</sub> lo que lo es María ]  
 Susana is more pretty of the that it is Mary  
 ‘Susana is prettier than Mary is’
- b. María es dos veces [ lo guapa que era su madre ]  
 Maria is two times the[neutr] beautiful.F that was her mother  
 ‘Maria is twice the beauty that her mother was’ Grosu and Landman 2013

Also recall that in Italian the wh word *quanto*, ‘how much’ can be used instead of the neutral form of the determiner. *Quanto* is also used in *than*-complements, which are normally assumed to denote single degrees.



- (60) a. Gianni è più alto di quanto non (lo) sia Piero  
 Gianni is more tall *di* how(much) EXPL.NEG it be.SUBJ Piero  
 ‘Gianni is taller than Piero (is)’<sup>10</sup>
- b. Dovevo essere quanto più carina possibile  
 had.to be how.much more pretty possible  
 ‘I had to be the prettiest possible’

I take these facts to suggest that the degree phrase in these modal cases is a free relative that denotes a single *maximal* degree and not a set of degree sets (as in Romero 2013). The role of the DegP is to provide a degree that saturates the degree slot of the adjective. In this respect the DegP has a similar contribution as that of the Measure phrase *5 feet* in (61).

- (61) Federica is five feet tall

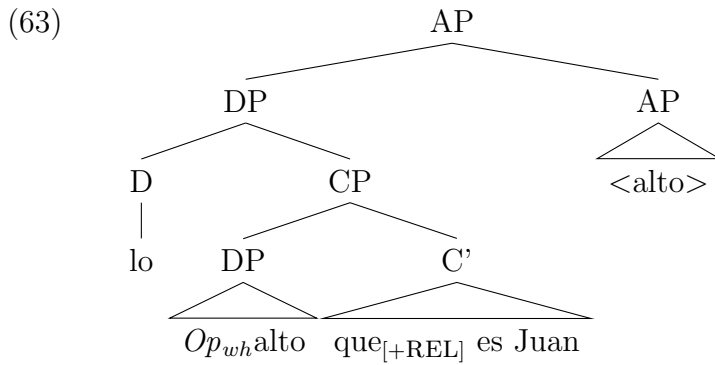
This treatment reproduces what Mendia 2017 proposes for degree relatives such as (62), which do not involve a superlative morpheme but arguably some process of maximalization.

- (62) Pedro es lo alto que es Juan.  
 Pedro is the tall that is Juan  
 ‘Pedro is as tall as Juan’ Mendia 2017

Mendia argues that the free relative *lo alto que es Juan* provides a degree argument for a second occurrence of the adjective “alto” that is deleted under identity. He assigns to *lo* the semantics of MAX in (64) and to the free relative the interpretation in (65).

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<sup>10</sup>In (60a), the gradable predicate *alto* can be replaced by the clitic *lo* or can be elided in the clause complement of *di*. When elided, it becomes less acceptable without the negative particle: *Gianni è più alto di quanto ??(non) sia Piero*. As far as I know this was not previously noticed. Unfortunately, I do not have an explanation to offer at this point.



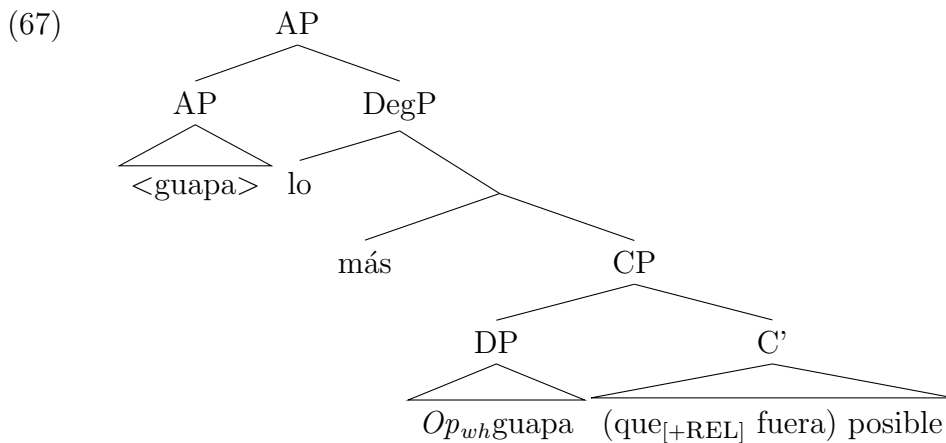
(64)  $\llbracket \text{MAX} \rrbracket = \lambda N_{\langle dt \rangle} . \iota d [ d \in N \ \& \ \forall d' [ d' \in N \ \& \ d \neq d' \rightarrow d' < d ] ]^{11}$

(65)  $\text{MAX}(\lambda d.tall(d, Juan))$

I adopt a similar structure for modal cases such as *lo más guapa (que fuera) posible* in (58b). I place the measure/degree phrase on the right, as in Romance they normally follow the adjective (exemplified by Italian here):

- (66) a. L' uomo era alto [<sub>MP</sub> due metri ]  
 The man was tall two meters  
 b. The man was [<sub>MP</sub> two meters ] tall.

Zamparelli 2000



<sup>11</sup>Uniqueness is built into the lexical entry of MAX here. Alternatively, one could keep maximalization and the operation of performing a “uniqueness test” on a maximalized set distinct, like in Krasikova 2012.

This also accounts for the fact that *the -est possible* seems to be able to form a unit in Italian to the exclusion of the adjectival predicate, as reported in §3.3.1.

- (68) Maria voleva essere carina il/ quanto più possibile  
 Maria wanted to.be pretty the how.much more possible

In order to account for the order in (68), we can simply assume that the higher occurrence of the adjective is instead pronounced.

To handle our modal cases, I follow Romero 2013 and assume that the DegP moves out to gain sentential scope. ACD is thus resolved with TP<sub>1</sub> (as shown in the structure below). Compositionally, I break down the superlative into two components:

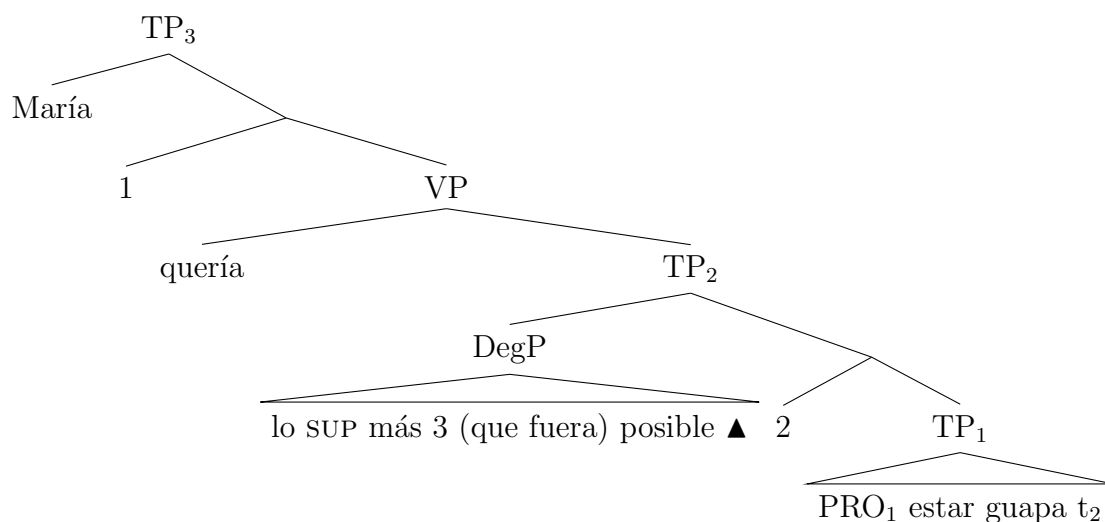
- (i) a comparative morpheme that creates a total ordering of degrees and
- (ii) an ordinal-like element SUP that turns the ordered set into a singleton containing the maximal degree

Finally, the definite determiner performs a “uniqueness test” and return the unique maximal degree. Note that this decomposition is parallel to what I suggested in Chapter 2 for attribute superlatives, with a crucial difference. What is ordered here is the members of a set of degrees (the one given in (71d)), rather than sets of individuals). In this respect, this construction can be thought as a partitive construction over degrees. Also note that the two operations in (i)-(ii) *plus* the function played by the definite determiner are assumed to mimic *de facto* what MAX (as given in (64)) could do. In (71e), the result of applying, *lo*, SUP and *más* to the set denoted by (71d) will be noted as MAX(N). This is done for the sake of simplicity and readability. The three operations should be thought as distinct.

- (69)  $lo \circ SUP \circ más = MAX$

The structure in (70) is fed to semantic interpretation. The semantic composition of the

Degree phrase is spelled out in (71).



(70) María [ 1 quería [ [ lo SUP más 3 (que fuera) posible <para PRO<sub>1</sub> estar guapa t<sub>3</sub> >] [ 2 PRO<sub>1</sub> estar guapa t<sub>2</sub> ] ] ]

- (71) a.  $\llbracket 2 \text{ PRO}_1 \text{ estar guapa } t_2 \rrbracket = \lambda d. [ \text{guapa}(g(1), d) ]$   
 b.  $\llbracket \langle \text{para PRO}_1 \text{ estar guapa } t_3 \rangle \rrbracket = [ \text{guapa} (g(1), g(3)) ]$   
 c.  $\llbracket \text{possible} \langle \text{para PRO}_1 \text{ estar guapa } t_3 \rangle \rrbracket = \diamond [ \text{guapa} (g(1), g(3)) ]$   
 d.  $\llbracket 3 \text{ possible} \langle \text{para PRO}_1 \text{ estar guapa } t_3 \rangle \rrbracket = \lambda d. \diamond [ \text{guapa} (g(1), d) ]$   
 e.  $\llbracket \text{lo SUP más 3 possible} \langle \text{para PRO}_1 \text{ estar guapa } t_3 \rangle \rrbracket = \text{MAX}(\lambda d. \diamond [ \text{guapa} (g(1), d) ])$

As shown in (71e), the DegP ends up denoting a unique maximal degree. Given the semantics of MAX, [ MAX( $\lambda d. \diamond [ \text{guapa} (g(1), d) ]$ )] should be thought as a shorthand for:

(72)  $\iota d [ \diamond [ \text{guapa} (g(1), d) ] \ \& \ \forall d' [ \diamond [ \text{guapa} (g(1), d') ] \ \& \ d \neq d' ] \rightarrow d' < d ]$

We are now ready to calculate the meaning of TP<sub>3</sub>. The unique maximal degree denoted by the DegP measure the degree of the property denoted by *guapa*. In particular, DegP

will be taken as an argument by its sister, which is of the appropriate type,  $\langle d, t \rangle$ . The whole sentence then asserts that Maria wanted to be *that* pretty, where *that* is equal to the maximal degree such that she cannot possibly be prettier than that. This is shown in (73), where I treat the control structure as a complex predicate for simplicity.

$$(73) \quad \llbracket (58b) \rrbracket = \text{querer-estar-guapa}(\text{María}, \text{MAX}(\lambda d. \diamond [ \text{guapa} (\text{Maria}, d) ]))$$

When the degree phrase is defined, this derives the same truth conditions as Romero 2013. It does so interpreting the degree phrase as a degree description of type  $d$ . The fact that the existence of a unique maximal degree is required in order for the relative clause to be defined could potentially be a problem, as pointed out to me by Yael Sharvit. An example of a problematic case is provided by sets where no maximal element can be identified. Take as an example the set of prime numbers. Unless we contextually restrict the set of numbers under consideration, *the largest prime number* fails to refer. Here, I avoid this problem by assuming that the context always plays the role of restricting the set of degrees under consideration to a finite set. I set aside for future investigation any potential side-effects of this decision.

Note that both the uniqueness test and maximalization happen in immediate succession, at the degree level. This explains why it is hard to provide a comparative paraphrase to these constructions: it does not compare entities. It will turn out that modal superlatives are unique in this respect. All the other superlatives discussed in this chapter also require uniqueness at the individual level. From the current perspective, modal superlatives are the only ones that involve a true  $d(\text{egree})$ -interpreted amount relative (see subsections 3.5.4.1-3.5.4.2 for a more detailed discussion and comparison with postnominal structures). This raises the question as to why this strategy is not available outside modal cases. Unfortunately, I do not have an explanation to offer at this point.

### 3.4 Sentential level and NPI cases in Romance

In this section, I turn to (the Romance counterparts of) the two other types of predicative superlatives that exist in English that were introduced in §3.2.2. These are (i) relative interpretations of adjectival superlatives at the sentential level and (ii) cases of NPIs occurring in relative clauses. Examples of both are given in (74).

- (74) a. Relative interpretations of adjectival superlatives  
Mary was (the) kindest YESTERDAY ( $\neq$  Mary was the kindest one)  
 $\approx$  Mary was kinder yesterday than any other relevant day
- b. NPI occurring in relative clauses  
Yesterday, Mary was the kindest she has ever been  
 $\approx$  (74a)

My contribution to the current understanding of these constructions is very modest. I will discuss novel data from Romance and show that both constructions are impossible in languages like Italian and Spanish, while they are both grammatical in French (yet more restricted in their distribution than they are in English). Although I am not able to offer an explanation for these facts, I claim that they suggest two things. First, there may be a correlation between (i) the possibility of associating with focus at the sentential level and (ii) the possibility of having an overt relative clause expressing the comparison class. If this is on the right track, then the two types of superlatives call for a uniform treatment (as in Howard 2014). Second, the fact that (74b) is not possible in Italian and Spanish while modal cases are perfectly grammatical further suggests that the two types of relative clauses should not be given a unified composition analysis (see Howard 2014 for such an attempt and discussion).

### 3.4.1 The data

The Italian (and Spanish) counterparts of (74) do not have the same grammaticity status or available readings as English. In particular, none of the available options for the determiner in (75a) can convey the relevant relative reading and (75b) is simply ungrammatical.

- (75) a. \*Ieri Maria era { il/ la/  $\emptyset$  } più gentile  
 Yesterday Maria was the.NEUTR the.F more kind
- b. \*Ieri, Maria è stata { il/ la/  $\emptyset$  } più gentile che fosse  
 Yesterday, Mary was the.NEUTR the.F more kind she has.SUBJ  
 mai stata.  
 never been

In (75) an unsuccessful attempt is made to convey the relevant relative reading using three strategies: (i) a neutral, non-agreeing determiner, *il*, (ii) a feminine determiner, *la* or (iii) no overt determiner. The first option results in ungrammaticality altogether whereas the other two are grammatical but not under the intended interpretation. In particular an agreeing determiner would deliver an absolute interpretation, whereas the absence of D would result in a comparative reading. This is shown below.

- (76) Ieri Maria era la più gentile  
 Yesterday Maria was the.F more kind  
 ✓ ABS  $\approx$  Maria was kinder than any other relevant female person  
 x REL  $\approx$  Maria was kinder yesterday than she was on any other relevant day

- (77) Ieri Maria era più gentile  
 Yesterday Maria was more kind  
 ‘Yesterday Maria was kinder/\*the kindest’

From our perspective, (76) shows that in this case the superlative must be attributive and cannot have a purely predicative construal. In other words, the postcopular superlative in (76) modifies a null head noun as shown here:

(78) la più gentile N

These facts suggest that on the one hand definiteness (or perhaps uniqueness) has to be overtly expressed in Italian to obtain superlative import (otherwise the only available interpretation is comparative), on the other hand an agreeing determiner always signals the presence of a nominal projection the determiner agrees with. On the present proposal, the presence of an embedded nominal phrase implies that the superlative is part of an attributive structure. As a result the implication in (79) seems to hold for Italian (and Spanish).

(79) [Italian] If agreeing determiner → the superlative is attributive

French does not pattern with Italian and Spanish. In particular, it allows (at least sometimes) relative readings of postcopular superlatives at the sentential level (as shown in (80))<sup>12</sup> as well as the counterpart of (74b), as shown in (81) (examples kindly provided by Dominique Sportiche).<sup>13</sup>

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<sup>12</sup>As a side note, in most of the asymmetries between French-type languages and Italian-type languages, Romanian patterns with French. (i) for instance can have a relative interpretation (thanks to Sorin Grigoraş for the Romanian judgements).

- (i) Ion este cel mai supărat pe Maria  
Ion is the more angry on Maria  
'Ion is (the) angriest at Maria' ABS, REL

Like French and unlike Italian, Romanian (i) shows polydefiniteness in the case of postnominal superlatives (shown in (ii)) and (ii) has quantity superlatives at the sentential level (see Chapter 5).

- (ii) a. Am cumparat cele mai bune ziare.  
have.I bought the more good newspaper  
b. Am cumparat ziarele cele mai bune.  
have.I bought newspapers.the the more good  
'I bought the best newspaper' Dobrovie-Sorin and Giurgea 2013

<sup>13</sup>For some reasons that remain to be understood, the distribution of these types of predicative superlatives is more constrained in French than it is in English. First, it is harder in French to get a predicative construal of a superlative in a predicate position (at the sentential level). In the case of (i) for examples speakers strongly prefer an attributive construal of the superlative, which correlate with an absolute interpretation. The relative interpretation is apparently almost unavailable.



- (80) Ce prof est le plus réveillé à 13h, juste après avoir pris son café.  
 This prof is the more awake at 1pm right after having taken his coffee.  
 ‘This professor is the most awake at 1pm, right after he has had his coffee’
- (81) Aujourd’hui, Marie a été la plus gentille qu’elle ait jamais été  
 Today Mary has been the most kind that she has.SUBJ never been  
 ‘Today Mary was the kindest she has ever been’

### 3.4.2 Previous accounts and brief discussion

Descriptively speaking, it seems that there is a correlation between (i) the possibility of associating with focus at the sentential level and (ii) the possibility of having an overt RC expressing the comparison class. Languages like English (and French) allows both whereas languages like Italian and Spanish do not have either option. This supports accounts where the two structure are related. Howard 2014 puts forth such an analysis. He does not discuss predicative cases, but the facts are similar. He shows that the contribution of focus on *eleven am* in (82a) and that of the NPI *ever* in (82b) is the same. They both participate in the creation of *-est*’s complement by introducing alternatives.

- (82) a. Mary sang the loudest at ELEVEN AM  
 b. Mary sang the loudest [ that she has ever sung]

- 
- (i) Marie est la plus énervée avec Pierre  
 Marie is the more angriest with Pierre  
 ✓ ABS  $\approx$  Marie is angrier at Pierre than anyone else is  
 # REL  $\approx$  Marie is angrier at Peter than she is at anyone else

Also, whereas it is possible to use a relative clause to specify the superlative’s domain of comparison in (81), it is not possible to do so when different people are compared (and not just different days/times). In other words, *jamais* ‘(n)ever’ in the embedded clause can introduce alternatives, but ‘quiconque’ ‘whoever/anyone’ cannot. English clearly allows both, as shown in (iii).

- (ii) \*Marie a été la plus gentille que quiconque a/ait jamais été  
 Marie has been the more kind that anyone has.IND/SUBJ ever been
- (iii) Mary was the kindest anyone has/had ever been

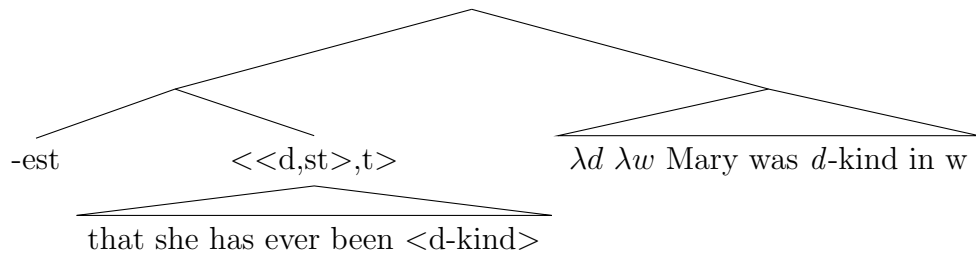
I refer the reader to Howard’s work for the full analysis. Here, I only mention the aspects of his semantic proposal that are relevant for the current discussion.

Howard 2014 uses the Heimian two-place lexical entry for *-est* that was introduced in Chapter 2. The first argument is a set of degree properties, whereas the second one denotes a degree property.

- (83) a.  $\llbracket -est \rrbracket = \lambda \mathbf{Q}_{\langle d \langle st \rangle, t \rangle} . \lambda P_{\langle d, st \rangle} . \exists d [P(d) \ \& \ \forall Q \in \mathbf{Q} [Q \neq P \rightarrow \neg (Q(d))]]$   
 b. Presuppositions: (a)  $P \in \mathbf{Q}$ ; (b)  $\exists Q [Q \in \mathbf{Q} \ \& \ P \neq Q]$

The relative clause is taken to provide the first argument for the superlative morpheme, as shown below for our predicative case (84). The meanings of the embedded clause is as in (85), whereas the final truth conditions are provided in (86).

- (84) Mary was the kindest she has ever been



- (85)  $\llbracket \text{that she has ever been } \langle d\text{-kind} \rangle \rrbracket =$   
 $\lambda P . \exists t [ P = \lambda d \lambda w [\text{she is } d\text{-kind at } t \text{ in } w ] ] =$   
 $\{ \lambda d \lambda w . \text{she is } d\text{-kind at } t \text{ in } w \mid t \in D_i \}$

- (86)  $\llbracket (84) \rrbracket = 1$  iff  $\exists d [ \lambda w . \text{Mary was } d\text{-kind at } t_3 \text{ in } w ] \ \& \ \forall Q \in \{ \lambda d \lambda w . \text{she is } d\text{-kind at } t \text{ in } w \mid t \in D_i \} [ Q \neq [ \lambda d . \lambda w . \text{Mary was } d\text{-kind at } t_3 \text{ in } w ] \rightarrow \neg (Q(d)) ]$

This derives the desired interpretation. Note that unlike the modal cases discussed in Section 3.3.1, this relative clause cannot be paraphrased using an equative construction. That is, (84) does not mean that in the particular time under discussion ( $t_3$  in (86)) Mary was as kind as she has ever been. Rather it means that she was kinder that she was in any other relevant time. In other words (i) ties are not allowed here and (ii) uniqueness at some other level is required. In Howard's analysis this is achieved using degree properties instead of degree sets (as in Romero 2013). The relevance of using degree sets to obtain the peculiar semantic properties of modal superlatives was discussed in §3.3.3.

These semantic differences already suggest that a unified analysis of modal superlatives and NPI-containing relatives is unlikely. The Romance data further support this conclusion.

### 3.5 Postnominal superlatives (and full relatives) in Romance

In this section I turn to postnominal superlatives and quality superlatives embedded inside relative clauses. The section is organized as follows. §3.5.1 displays the relevant data, mainly drawn from Italian, Spanish, Modern French and Middle French. In §3.5.2 I provide a novel analysis of postnominal superlatives, arguing that they are predicative reduced relative clauses. Before presenting my own proposal, I review two previous accounts, namely Kayne 2008 and Alexiadou 2014. I also discuss Romance variation w.r.t. how definiteness is marked in these constructions, focusing mainly on the difference between Italian-type languages and French-type languages. Subsection 3.5.3 takes into account a type of omission of the nominal phrase which is different from the one discussed in Chapter 2 and that I assimilate to a postnominal construction. I then discuss the interpretative properties of postnominal superlatives and relative clauses containing superlative predicates more generally (in §3.5.4). I will show some crucial differences between these constructions and modal superlatives and I will argue that whereas postnominal superlatives involve degree abstraction, they do not contain a syntactically independent degree description. In this respect, they are akin to

relatives out of existential sentences, where abstraction is taken to be over entity-degree pairs (as in Grosu and Landman 2013).

### 3.5.1 The data

In §3.5.1.1, I present data about basic postnominal superlatives and their interpretation in Romance. Synchronic and diachronic variation about definiteness in these constructions is also introduced. In §3.5.1.2 I move on to full relative constructions that contain predicative superlatives and show that the same kind of variation holds in these more complex constructions.

#### 3.5.1.1 Basic data

In languages like Italian and Spanish, simple postnominal superlatives look like (87).

- (87) a. la ragazza più bella [ITA]  
b. la chica más hermosa [SPA]  
the girl more beautiful  
'the most beautiful girl'

Phrases like (87) are actually ambiguous between a superlative interpretation and a definite comparative interpretation, as the compatibility with a *than*-phrase shows:

- (88) la ragazza più bella di Maria  
the girl more beautiful than Maria  
'the girl more beautiful than Maria'

Not so in French, where postnominal superlatives are equipped with a second definite determiner, which distinguishes them from comparatives.

- (89) la fille \*(la) plus belle  
 the.F.SG. girl the.F.SG. more beautiful.F.SG.  
 ‘the most beautiful girl’

This form of ‘doubling’ in French is limited to superlative forms and does not extend to ordinary forms of adjectives.

- (90) la fille (\*la) belle  
 the girl the beautiful  
 ‘the beautiful girl’

Historically, this case of ‘polydefiniteness’ is an innovation in French. (Some stages of) Middle French patterned with Italian in not having a definite determiner preceding *plus*.

- (91) a. [...] le iugement plus certain & plus assuré, la conscience  
 the judgement more certain and more assured, the consciousness  
 meilleure & plus entiere  
 better and more entire  
 ‘the most certain and most assured judgement, the best and most entire consciousness’  
 La Madeleine  
 1575
- b. Ce sera toy, bon Dieu, qui façonne et change les coeurs plus  
 It be.FUT you, good God, who shapes and changes the hearts more  
 inconstans en un ferme rocher.  
 inconstant into a solid rock  
 ‘It will be You, beneficent God who fashion and change the most inconstant hearts into solid rock.’  
 De Coignard 1594

### 3.5.1.2 Superlatives in full relative clauses

What has not been previously noticed is that the same difference between Italian and French is found in superlatives embedded in full relative constructions. In (92), this is shown for quality superlatives inside full relatives but it also extends to adverbial and quantity

superlatives as I will show in Chapter 5.

- (92) a. Marie est [ la fille qui est \*(la) plus énervée ]  
M. is the girl who is the more angry
- b. Maria è [ la ragazza che è più arrabbiata ]  
M. is the girl who is more angry  
'Marie is the girl who is the angriest',<sup>14</sup>

Once again, Middle French patterns with Italian:

- (93) a. Discours au Roy contenant une breuve et salutaire instruction pour  
Discourse to.the king containing a brief and salutary instruction for  
bien & heureusement regner, accomomodee à ce qui est plus  
well and happily govern, adjusted to that which is more  
necessaire aux mœurs de nostre Temps  
necessary to.the customs of our time  
'Discourse to the King containing brief and salutary instructions on how to gov-  
ern well and happily, adjusted to what is (the) most necessary for the customs  
of our time' Du Bellay 1566
- b. mais la vertu de ceste parole espoinçonnant mon ame, l' incitoit  
but the virtue of this word stimulating my soul, it encouraged  
incessamment à ce qu' elle chosit ce qui est plus profitable &  
incessantly to that that it chose that that is more profitable and  
meilleur  
better  
'[...] to that it chose what is the most profitable and good' Damascène 1574

The definiteness of the relative clause in (92b) plays a crucial role, as shown by the following facts: (i) its indefinite counterpart can only have a comparative interpretation (see (94)) and (ii) superlative import of the post-copular predicate *più arrabbiata* is not available at the sentential level (see (95)).

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<sup>14</sup>Again, (92b) is also compatible with a definite comparative interpretation.

(94) una ragazza che è più arrabbiata  
 a girl who is more angry  
 ‘a girl who is angrier/\*angriest’

(95) la ragazza è più arrabbiata  
 the girl is more angry  
 ‘the girl is angrier/\*angriest’

It turns out that embedding the superlative under a definite DP is exactly how the relative interpretations discussed in §3.2.2 are obtained in languages like Italian and Spanish.

- (96) a. l’ anno in cui Maria fu più felice [ITA]  
 the year (in) which Maria was more happy
- b. el año (en) que María fue más feliz [SPA]  
 the year (in) which Maria was more happy  
 x ABS  $\approx$  the year when M. was happier than any other (relevant) female person  
 ✓ REL  $\approx$  the year where Maria was happier than any other year

As indicated by the paraphrases, (96a) and (96b) are only compatible with a relative interpretation. The presence of a second definite article on the other hand would unambiguously yield the absolute reading. This option is shown in (97).

- (97) a. l’ anno in cui Maria fu la più felice [ITA]  
 the year (in) which Maria was the.F.SG more happy
- b. el año (en) que María fue la más feliz [SPA]  
 the year (in) which Maria was the.F.SG more happy  
 ✓ ABS , x REL

The datapoint in (98) again shows that the definiteness of the relative clause in (96) plays a crucial role. The indefinite relative clause in (98) cannot have superlative import.

- (98) un anno in cui Maria fu più felice [ITA]  
 A year (in) which Maria was more happy  
 ✓ ‘A year when Maria was happier’  
 x ‘A year when Maria was happiest’

Since French always requires an overt definite determiner preceding *plus*, the French counterparts of Italian (and Spanish) (96) and (97) are collapsed into a single ambiguous sentence. Thus (99) is ambiguous between the two readings that in Italian are distinguished based on the presence of a second definite determiner inside the relative clause.

- (99) l’ année où Marie fut \*(la) plus heureuse  
 the year where Marie was the more happy  
 ✓ ABS  $\approx$  the year when M. was happier than any other (relevant) female person  
 ✓ REL  $\approx$  the year where Maria was happier than any other year

The last interesting property of superlatives inside relative clauses that I would like to point out has to do with Spanish copular alternation. It was first reported by Matushansky 2008 and attributed to a personal conversation with Maria Luísa Zubizarreta. It will play an important role in my proposal.

In Spanish, sentential copular sentences involving superlative predicates require the copula *ser*, excluding *estar*. This holds true, regardless of the adjective choice. That is, even adjectives that can appear with the copula *estar* in the ordinary form require *ser*, when in the superlative form. The adjective *enojada* below is such an example.

- (100) a. María está enojada  
 Maria is annoyed.F.SG.  
 b. María es/\*está la más enojada  
 Maria is the.F.SG. more annoyed.F.SG.



Interestingly, this restriction does not extend to DP-internal superlatives. Compare (101) with (100b):

- (101) la que está (\*la) más enojada  
the.F.SG. that is the more annoyed.F.SG.  
'the one who is the most annoyed' adapted from Matushansky 2008

### 3.5.2 The syntax of postnominal superlatives

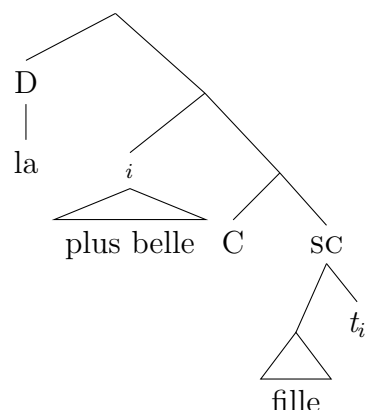
In this subsection, I argue that postnominal superlatives in Romance are reduced relative clauses with a predicative construal (in disagreement with Matushansky 2008 and Alexiadou 2014). This implies that they do not embed a null nominal. In agreement with Kayne 2008, I take the variation within Romance not to follow from any structural differences, rather as a reflection of what each language realizes overtly or covertly. Unlike Kayne 2008, I will argue that the determiner subject to variation is internal to the predicative superlative and on the spine of the DP. The main arguments for my proposal are presented in §3.5.2.2. In the rest of the subsection, I offer some speculation on why superlatives are unique in showing polydefiniteness in French (in §3.5.2.3) and in I provide additional evidence about the purely predicative nature of these superlatives coming from stacking facts (§3.5.2.4).

#### 3.5.2.1 Previous accounts

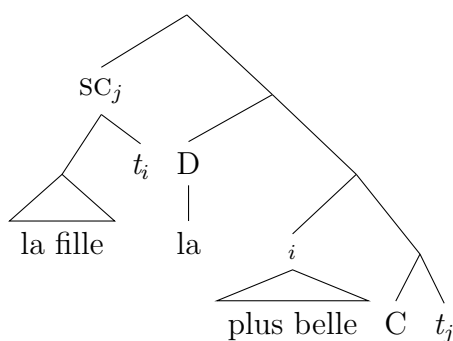
Two main proposals from the literature are discussed: Kayne 2008 in and Alexiadou 2014.

**Kayne's (2008) analysis** Kayne 2008 argues for the following two structures for prenominal and postnominal superlatives in Romance:

(102) La plus belle fille



(103) La fille la plus belle

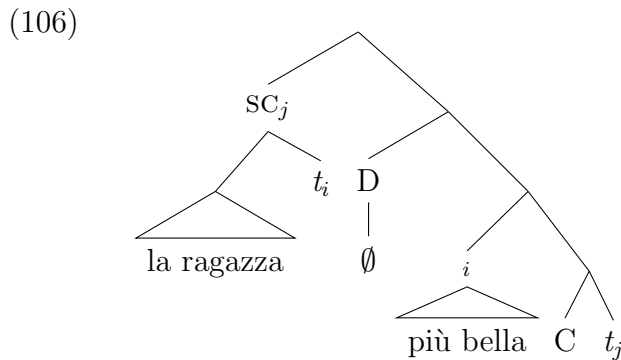


Here are the core properties of Kayne's (2008) proposal. First, an operation of 'superlative preposing' is responsible for the movement of *plus belle* in both structures to the same position. Second, prenominal superlative phrases differ from postnominal ones in two ways: (i) the subject of the small clause lacks a determiner and (ii) small clause preposing does not occur. Lastly, the difference between Italian and French, repeated below, is explained based on the parametric difference in (105):

- (104) a. la ragazza (\*la) più bella  
 b. la fille \*(la) plus belle  
 the.F.SG. girl the.F.SG. more beautiful.F.SG.  
 'the most beautiful girl'

- (105) a. In Italian, a definite D with a filled Spec can and must be unpronounced.  
 b. In French, a filled Spec does not license non-pronunciation for a definite D.

Thus, the structure for Italian (104a) is taken to be structurally identical to the one in (103), with the only difference that the filled specifier of the DP in Italian causes the determiner to be unpronounced. The tree structure is shown in (106), below.



Italian is known to allow null determiners more productively than French does (see Delfitto and Schroten 1991 a.o. for discussion). Thus, the parametric difference in (105) is also argued to account for two other environments where Italian and French differ w.r.t. the pronunciation of the determiner: (i) the lack of bare plurals in French but not in Italian and (ii) the counterpart of interrogative *which* without nominal in Italian and French.

- (107) a. \*Jean achetait livres  
 Jean bought books  
 b. Gianni comprava libri  
 Gianni bought books  
 ‘Gianni bought books’
- (108) a. Lequel/ \*quel as-tu vu?  
 the.which which have-you seen  
 b. { Quale/ \*il quale } hai visto?  
 which the which have seen  
 ‘Which have you seen?’

adapted from Kayne 2008

**Alexiadou's (2014) analysis** Alexiadou 2014 follows Kayne 2008 in assuming that the variation between Italian-type languages and French-type languages can be explained based on whether D can remain null or not in the language. Differently from Kayne 2008, though, she takes the determiner that is subject to crosslinguistic variation to be internal to a nominal reduced relative clause (rather than in the spine of the DP).

This conclusion - which I will adopt - is based on the fact that the behavior of the second definite determiner diverges significantly from that of the main D. Consider for instance the following fact reported by Plank 2003. The second definite determiner can be omitted in the case of coordination like in (109a) but when two postnominal superlatives are coordinated, they each need a definite determiner. Also, unlike (109a), the presence of a second D in (109b) does not imply reference to two men.

- (109) a. le grand et (le) beau homme  
the great and (the) beautiful man  
'the great and the beautiful man'
- b. l' homme le plus grand et \*(le) plus fort  
the man the more large and \*(the) more strong  
'the largest and strongest man' Plank 2003:363

Alexiadou 2014 follows Matushansky 2008 in assuming that the presence of an article should be taken as evidence for the presence of a nominal projection which can be elided (see Chapter 2 for discussion). She claims that postnominal superlatives in Romance can be assimilated to apposition structures such as (110) and should be analyzed as nominal relative clauses for which she provides the structural representation in (111).

- (110) Chomsky the philosopher

- (111) [DP [<sub>#</sub>P [ClassP [NP AP N ] ] ] ]

I will reject this part of her analysis.

### 3.5.2.2 My proposal: postnominal superlatives are predicative reduced relative clauses

In what follows, I put forth a novel analysis for postnominal superlatives which has the following ingredients.

- (i) As in Kayne 2008, the difference between Italian and French is not taken to reflect any structural differences but simply to result from the fact that Italian allows for null Ds more productively than French does. I will also show that diachronic facts further support this claim.
- (ii) As in Alexiadou 2014 and contra Kayne 2008, the second definite determiner is assumed to be internal to a reduced relative clause.
- (iii) Unlike Alexiadou 2014 the postnominal superlative is treated as a predicative reduced relative clause, which does not embed a (null) nominal projection.

As stated in (i) above, I follow Kayne in assuming that we do not need to posit structural differences to account for the variation between French and Italian. As discussed in the previous subsections, Italian licenses null determiners more productively than French does. The case of bare plurals was given as an example. The link between polydefiniteness in superlatives and other areas of grammars is further supported by diachronic data. As the data in §3.5.1 showed (see (91) and (93)), Middle French DP-internal superlatives look very much like the Italian ones. (91a) (repeated in (112)) shows that postnominal superlatives did not require a dedicated definite determiner.

- (112) [...] le iugement plus certain & plus asseuré, la conscience meilleure  
the judgement more certain and more assured, the consciousness better  
& plus entiere  
and more entire  
'the most certain and most assured judgement, the best and most entire conscious-  
ness' La Madeleine 1575

Furthermore bare plurals are found in Old and Middle French.

- (113) a. J' ai servi lonc tans eskevins  
 I have served long time aldermen  
 'I have served long time aldermen'
- b. On dit que, qui veult argent/ prendre...  
 IMP says that who wants money/ takes  
 'It is said that he who wants money/take...' adapted from Delfitto and  
 Schroten 1991

Table 3.1 summarizes these facts, clearly suggesting that the two phenomena are related. How this correlation should be formally implemented is a question that I leave open for future research.

Table 3.1: D-omission synchronically and diachronically

|                      | MANDATORY D IN BPs | MANDATORY D IN SUP |
|----------------------|--------------------|--------------------|
| <b>Middle French</b> | no                 | no                 |
| <b>Italian</b>       | no                 | no                 |
| <b>Modern French</b> | yes                | yes                |

According to Kayne's analysis, the determiner that is left unpronounced in Italian but not in French is the main D in the spine of the DP. The first occurrence of the determiner is instead argued to be part of the preposed small clause in the specifier of DP. Kayne's proposal is repeated below.

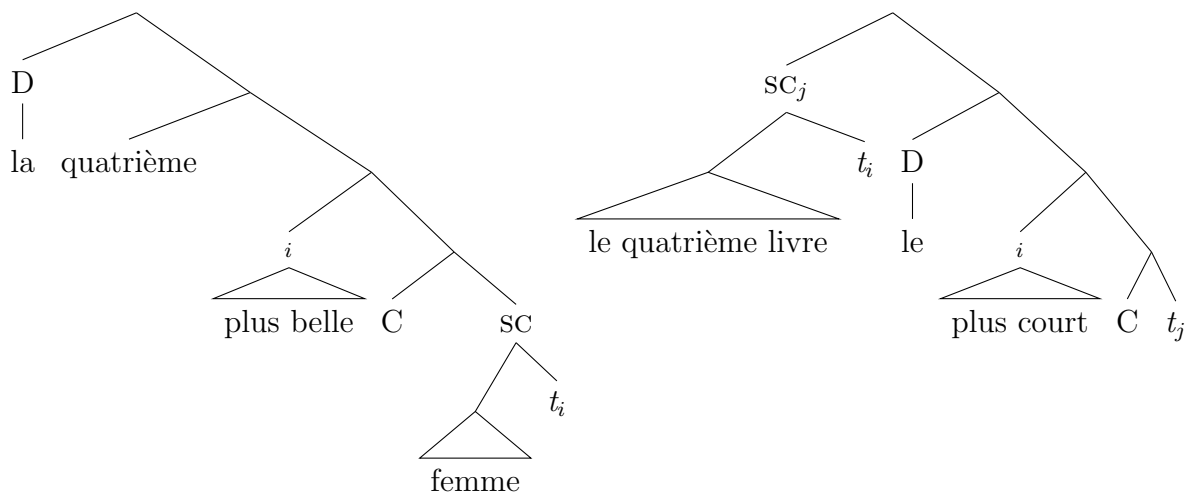
- (114) a. [DP [ la fille ] [ la [ plus belle ] ] [FRE]
- b. [DP [ la ragazza ] [ ∅ [ più bella ] ] [ITA]

This assumption was rejected by Alexiadou 2014 based on the fact that the behaviour and contribution of the determiner subject to cross-linguistic variation diverges from that of the main determiner. For instance, it does not seem to introduce new reference (see Plank's observation in (109a) *vs.* (109b)).

Let me add to her point some novel observations which point in the same direction. Consider first the interaction between ordinal numbers and superlatives in French. When the superlative is postnominal, the only position for the ordinal is after the first determiner (as shown in (115a)). In a prenominal structure the ordinal would also follow the first determiner:

- (115) a. le quatrième livre le plus court  
 the fourth book the more short  
 ‘the fourth shortest book’
- b. la quatrième plus belle femme  
 the fourth more beautiful woman  
 ‘the fourth most beautiful woman’

Kayne 2008 assigns the following structures to the two phrases in (115):



It is unclear why the ordinal is generated in two different positions in the two structures, nor what would prevent the ordinal from appearing between the second determiner and *plus* as in ungrammatical (116).

- (116) \*le livre le quatrième plus court

In footnote 22, Kayne 2008 addresses the issue and writes “The presence of a numeral between CP and D appears to interfere with small clause preposing”. As a matter of fact nothing is able to appear between D and *plus* in French, more generally. In Kayne’s analysis nothing requires adjacency of the determiner and *plus*, which seems to be treated as a quite accidental feature of the postnominal structure (as opposed to the prenominal one). I think that this is a rather weak property of his analysis.

Secondly, under Kayne’s approach, the distribution of prenominal possessives is mysterious. Why is the possessive able to co-occur with the definite determiner in the case of postnominal superlatives but not in other cases, including prenominal superlatives?

- (117) a. ma robe la plus belle  
           my dress the more beautiful
- b. (\*la) ma (plus) belle robe  
           the my (more) beautiful dress  
           ‘my (most) beautiful dress’

To sum up, an analysis where *le* preceding *plus* is part of the predicate and not the main article is in a better position to account for the distribution of the other left-peripheral elements within the DP. As we will see, such an analysis could also extend very naturally to other DP-internal superlatives, where the same asymmetry is found w.r.t. the pronunciation vs. non-pronunciation of D. This brings me to my main argument.

The difference between Italian and French is not specific to postnominal superlatives. It extends to other superlatives embedded inside definite relative clauses. (92) (repeated in (118)) shows this for full relative clauses. The same holds true for adverbial superlatives (as in (119)) and quantity superlatives (as in (120b))<sup>15</sup>, which will be the object of Chapter 5. All the (a)-examples are from French, whereas all the (b)-examples are from Italian.<sup>16</sup>

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<sup>15</sup>(119a) and (120a) are ungrammatical when the second definite determiner is omitted only under a superlative interpretation.

<sup>16</sup>Once again, Spanish, Catalan and (some) Middle French dialects all pattern with Italian.





My main arguments are based on two crucial assumptions: (i) postnominal superlatives are reduced relative clauses and we can expect them to be fairly similar to full relative clauses and (ii) Italian and French postnominal superlatives are assumed to be structurally identical (as argued by Kayne 2008).

The first piece of evidence that DP-internal superlatives in Romance can be assigned a truly predicative logical form come from Spanish copular alternation.<sup>17</sup> As presented in §3.5.1, sentential copular sentences involving superlative predicates require the copula *ser*, excluding *estar*, regardless of the adjective choice. Sentences (100a) and (100b) made this point with the adjective *enojada* ‘annoyed’ and are repeated below.

- (122) a. María está enojada  
 Maria is annoyed.F.SG.
- b. María es/\*está la más enojada  
 Maria is the.F.SG. more annoyed.F.SG.

This restriction that we see in main clause superlatives does not hold in DP-internal superlatives. (101) is repeated in (123).

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<sup>17</sup>Incidentally, Logoori (Bantu) shows a similar pattern. Like Spanish, Logoori uses two different copulas: a defective one, which has an invariant form *ni* and a second one *kuva* which agrees with the subject (*ave* in the example below). Definite DPs cannot appear in the postcopular position after *kuva*. Thus *kuva* cannot be used at the sentential level with a superlative in the postcopular position (see (i)). When embedded in a relative clause, then *kuva* becomes compatible with the superlative predicate, as shown in (ii).

- (i) Johana ni/\*ave mituḡi mwene  
 J ni/ave is rich EST  
 ‘J. is the richest’
- (ii) Johana nije ave mituḡi mwene  
 J is.the.one is rich EST  
 ‘J. is the one who is the richest’

Data collected during our Field Methods Class at UCLA in 2014/2015. Many thanks to our Logoori consultant, Mwabeni Indire.

- (123) la que está (\*la) más enojada  
 the.F.SG. that is the more annoyed.F.SG.  
 ‘the one who is the most annoyed’ adapted from Matushansky 2008

The copula *estar* has been claimed not to be able to take nominals and to be compatible with predicative constructions only (see Roy 2006 a.o. for discussion).<sup>18</sup> For this reason, I take the facts above to show that the DP-internal superlative in (123) is a predicate. This implies that whereas *la más enojada* in (122b) is an attributive elliptical superlative (that contains a null noun), *mas enojada* in (123) is a predicate without nominal projection. (124) below shows the restriction on the kind of superlative that can follow *estar*. Predicative construals are possible, attributive ones are banned.

- (124) a. \*...está [DP la más enojada N ] (122b)  
 b. ...está [AP [DEGP  $\emptyset$  más DEGREE ] enojada ] ] (123)

The presence of a second definite determine in (123) would make the sentence ungrammatical, because it would imply a nominal projection and in turn an attributive structure.

Copular alternation can unfortunately only be tested with full relative clauses, but I assume postnominal superlatives to be reduced relative clauses, arguably not very different from full constructions. For this reason, I will assume that the structure given in (124b) can also be assigned to its reduced counterpart (*la chica más enojada*, ‘the most annoyed girl’).

I also take this predicative construal to underlie the relative reading of (96), which is repeated in (125)). Note the English counterpart of (125) is not compatible with the presence of an overt nominal element either. That is, *the year when Mary was the happiest one* cannot have

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<sup>18</sup>Nominals need to be introduced by a preposition in order to be able to appear with *estar*

- (i) Juan está \*(de) profesor (en USC)  
 Juan is of professor (at USC)  
 ‘Juan is a professor (USC)’ adapted from Roy 2006

the desired relative interpretation (see §3.2.2 for discussion of similar data).

- (125) a. L' anno in cui Maria fu più felice [ITA]  
 the year (in) which Maria was more happy
- b. El año (en) que María fue más feliz [SPA]  
 the year (in) which Maria was more happy  
 x ABS  $\approx$  the year when M. was happier than any other (relevant) female  
 person  
 ✓ REL  $\approx$  the year where Maria was happier than any other year

More generally, the presence (*vs.* the impossibility) of an overt determiner in languages like Italian and Spanish turns out to be a reliable way of detecting the presence (or lack thereof) of a nominal projection. Recall from §3.5.1 that adding a local determiner adjacent to *più/más* in (125) would unambiguously result in the absolute/attributive interpretation. Not so in French, where the resulting phrase would be compatible with both interpretations. The relevant examples ((97a), (97b) and (99)) are repeated here:

- (126) a. l' anno in cui Maria fu la più felice [ITA]  
 the year (in) which Maria was the.F.SG more happy  
 ✓ ABS , x REL
- b. el año (en) que María fue la más feliz [SPA]  
 the year (in) which Maria was the.F.SG more happy  
 ✓ ABS , x REL
- c. l' année où Marie fut \*(la) plus heureuse [FRE]  
 the year where Marie was the more happy  
 ✓ ABS , ✓ REL

To sum up, the data about full relative clauses strongly suggest is that Italian-type languages and French-type languages never differ w.r.t. the pronunciation of D in attributive constructions. They only differ in the pronunciation of the determiner associated with relative superlatives, which, I argued, lack a nominal projection. If this generalization is correct, it is then reasonable to assume that the variation that we see in postnominal superlatives is

of the same nature (*contra* Alexiadou 2014 who assumes an attributive structure for post-nominal superlatives).

In §3.2.3 I followed Krasikova 2012 in assuming that determiners can play two different functions in superlatives: they can either reflect the definiteness of a DP or they can express definiteness of a Degree Phrase. In the former case they embed a nominal projection and they participate in an attributive construction, in the latter they are internal to a predicative structure. (22) illustrates the difference between the two roles and is repeated in (127).

- (127) a. [DP **D** [ [AP ... ] N ] ]  
 b. [AP [DegP **D** -est DEGREE ] A ] ]

Romance languages clearly pattern together when D is performing the function in (127a). In these cases a determiner that agrees with the nominal it embeds has to be used. The determiner that is subject to variation is the one in (127b). Whereas it has to be overt in French, it cannot be overtly realized with an agreeing definite determiner in Italian.<sup>19</sup>

As a consequence, Italian *la più bella* can only have an attributive elliptical form, as illustrated in (128). French *la plus belle* on the other hand is compatible with both an attributive elliptical structure and a purely predicative one.

- (128) *la più bella*  
 a. [DP *la* [AP *più bella* ] N ]  
 b. \*[AP [DegP *la più* DEGREE ] *bella* ]

- (129) *la plus belle*  
 a. [DP *la* [AP *plus belle* ] N ]  
 b. [AP [DegP *la plus* DEGREE ] *belle* ]

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<sup>19</sup>As discussed in §3.3.1, an overt non-agreeing determiner can be used in the case of modal superlatives.

Descriptively speaking, we observe that the null determiner in Italian superlatives is licensed only under the scope of another maximality operator (a definite determiner in all the examples considered so far). In particular, (94) and (95) showed that in the absence of such condition superlative import does not obtain.

The variation we have discussed so far can be finally stated as follows. Italian and French differ in a systematic way on the pronunciation (*vs.* non-pronunciation) of the definite determiner in (127b) either obeying (130) or (131).

- (130) In superlatives, only the definiteness of the host DP can and must be overtly expressed, not the one of the DegrP. [ITA]
- a. a max operator over degrees cannot be spelled out as an overt agreeing definite determiner
  - b. a covert max operator over degrees is licensed when it is under the scope of another max operator (such as definite determiners)
- (131) In superlatives, the definiteness of the DegrP must always be overtly expressed.  
 $\approx$  null max operators over degrees are never licensed [FRE]

To sum up, in this subsection I argued that postnominal superlatives are reduced relative clause constructions which should be assigned a purely predicative construal. I agreed with Kayne 2008 that the same structure can be assigned to both Italian and French postnominal superlatives and that they only differ in the pronunciation *vs.* non-pronunciation of D. I further sustained this claim with diachronic data. *Contra* Kayne 2008, I argued that the determiner subject to variation is not the the main D in the spine of the DP. Rather it is internal to the degree phrase of the predicate. Finally, I rejected the attributive analysis put forth by Alexiadou 2014 based on the behavior of superlatives in full relative clauses. First, I showed that Spanish allows the use of the copula *estar* with DP-internal superlatives. This would be unexpected if the postcopular superlative had an attributive/elliptical form.

Second, I showed that the variation between Italian and French never involves attributive structures.

### 3.5.2.3 Polydefiniteness in French, overt movement in Spanish and some speculations

In §3.5.2.2 I argued that Italian and French superlatives are structurally the same and they only differ on what each specific language realizes overtly (as opposed to covertly). In this brief subsection, I want to suggest that polydefiniteness can be seen as a byproduct of the preposing of the adjective over the head noun to form the appropriate superlative predicate of degrees. In his dissertation, Leu 2008 concludes that across languages, (overt) polydefiniteness is often due to leftward movement of the adjectival constituent. If this movement is due to scopal reasons in Romance, then it is not surprising that determiner doubling is limited to superlatives, given their quantificational component.

In Chapter 4, I will discuss the constructions in (132) that I refer to as *di*-free relatives.

- (132) a. quello che ho di più prezioso [ITA]  
b. ce que j'ai de plus précieux [FRE]  
That that I.have of more valuable  
≈ 'the most valuable thing I have'

What is interesting for the present discussion is that the superlative predicate in (132b) does not have a dedicated definite determiner preceding *plus*. As a result Italian and French do not differ w.r.t. overt *vs.* null D in this context. I will claim that the peculiar derivation of *di/de*-constructions provides the superlative with the right scopal configuration without extra machinery being needed.

I turn next to a kind of DP-internal preposing, related to the one that I take to be responsible for polydefiniteness in French. This movement is visible in the Romance languages

that do not have a specialized overt definite marker in superlative constructions. Perhaps not surprisingly, overt movement makes the otherwise available comparative interpretation disappear. In other words, preposing implies superlative import, as I show below. In order to see this movement with predicates, we have to consider some Atlantic dialects of Spanish.<sup>20</sup> The (a)-examples show that when the predicate is in the post-copular position, both a comparative and a superlative interpretation are available. The (b)-examples show the effect of movement in restricting the range of possible interpretations.

(133) Canariense Spanish

- a. Pepe es el que está **más solo**  
 Pepe is the that is more alone  
 ‘Pepe is the one who is {the most/more} alone’
- b. Pepe es el **más solo** que está  
 Pepe is the more alone that is  
 ‘Pepe is the one who is {the most/\*more} alone’    adapted from Bosque and  
 Brucart 1991<sup>21</sup>

(134) Puerto Rican Spanish

- a. Éstos son los que están **más maduros**  
 These are the that are more ripe  
 ‘These are the ones that are {the ripest/ riper}’
- b. Éstos son los **más maduros** que están  
 These are the more ripe than are  
 ‘These are the ones that are ripest/\*riper’    (adapted from Rohena-Madrado  
 2007 and p.c. with the author)

I take these additional data to further support the claim that Romance superlatives involve similar derivations. Superlatives always involve more structure than comparatives, even

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<sup>20</sup>In Standard Spanish, this movement is limited to quantity superlatives and adverbs. In Italian it is even more restricted. Only bare adverbial superlatives display it. The relevant data will be discussed in Chapter 5.

<sup>21</sup>The (a) example is not present in their paper - it’s inferred by their discussion.



in languages like Italian and Spanish that fail to show transparently (the product of) the additional steps.

#### 3.5.2.4 A brief note about stacking

We do not expect purely predicative adjectives to stack in the absence of a nominal head. Matushansky 2008 argued that when it looks like they do, there are actually modifying a null nominal projection and they provide evidence for an elliptical structure. She uses this fact as support for her claim that superlatives are attributive only.

- (135) The problem had several solutions - ours was considered...
- a. \*(a/the) cheap available/on the market/we could think of
  - b. the cheapest available/on the market/we could think of
  - c. \*the cheapest mathematical/good/functional
- Matushansky 2008

Grammatical (135b) should be then thought as:

- (136) the cheapest N available/ on the market/ we could think of

If the presence of a (reduced) relative clause reveals the attributive nature of the superlative, then we may expect stacking to be incompatible with the relative/degree-based readings discussed above. That holds true in cases like (137). For this reason, (137a), but not (137b), can have an interpretation where different days are compared (as opposed to just tickets). On the present proposal, this reading is associated with the predicative structure in (138b). Since (137b) has the attributive construal on (138b) instead, it is only compatible with an absolute interpretation. That is, it can only mean that Tuesdays is the day where the cheapest tickets you can find on the market are sold at the Laemmle theater.

- (137) a. It is on Tuesdays that tickets at the Laemmle are the cheapest.  
 b. It is on Tuesdays that tickets at the Laemmle are the cheapest on the market.
- (138) a. ... is [<sub>DEgP</sub> the -est DEGREE cheap ] (137a)  
 b. ... is [<sub>DP</sub> the [ cheapest [ N [ on the market ] ] ] ] (137b)

Additional evidence for the two different construals comes from Italian-type languages. Whereas the Italian example corresponding to (137a) requires determiner omission, the counterpart of (137b) needs an overt determiner.

- (139) a. Martedì è il giorno in cui i biglietti del Politeama sono più  
 Tuesday is the day in which the tickets of the Politeama are more  
 economici  
 cheap  
 ‘Tuesday is the day when Politeama tickets are the cheapest’
- b. Martedì è il giorno in cui i biglietti del Politeama sono \*(i) più  
 Tuesday is the day in which the tickets of the Politeama are the more  
 economici sul mercato  
 cheap on the market  
 ‘Tuesday is the day when Politeama tickets are the cheapest on the market’

The stacking facts briefly discussed in this section provide further evidence for the correlation between (i) purely predicative superlatives, (ii) the absence of a nominal projection and (iii) relative readings. In these cases, the superlative is not part of an elliptical structure and stacking is not available. It also supports my claim that DP-internal superlatives in Romance can have a purely predicative construal.

### 3.5.3 *Quello*-constructions

In Chapter 2, I showed that superlatives are compatible with two types of omissions of the nominal phrase. I followed Sleeman 1996, and referred to them as *il*-construction (for cases like (140a)) and *quello*-construction (for (140b)).

(140) [talking about *gatti bianchi*, ‘white cats’]

- a. il più grasso  
the more fat  
‘the fattest (one)’
- b. quello più grasso  
the.one more fat  
‘the fattest (one)’

I also showed that *il*-constructions are attributive structures where ellipsis is licensed by partitivity. What gets elided in these structures is the extended projection of the nominal phrase which is roughly what determines the comparison class for the superlative. In this subsection I will address cases like (140b) and I will show that they can be assimilated to postnominal superlatives. They will provide further evidence that the postnominal superlative should be treated as a predicate.

### 3.5.3.1 Background on *quello*-constructions

Sleeman 1996 analyzed *quello*-constructions as composed of a pronominal element *plus* a predicate, as shown in (142). This is an analysis that I adopt, also providing new evidence for it coming specifically from superlative constructions. Unlike the case of *il*-construction, partitivity does not play any role in licensing *quello*-constructions. Ordinary adjectives are perfectly acceptable in this type of omission of the nominal phrase, as shown in (141).

(141) quello alto/ giallo/ arrabbiato/ stanco...  
that tall yellow angry tired...  
‘the tall/ yellow / angry/ tired one’

(142) quello *pro* alto adapted from Sleeman 1996

Not all adjectives, though. Only predicates. This was shown by Cardinaletti 1998 who reported that adjectives that cannot be used predicatively (such as *probabile*, ‘probable’) are

ungrammatical in *quello*-constructions.

- (143) a. \*La causa prima della sua morte è probabile  
the cause main of his death is probable adapted from Cinque 2010  
b. \*Quella probabile  
that probable

Note that *quello* can function either as a pronoun or as a determiner/demonstrative used deictically. The use of *quello* in this construction is of the pronominal type. Vanelli 1979 first noticed that the two uses can have different phonological forms. They explicitly analyzed as corresponding to the two different constructions in (145) by Sleeman 1996. Whereas *quello* in (144a) is a pronominal element (without deictic content), *quell(o)* in (144b) is analyzed as a determiner/demonstrative which can be used deictically.

- (144) a. quell\*(o) alto  
‘the tall one’  
b. quell’ altro  
‘the other one’
- (145) a. quell\*(o) *pro* alto  
b. quell’ altro *pro*

In the case of superlatives, the pronominal nature of *quello* can be shown by its incompatibility with the presence of an overt nominal phrase. In the presence of a noun, *quello* would function as a demonstrative. Since demonstratives are incompatible with superlative readings, the only available interpretation for (146) is comparative:

- (146) quella ragazza più povera  
that girl more poor  
‘that poorer girl’

I turn to superlatives next.

### 3.5.3.2 *Quello*-constructions and superlatives

If superlatives cannot function as predicates (as argued by Matushansky 2008), then the fact that they can appear in *quello*-construction should be surprising. *Quello* can never be followed by any definite DP, which is the standard for apposition:

- (147) a. Wittgenstein il matematico  
Wittgenstein the mathematician  
b. \*quello il matematico

On the contrary, if we assume that postnominal superlatives are predicative relative clauses, then their compatibility with *quello*-construction (as in (148)) is totally expected.

- (148) quello più incapace  
the.one more incapable  
'the most incapable (one)'

To further support the claim that (148) can be safely assimilated to a postnominal structure, let us compare Italian to French. Recall that French postnominal superlatives require a dedicated definite determiner preceding *plus*, unlike their Italian counterparts. The interpretation would otherwise be unambiguously comparative.

- (149) a. le professeur plus incapable...  
the professor more incapable...  
'the professor more incapable...'  
b. le professeur le plus incapable...  
'the professor the more incapable...'  
'The most incapable professor...'

What we observe is that the same holds true for *celui* constructions, which I take to be a fair counterpart of *quello*-constructions.<sup>22</sup> When *plus incapable* follows *celui*, the only available interpretation is comparative (see (150b)). A superlative interpretation requires a dedicated determiner and, to be fully acceptable, a full relative clause structure (as in (150c)). In attributive constructions an additional determiner is not needed (as shown in (150a)) (judgements kindly provided by D. Sportiche, p.c.).

- (150) a. le plus incapable  
the more incapable  
‘the most incapable (one)’
- b. celui plus incapable  
that more incapable  
‘the one more incapable...’
- c. celui ??(qui est) le plus incapable  
that who is the more incapable  
‘that who is the most incapable’

### 3.5.4 The interpretation of postnominal superlatives

Since Partee 1973, it is normally assumed that restrictive (reduced) relative clauses denote sets which semantically combine with the head noun through intersection, which is implemented through the rule of Predicate Modification in Kratzer and Heim 1998. This is based on the fact that the head (*book* in (151)) and the relative provide an equal contribution to the meaning of the complex expression.

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<sup>22</sup>*Celui* is however not an exact counterpart of *quello*. Kayne 1994 discussed the fact that unlike participials, simple adjectives cannot follow *celui*. This is shown by (150c), which the reader should compare to perfectly grammatical *quello giallo*, ‘the yellow one’ in (141).

- (i) a. \*celui jaune  
the.one yellow
- b. celui envoyé à Jean  
the.one sent to Jean
- adapted from Kayne 1994

- (151) *Anna Karenina* is [ the book [ that Alec bought ] ]  
 the [  $\lambda x$ . x is a book and Alec bought x ]

Thus, *Anna Karenina* has at the same time the property of being a book and the property of being something Alec bought. Since intersection is a symmetric operation and more than one set can intersect with the same head noun, stacking is to be expected.

In this chapter, I have argued that postnominal superlatives are reduced relative clauses. Yet, their interpretation does not result from straightforward intersection as one might expect. In particular, they do not combine with the head noun in the same way as the relative clause in (151). Thus (152) does not imply that *Anna Karenina* is (the) longest (thing).

- (152) *Anna Karenina* è [ il libro più lungo ]  
 Anna Karenina is [ the book more long ]  
 ‘Anna Karenina is the longest book’

The noun *libro* ‘book’ clearly plays a crucial role in the calculation of the meaning of the predicate. Only books are compared relative to their length. This is easily accounted for under an analysis *à la* Alexiadou 2014 where a second nominal following the superlative is assumed (*il libro più lungo* N). In contrast, our predicative account needs to derive the meaning of the superlative through some other means.<sup>23</sup>

These postnominal superlatives also differ significantly from predication at the sentential level. As discussed in §3.5.1, (153) cannot have superlative import.

- (153) Il libro è più lungo  
 the book is more long  
 ‘the book is longer/\*longest’

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<sup>23</sup>This is not unique to predicative cases. As I will discuss in Chapter 5, it extends to any relative interpretation of superlatives inside relative clauses. With respect to these other cases, it was first noticed by Schueler 2006 and also discussed by Bhatt and Pancheva 2012. I refer the reader to these works as well as Chapter 5 of this dissertation.

In §3.5.2, I argued that the postnominal superlative in (152) contains an additional definite marker that is not overt in Italian and that can only be licensed under the scope of a definite determiner. This accounts for the peculiar interpretative properties of (153) but does not offer a principled reason for such a restriction.

The challenge that we now face is to provide a compositional analysis of superlatives that are (contained in) predicates that do not behave like normal predicates (e.g. they are not intersective).

One potential treatment for postnominal superlatives is to analyze them as structures containing an elliptical amount relative, which is basically what I suggested for modal cases in §3.3.4. This would imply that they contain a degree description. In §3.5.4.1, I explore this option. I will conclude that such an analysis does not capture their morphosyntactic properties in a satisfactory way and that the appropriate meaning is derived at the expense of some *ad hoc* assumptions. I also discuss crucial differences between postnominal superlatives and modal cases that suggest that they should not be given a unified account. In §3.5.4.2 I argue that postnominal superlatives share more properties with relatives out of existential sentences and I sketch a possible analysis.

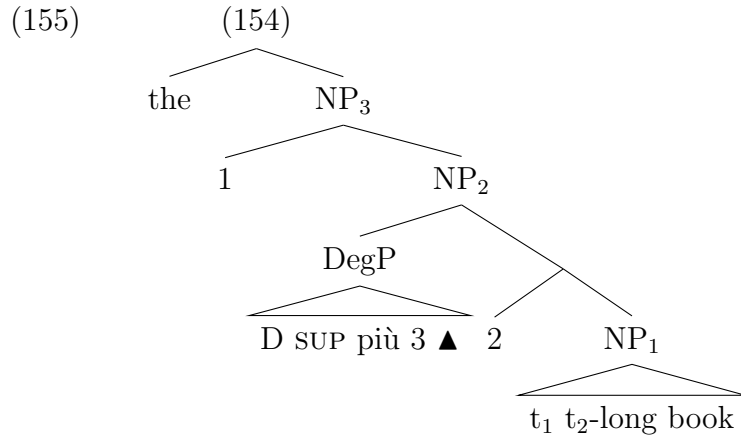
#### **3.5.4.1 ACD treatment of postnominal superlatives**

In this subsection postnominal superlatives such as (154) are given a compositional semantic analysis that is very similar to the one adopted for modal predicates in Section 3.3.1. In particular their derivation is taken to involve a process of formation of a degree description, which saturates the degree slot of the adjective *lungo*.

- (154) il libro più lungo  
the book more long  
'the longest book'



The ellipsis site is resolved to a proposition-denoting constituent like NP<sub>1</sub>. Crucially, the individual variable is existentially bound within the degree phrase, to generate the appropriate interpretation and we obtain the LF in (156). As in the modal cases, the degree phrase is a degree description (of type *d*) and refers to the maximal book length.



(156) the 1 [ [ D SUP più 3 <a t<sub>3</sub>-long book> ] 2 t<sub>1</sub> t<sub>2</sub>-long book ]

The main steps of the derivation are given here:

- (157)
- a.  $\llbracket 2 t_1 t_2\text{-long book} \rrbracket = \lambda d. [ \text{long}(g(1),d) ]$
  - b.  $\llbracket < a t_3\text{-long book} > \rrbracket = \exists x [ \text{book}(x) \ \& \ \text{long}(x, g(3)) ]$
  - c.  $\llbracket 3 < a t_3\text{-long book} > \rrbracket = \lambda d. \exists x [ \text{book}(x) \ \& \ \text{long}(x,d) ]$
  - d.  $\llbracket D \text{ SUP più } 3 < a t_3\text{-long book} > \rrbracket = \text{MAX}(\lambda d. \exists x [ \text{book}(x) \ \& \ \text{long}(x,d) ])$

As shown in (157d), the DegP denotes a unique maximal degree. Given the semantics of MAX I adopted,  $\text{MAX}(\lambda d. \exists x [ \text{book}(x) \ \& \ \text{long}(x,d) ])$  should be thought as a shorthand for:

(158)  $\iota d[\exists x[\text{book}(x) \ \& \ \text{long}(x,d)] \ \& \ \forall d'[\exists x[\text{book}(x) \ \& \ \text{long}(x,d')] \ \& \ d \neq d'] \rightarrow d' < d]]$

[NP<sub>3</sub>] denotes the property of books that have the maximal attested book length. In a context where the maximal attested length is 600 pages, [NP<sub>3</sub>] would refer to the property of being a 600 page long book (and possibly longer than that). The higher definite article will then perform the uniqueness test and return the only book that has such a property, if there is one. Under its absolute interpretation, the DP in (154) would then have the meaning in (159).

$$(159) \quad \llbracket (154) \rrbracket = \iota y. \text{long}(y, (\text{MAX}(\lambda d. \exists x [ \text{book}(x) \ \& \ \text{long}(x, d) ]))) \ \& \ \text{book}(y)$$

We generated an appropriate interpretation. In order to do so, we had to existentially bind the individual variable within the Degree Phrase. Without existential closure, we would obtain the unwanted meaning in (160) which translates into ‘the unique book which is (at least) as long as its maximal length’. We would also get the paradoxical implication that if there are other (relevant) books, they are somehow shorter they they are.

$$(160) \quad \llbracket (154) \rrbracket = \iota x. \text{long}(x, (\text{MAX}(\lambda d. [ \text{book}(x) \ \& \ \text{long}(x, d) ]))) \ \& \ \text{book}(x)$$

I will return to this issue of existential closure in the next subsection. In the rest of the current one, I would like to point out that closer scrutiny reveals important differences between modal cases and postnominal superlatives that call into question a straightforward amount relative analysis of the latter.

Under the current approach, both in the case of modal and in the case of postnominal superlatives, the degree phrase is analyzed as a degree description. This means that, once ellipsis is resolved, the degree phrase denotes a syntactic constituent that refers to a unique degree. We then expect the formation of this constituent to be independent of what happens in the higher part of the derivation. This prediction is not borne out in the case of postnominal superlatives, where (i) the formation of the amount relative is not independent of (ii) the formation (i.e. relativization) of the definite DP.

For instance, if these two processes were independent, we would expect the possibility of using an indefinite determiner in the higher position. The intended interpretation would be: ‘a book which has the property of being of the maximal book length’. In the context we set above, it would be a book which is 600 pages long. This prediction is not borne out as the ungrammatical French example in (161) shows.

- (161) \*un livre le plus long  
 a book the more long

Modal predicates on the other hand are different. The process of formation of a degree phrase does not rest on the presence of a higher determiner. This is for example shown by the fact that they are compatible with an indefinite determiner at the higher DP level:

- (162) Ho bisogno di una torta il più grande possibile.  
 I.have need of a cake the more big possible

Modal predicates can also appear in predicate position at the sentential level and they can be spelled out with an overt D in languages like Italian or Spanish (see (163)). Also, the nominal part can be cliticized to the exclusion of the predicate, as shown in (164).

- (163) Maria voleva essere (il) più bella possibile.  
 Maria wanted to.be the more pretty possible

- (164) La voglio il più grande possibile  
 CL I.want the more big possible

Postnominal superlatives cannot do the same. The sentences in (165) are all ungrammatical under the intended superlative interpretations.

- (165) a. \*Ho bisogno di una torta (il) più grande  
 I.have need of a cake the more big

- b. \*Maria voleva essere (il) più bella  
     Maria wanted to.be the more pretty
- c. \*La voglio il più grande  
     CL I.want the more big

These data clearly suggest that modal superlatives and postnominal ones should not be given the same analysis. In the case of modal superlatives, the uniqueness test is only performed at the degree level. In postnominal superlatives, definiteness (and therefore uniqueness) at the individual level (the head of the relative) is also required. The analysis I provided for modal predicates can capture the fact that the degree phrase is an autonomous referential constituent (semantically of type *d*). The same analysis does not seem suited for postnominal superlatives where we need to capture the dependency between the process of maximalization of the degree variable and uniqueness at the individual level.

#### 3.5.4.2 The parallelism with relatives out of existential sentences

I argued that modal superlatives involve a degree (or amount) relative clause, that is a property of degrees or amounts. I also showed that postnominal superlatives are not interpreted in the same way, even though they seem to involve abstraction over degrees. At this point we would like to know what kind of relative clauses they are.

Grosu and Landman 2013 make a relevant distinction between two types of “amount relatives”<sup>24</sup> that they refer to as (i) d(egree)-relatives and (ii) ep-relatives. The one in (166) (and also (35) above) is an example of a d-interpreted relative clause. As the paraphrase suggests, it is interpreted as referring to a quantity, specifically the maximal number of books that John could fit in his bag.

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<sup>24</sup>Here the term *amount relative* should be understood in a broader sense, to include more constructions than just relatives with a clear amount interpretation. In their previous work (Grosu and Landman 1998), they referred to this class of non-restrictive relatives as *maximalizing relatives*.

- (166) John put in his bag [every book he could]. Grosu and Landman 2013  
 $\approx$  John put in his bag as many books as he could

Ep-relatives are different. They do not refer to a quantity, but they do not pattern with restrictive relative clauses either. They are defined as e(ntity)-headed and e(ntity)-interpreted relatives whose gap position is not a canonical argument position (rather it is a more p(redicate)-like position). This last fact distinguishes them from standard restrictive relatives. (167) provides an example of an ep-relative. It does not have an “identity of quantity” reading. That is, it does not mean *Bill read as many books as there were on the table*. Rather, (167) has an “identity of objects” interpretation (*Bill read those actual books that were on the table*). This is true, despite the fact that it is normally taken to involve abstraction over degrees, as we will see.

- (167) Bill read the books [that there were on the table]  
 $\not\approx$  Bill read as many books as there were on the table  
 $\approx$  Bill read *the* books that were on the table

This distinction turns out to be relevant for our discussion of (predicative) superlatives. Whereas modal superlatives are clearly d-relatives (as the equative paraphrase suggests, among other things), postnominal superlatives appear to be related to ep-relatives such as relatives out of existential sentences like (167). In order to see the connection, let us look at these cases more closely.

The pivot of existential ‘there’ sentences is known for being a position open to definiteness effects, as shown by (168). An individual variable in the gap position of (167) would then count as a strong NP and generate the violation in (169)).

- (168) \*There are the books on the table

(169) \*There be x, where x is an individual variable

Heim 1987

For this reason, Carlson 1977a assumes that the gap position in (167) contains a degree variable, which counts as a weak NP, instead. Carlson's idea is spelled out in (170), where abstraction targets the variable *d*.

(170) books that there were (*d*-many books) on the table

$\lambda x.\text{books}(x) \ \& \ |x| = \max(\lambda n.\exists y:\text{books}(y) \ \& \ \text{on the table}(y) \ \& \ |y| = n)$

$\lambda x.\text{books}(x) \ \& \ |x| = | \text{books on the table} |$

'The set of plurality of books that have the same number of individuals as there are books on the table' (adapted from von Stechow 1999)

This analysis has the following core properties:

- a. the nominal 'books' is interpreted/active twice: inside and outside the amount relative;
- b. we obtain the identity-of-quantity reading, not the identity-of-individuals one;
- c. the individual variable is existentially closed in the amount relative and needs some type of disclosure

Grosu and Landman 1998 point out that property (b) is an unwelcome result of Carlson's analysis. As established above, (167) clearly has an "identity of objects" reading. Properties (a) and (c) are shared by the compositional analysis of postnominal superlatives I attempted in §3.5.4.1. Let me spell out the parallelism between (167) and (154) (which is repeated in (171a) and it is paired with the meaning we were able to derive).

- (171) a. il libro più lungo  
 the book more long  
 ‘the longest book’
- b.  $\llbracket (171a) \rrbracket = \iota y. \text{long}(y, (\text{MAX}(\lambda d. \exists x [ \mathbf{book}(x) \ \& \ \text{long}(x, d) ]))) \ \& \ \mathbf{book}(y)$

First, in (171b), the nominal makes a contribution in two places: inside the maximalized degree property (in order to generate the right meaning) and outside of the relative (in order for the complex DP to refer to an individual book). Also, the individual variable within the relative clause is existentially closed to generate the appropriate (superlative) predicate. The importance of this step in the economy of the interpretation was briefly discussed in §3.5.4.1. Thus both in the case of postnominal superlatives and in the case of extraction out of existential sentences, the existentially closed individual variable needs some type of ‘disclosure’ in order to participate in the higher part of the derivation.

In the rest of the subsection I discuss Grosu and Landman’s 1998, 2013 proposal for cases like (167) and sketch an analysis of postnominal superlatives (and, more generally, of relative superlatives inside relative clauses) where I adopt the core properties of their account, despite some significant differences between the two constructions.

**Grosu and Landman’s 1998, 2013 proposal** Carlson’s 1977 approach left the following problem unsolved: if abstraction in (167) targets a degree variable, how come the relative clause has a “identity of object” reading? Grosu and Landman 1998 address this issue defining an operation that is able to extract entities from a degree denoting expression. In order to do so, they introduce a richer notion of degree than what is normally assumed. They suggest that degrees should keep track of what degrees are degree of and this information should be accessible.

In more recent work (Grosu and Landman 2013), the authors explicitly suggest that in ep-relatives such as (167) abstraction is neither over individuals (type  $e$ ), nor over abstract degrees (type  $d$ ), but over individual-degree pairs (type  $e \times d$ ), for which they use the variable

$\delta$ . To ensure that the right interpretation is derived, they also assume that the external head (in this case *books*) enters into the interpretation of the gap.

(172) **External head assumption:**

The interpretation of the external syntactic head of the amount relative enters into the interpretation of the gap inside the relative.

In Grosu 2005, Grosu explains:

The values over which the deg variable ranges are cardinalities of entities, not abstract numbers. Suppose then that in the situation described by the relative in (167), each value of the deg variable, in particular, 1, 2 and 3, is paired with an entity that it provides the cardinality of. If abstraction applies to such pairs, the result is a set of pairs of the form  $\langle \text{deg}, \text{ent} \rangle$ . Now, if one could identify an entity through its cardinality, quantifying over the cardinality will automatically also yield the corresponding entity. There is one catch, however, the correspondence between cardinalities and the entities they measure is not in general one-one, and one can thus not unambiguously deduce an entity from just any cardinality picked out by quantification. There is one pair, however, in which a cardinality is associated with a unique individual: the maximal cardinality. This state of affairs points to the desired operation for unambiguously extracting an entity from a cardinality: ignore all pairs, except the maximal one. This state of affairs can be ensured by an operation of maximalization, which maps a set to the singleton that contains only its maximal pair. To ensure that the appropriate maximal pair is appropriately defined within the denotation of the relative, it is sufficient to assume that the external NP constrains the existentially quantified variable within the relative. In the minimal situation described by the relative clause, the entities whose existence is asserted are defined, and so is the cardinality of their total sum. Accordingly, the RC can smoothly denote a set containing just the



pair formed by the maximal sum and its cardinality.

Let me show how the meaning of (167) is derived in this framework. Abstraction over individual-degree pairs derives the predicate of type  $\langle e \times d, t \rangle$  in (173):

$$(173) \quad \lambda\delta. \exists x [\text{book}(x) \ \& \ \text{on-table}(x) \ \& \ \delta = \langle x, |x| \rangle]$$

Then an operation of maximalization maps the set in (173) to the singleton that contains only its maximal element. As a result, the relative clause then denotes a singleton set containing the pair of the sum of all the books on the table and its cardinality. (174) shows what the singleton predicate would be if *Anna Karenina* (ak) and *La Divina Commedia* (dc) were the only books on the table.

$$(174) \quad \text{MAX}(\lambda\delta. \exists x [\text{book}(x) \ \& \ \text{on-table}(x) \ \& \ \delta = \langle x, |x| \rangle]) = \{ \langle \text{ak} \oplus \text{dc} \rangle, 2 \}$$

At this point the external head noun *books* combines with the relative clause. The semantic mismatch between a predicate of individuals (type  $\langle e, t \rangle$ ) and the CP predicate (type  $\langle e \times d, t \rangle$ ) is handled by retrieving the first element of the relative. In Grosu and Landman 1998, this operation was labeled SUBSTANCE. In Grosu and Landman 2013 they use a superscript notation where  $^n$  picks out the  $n^{\text{th}}$  element. For predicates of type  $\langle e \times d, t \rangle$ , it is defined as follows:

$$(175) \quad \text{Let } \Delta \text{ be a predicate of type } \langle e \times d, t \rangle, \text{ a set of individual-degree pairs.} \\ \Delta^1 = \lambda x. \exists \delta [\Delta(x, \delta)] \quad \text{the first projection of type } \langle e, t \rangle, \text{ a set of individuals.}$$

In this case, it creates the property of type  $\langle e, t \rangle$  of being the sum of all the books that there were on the table. This can combine with the external head and derive a singleton set consisting of the sum of all books that were on the table, which is a suitable argument for

the definite determiner. This is shown in (176)

$$\begin{aligned}
 (176) \quad \llbracket \text{books there were on the table} \rrbracket &= \\
 \lambda x. \text{book}(x) \ \& \ \text{SUBSTANCE}(\text{MAX}(\text{CP})) &= \\
 \lambda x. \text{book}(x) \ \& \ \text{MAX}(\text{CP})^1 &=^{25} \\
 \lambda x. \text{book}(x) \ \& \ \sigma(\lambda x. \text{book}(x) \ \& \ \text{on-table}(x)) &= \\
 \{ \sigma(\lambda x. \text{book}(x) \ \& \ \text{on-table}(x)) \} &
 \end{aligned}$$

The singleton set consisting of the sum of all books that were on the table

**What about superlatives?** We saw that postnominal superlatives (and relative superlatives in relative clauses more generally) and relative clauses out of existential sentences share some core properties. First, both cases end up having an object and not a quantity interpretation. Second, they both seem to involve amount relativization/abstraction at some level of the derivation. Third, the nominal plays a double role. It is crucial to derive the maximalized predicate and it is active outside the relative clause to derive the entity interpretation. Lastly, the individual variable is targeted by existential quantification in both cases and some type of “disclosure” is required.

It seems natural then to explore the possibility of assigning Romance postnominal superlatives an account *à la* Grosu and Landman. We quickly notice however, that the parallel between the two types of relative clauses is not perfect. In (167), we deal with cardinalities of books and each value of the degree variable is paired with the entity that it provides the cardinality of (that is, books). When it comes to superlatives, however, the relevant pairs would not have such a direct relationship. That is, abstraction (and maximalization) does not apply to pairs of (i) cardinalities/degrees and (ii) the entities they measure. Take (171a) as an example. The degree is technically an argument of the predicate and does not bear any direct relation with the nominal. The variable  $x$  ranges over books whereas  $d$  ranges over lengths, as shown in (177).

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<sup>25</sup>Where  $\text{MAX}(\text{CP})^1$  is the first element of  $\text{MAX}(\text{CP})$

(177)  $\delta = \langle x, d \rangle$ ,

where  $x$  ranges over books and  $d$  over lengths

One could argue that it is still the case that the objects being measured are books. However, this consideration does not extend to other DP-internal relatives that behave like postnominal superlatives, where the head of the relative does not have any relationship with the adjectival predicate. Such cases were introduced in §3.5.1. Sentence (96a) is repeated in (178).

(178) l' anno in cui Maria fu più felice  
the year (in) which Maria was more happy  
 $x$  ABS  $\approx$  the year when M. was happier than any other (relevant) female person  
✓ REL  $\approx$  the year where Maria was happier than any other year

The relative clause in (178) shares all the relevant properties of postnominal superlatives that motivated the parallel with relatives out of existential sentences.<sup>26</sup> It is clear, though, that happiness describes not years, but rather Maria's mental state. This point is made even clearer by (179) where abstraction is over pairs of (i) people who make Maria happy to some degree and (ii) the associated degree of Maria's happiness.

(179) La persona che rende Maria più felice  
the person who makes Maria COMP happy  
'The person who makes Maria (the) happiest'

For (167), Grosu and Landman 2013 assume that CARD (for cardinality) is the relevant function bridging the two variables, since *book* is a count noun. As a result,  $d$  expresses the cardinality of the relevant entity  $x$ , which are books. In our cases we need to allow a less direct relationship between the two variables  $x$  and  $d$  that are paired up in  $\delta$ . In (179) for example abstraction (and therefore maximalization) is over the pair in (180):

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<sup>26</sup>In Chapter 5, I show that non quantity superlative (that is, quantity and adverbial superlatives) inside relative clauses show the same behavior.

$$(180) \quad \lambda\delta.\exists x\exists d[x \text{ makes Maria d-happy} \ \& \ \delta = \langle x,d \rangle]$$

In the rest of this section, I sketch how the derivation of a postnominal superlative works, once we accept such a loose relationship between the two variables in  $\delta$ . Let us consider (181) in a context where the the relevant white cats are the ones introduced in Chapter 2. Romeo, Sale and Chloe (from left to right) are associated with the weights shown in Figure 3.1.

$$(181) \quad \begin{array}{l} \text{il gatto bianco pi\`u pesante} \\ \text{the cat blanc more heavy} \\ \text{'the heaviest white cat'} \end{array}$$

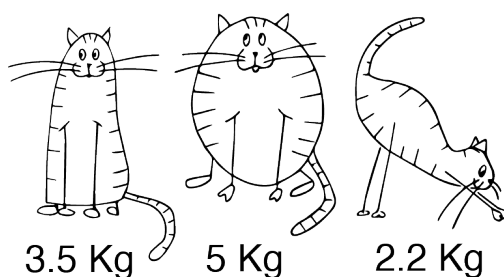


Figure 3.1: Weights of the relevant cats

First, abstraction over individual-degree pairs derives the predicate of type  $\langle e \times d, t \rangle$  in (182):<sup>27</sup>

$$(182) \quad \lambda\delta.\exists x.\exists d[x \text{ is a d-heavy white cat} \ \& \ \delta = \langle x,d \rangle]$$

Then MAX maps the set in (182) to the singleton that contains only its maximal element. In our context, this singleton set contains the pair of the singleton set containing the individual cat Sale and the singleton containing its weight, as shown in (46):

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<sup>27</sup>(182) is an alternative notation to the more rigorous one:

$$(i) \quad \lambda\delta.\exists x.\exists d[\text{cat}(x) \ \& \ \text{white}(x) \ \& \ \text{heavy}(x,d) \ \& \ \delta = \langle x,d \rangle]$$

(183)  $\text{MAX}(\lambda\delta.\exists x.\exists d[\text{cat}(x) \ \& \ \text{white}(x) \ \& \ \text{heavy}(x,d) \ \& \ \delta = \langle x,d \rangle]) = \{ \langle \text{sale}, 5\text{kg} \rangle \}$

At this point we need to convert this predicate of type  $\langle e \times d, t \rangle$  into a set of individuals (type  $\langle e, t \rangle$ ). The operation defined by Grosu and Landman 2013 in (175) will do the job. It picks out the first projection of the relative, which is a singleton containing the only white cat who is associated with the heaviest weight. Finally the definite determiner performs the uniqueness test and returns that only cat. In our case, Sale.

### 3.6 Definite comparatives in English are attributive only

I started this investigation of predicative superlatives with English data. I close the chapter with a brief note on English definite comparatives. It turns out that they lack a predicative construal and that they are compatible with an attributive structure only.

Definite comparatives in English are superficially like superlatives over a set of two. Among other things, they share with superlatives the fact that (i) they are incompatible with *than*-clauses and (ii) they co-occur with a definite article:

- (184) a. John is the smarter of the two.  
b. John is the smartest of the three.  
c. John is the smarter one (\*than Mary)

In other Germanic languages where agreement is different from concord (such as German and Dutch), definite comparatives behave like superlatives, showing attributive agreement with a (possibly null) head noun (see Matushansky 2008 for discussion). Simple comparatives (on the other hand) are incompatible with concord morphology (see (185a)).

- (185) a. Diese Schlange ist schöner>(\*e). [GER]  
 this snake is beautiful-cmp-agr  
 ‘This snake is more beautiful’
- b. Diese Schlange ist die schöner\*(e)  
 this snake is the beautiful-cmp-agr  
 ‘This snake is the more beautiful (one).’
- c. Diese Schlange ist die schönst\*(e)  
 this snake is the-f beautiful-sup-(agr)  
 ‘This snake is the most beautiful.’ Adapted from Matushansky 2008

It turns out however that definite comparatives are not simply superlatives with a comparison set of cardinality two. They are syntactically restricted to cases where the adjective is in a attributive position, as in (186a). They cannot have predicative construals. As a result, they are not compatible with the relative readings discussed throughout the chapter and of which (186b) provides an example.

- (186) a. Of the two of us, I am definitely the busier one. *Attributive*
- b. \*Of the two days, I am the busier on Monday. *Predicative*

Relative interpretations of quantity or adverbial superlatives are also either impossible or very marginal.

- (187) a. ??/\*John has the more books of the two.
- b. John has the most books of the three.
- (188) Of the two of them, John’s the one who talks the ?most/\*more (example provided by R. Kayne, p.c.)

### 3.7 Conclusion

In this chapter, I defended the claim that superlatives can be given a truly predicative construal cross-linguistically (*pace* Matushansky 2008). In particular, I argued that such an underlying structure can be assumed in (at least) the following cases:

1. Relative interpretations of quality superlatives, at the sentential level in English (189a) or DP-internally in Romance (189b).

- (189) a. Maria was the prettiest on 2015.  
b. El año (en) que María fue más guapa  
the year (in) which Maria was more pretty  
≈ the year where Maria was prettier than any other year

2. The cases where the comparison class is provided overtly by a relative clause containing NPIs.

- (190) In 2015, Maria was the prettiest she has ever been

3. Postnominal superlatives in Romance.

- (191) Maria è la ragazza più carina  
Mary is the girl more pretty  
'Mary is the prettiest girl'

4. Modal superlatives.

- (192) María quería estar lo más guapa (que fuera) posible  
Maria wanted to.be it.M.S. more pretty.7s.f. that was possible  
'Maria wanted to be the prettiest possible'

Modal superlatives are unique in that (i) they can be paraphrased using an equative construction (*as pretty as possible*) and (ii) they are therefore compatible with ties. In this chapter I analyzed them as degree relatives with the syntax of free relatives in Romance. Semantically, they are degree descriptions which function like measure phrases. What distinguishes them from the other predicative cases is that both maximalization and the uniqueness test happen in immediate succession and at the degree level.

All the other cases (1)-(3) have different interpretative properties. Uniqueness is tested at the individual level (as well). In all the examples (189a), (189b), (190) and (191), a particular year or girl has to be identified as the unique one that exceeds all the other (relevant ones) relative to some property. As a result they are not compatible with ties ((189a) would not be true for instance if Mary was as pretty in 2016 as she was in 2015) and they are better paraphrased using a comparative instead (as shown in (189b)). Among these cases, (189b) and (191) were analyzed as *maximalizing* relative clauses (in the sense of Grosu and Landman 1998) where abstraction is over individual-degree pairs.

When a definite article appears in these predicates, it is taken to be part of a degree phrase and not to embed a nominal structure (see §3.2.3). This claim was supported by the clear pattern of variation that we see in Romance languages w.r.t. definiteness in superlative phrases. We observe that variation is only attested in DegP-internal determiners. When it comes to determiners embedding nominal phrases, all the Romance languages pattern together.



## CHAPTER 4

### The case of *di*-free relatives

#### 4.1 Introduction

This chapter is concerned with phrases like (1) that is, a type of definite construction that involves stranded predicates that can have superlative import. Given (i) the mandatory presence of the preposition *de/di* and (ii) the analysis I will put forth, I refer to them as *di*-free relatives:

- (1) a. quello che ho di più prezioso [ITA]  
b. ce que j'ai de plus précieux [FRE]  
That that I.have of more valuable  
≈ 'the most valuable thing I have'

The main challenge for a compositional analysis of (1) is that in this construction the predicate is stranded and the superlative appears to be discontinuous. This raises the question of how the scope of the superlative is achieved and the comparison class determined in this construction. Moreover, the fact that (1) is clearly built on the inherently indefinite “Q-of-A” construction (shown in (2)) raises additional questions on whether (and how) superlative import can result from the process of relativization out of an indefinite/comparative.

- (2) qualcosa di (più) prezioso  
something of more valuable  
'something (more) valuable'

The rest of the chapter is organized as follows. Section 4.2 introduces the data that will be relevant for the analysis. In §4.3 I provide the reader with some background information on the “Q-of-A” construction in Romance that will be useful to understand the extraction cases. Sections 4.4 and 4.5 develop the proposal of the syntactic and semantic derivation of *di*-free relatives and compare them with simple postnominal superlatives. Section 4.6 accounts for the contrast between question formation and relativization w.r.t. to the availability of a superlative interpretation. Lastly, Section 4.7 concludes the chapter.

## 4.2 The data

*Di*-free relatives such as (1) are built on the Romance “Q-of-A” construction which is shown in (3) and discussed in Section 4.3. As I will show in detail, this construction is inherently indefinite and it is not compatible with superlative import *per se*. Superlative import in (1) somehow results from the process of relativization.

- (3) a. Ho qualcosa di più prezioso [ITA]  
 b. J’ai quelque chose de plus précieux [FRE]  
 I.have something of more valuable  
 ‘I have something more valuable’

Spanish lacks this kind of indefinite construction altogether, so it will not be discussed in this chapter. English, on the other hand, has an indefinite structure comparable to (3) but it does not allow superlatives to be derived from it as the English counterpart of (3) (shown in (4a)) does not allow splitting/ stranding more generally (see Leu 2005, footnote 15).<sup>1</sup>

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<sup>1</sup>The English construction ‘something of interest’ on the other hand does allow stranding (as in ‘what did you read of interest’) but for some reason, it is not compatible with superlatives, as shown (i).

(i) \*What I read of most interest.

- (4) a. I saw something interesting.  
 b. \*What did you see interesting?  
 c. \*What I saw most interesting

*Di*-free relatives are very similar in meaning to more standard superlative DPs, like (5). They also have a very similar distribution. For instance, they can both appear in argument positions, as shown below.

- (5) la cosa più preziosa ( che ho )  
 the thing more valuable that I.have  
 ‘the most valuable thing (I have)’

- (6) a. Ti ho dato [ quello che ho di più prezioso ]  
 b. Ti ho dato [ la cosa più preziosa che ho ]  
 ≈ ‘I gave you the most valuable thing I have’

We observe however that they differ from simple postnominal constructions like (5) in a significant way. First, the relative clause is mandatory in *di*-free relatives but not in (5).

- (7) a. quello \*( che ho ) di più prezioso  
 b. ce \*( que j’ai ) de plus précieux  
 That that I.have of more valuable

Second, French does not exhibit polydefiniteness in phrases such as (1b). This is shown in (8) by the impossibility of adding a dedicated determiner preceding ‘plus’.

- (8) Ce qu’ il y a de/ \*du plus beau  
 that that there is of of.the more beautiful  
 ‘the most beautiful thing there is’

As a result, the difference in the definiteness of superlative predicates between Italian and French that I discussed in Chapter 3 (and shown in (9)) disappears in the case of *di*-free relatives.

- (9) a. la cosa       più   preziosa  
      b. la chose \*(la) plus précieuse  
          the thing the more valuable  
          ‘the most valuable thing’

Let me spell out the reason why this is surprising. First, recall from Chapter 3 that I analyzed postnominal superlatives as involving a reduced relative clause structure. I also claimed that the determiner adjacent to *plus* in French is part of the superlative predicate (*pace* Matushansky 2008 and Kayne 2008). The structures I assigned to (9a) and (9b) are formally identical, differing only in the pronunciation (*vs.* non-pronunciation) of the determiner. If (i) what follows *de/di* is a superlative predicate (and not an attributive structure - see Section 4.3 for discussion) and (ii) French and Italian systematically differ in the realization of D in predicative superlatives, then we expect to find the same difference between the two languages inside the predicate in *di*-free relatives, but we do not.

Interestingly, the absence of a definite determiner preceding *plus* in (8) also correlates with the lack of gender/number features on the adjective:<sup>2</sup>

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<sup>2</sup>There could be a connection between this fact and the idea put forth by several scholars that the pronunciation of D in Modern French could be a compensatory mechanism for the loss of inflectional morphology French adjectives underwent. In particular, the correlation between the absence of agreement and the absence of a dedicated determiner could provide an additional argument for idea that gender and number features must be realized in D in French because adjectives (and nouns) are not inflected for gender and number, with few exceptions. I leave this issue to future research and I refer the reader to Delfitto and Schrotten 1991 for an analysis of the lack of bare plurals in French based on this idea.

- (10) a. ceux que j' ai de plus spécial/ \*spéciaux  
 those that I have of more special.SG./ special.PL.
- b. celle que je connais de plus intelligent(\*e)  
 that.FEM. that I know of more intelligent(.FEM)

Another important datapoint that will play a role in the analysis is that, unlike relativization, question formation does not seem to be able to generate a superlative interpretation (at least in Italian). Thus, (11) can only have a comparative reading. This will be the main focus of Section 4.6.

- (11) cos' hai di più prezioso?  
 what you.have of more valuable  
 'What do you have of more value?'  
 #'What is the most valuable thing you have?'

### 4.3 Background on the “Q-of-A” construction in Romance

Both French and Italian (but apparently not Spanish) have a “Q-of-Adj” construction where the preposition *de/di* appears mandatorily between an indefinite pronoun and an adjective (see Azoulay-Vicente 1985, Kayne 1994, Kayne 2005b, Zamparelli 2000, Cinque 2010, Leu 2005 a.o.):

- (12) a. quelque chose de lourd [FRE]  
 some thing of heavy  
 'something heavy' Kayne 2005b
- b. qualcosa di pesante [ITA]  
 something of heavy

These constructions are inherently indefinite and crosslinguistically quite unproductive.<sup>3</sup> The indefinite quantifier can normally only combine with a very limited class of nominal-looking

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<sup>3</sup>See Leu 2005 on this point.

elements, such as *thing, one, body, place...* In the case of Romance, the class of elements that can combine with the indefinite is very restricted, more so than in English. In Italian, it is arguably limited to *cosa*, “thing”. French *quelque* has a wider distribution that includes *un* “one”.<sup>4</sup>

- (13) a. Qualcuno (?? di) simpatico ci sarà pure  
 Someone of nice there will.be for.sure  
 ‘There will be someone nice for sure’ Zamparelli 2000
- b. Quelqu’ un de célèbre  
 some one of famous  
 ‘someone famous’ Kayne 1994

Neither *quelque* (French) nor *qualche* (Italian) can combine with common nouns in the “Q-of-A” construction.

- (14) a. \*J’ai lu quelques livres d’ intéressant  
 I.have read some.PL books of interesting
- b. \*Ho letto qualche libro di interessante  
 I.have read some books of interesting

It is normally assumed that constructions involving *de/di* like in (12) are akin to relative clauses with an ‘extraposed’ predicate (see Kayne 1994, Cinque 2010 a.o.). For English, Larson and Marušič 2004 convincingly argue that the adjective following the indefinite pronoun displays the typical properties of English postnominal adjectives, which in the dual source model of adnominal modification *à la* Larson/Cinque are indirect modifiers. In other words,

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<sup>4</sup>Some Italian speakers accept “Q-di-A” constructions with *qualcuno*, as *qualcuno di simpatico* ‘someone nice’. I personally agree with Zamparelli 2000 and I find it less than perfect. Some adjectives seem to work better than others. Compare (13a) with:

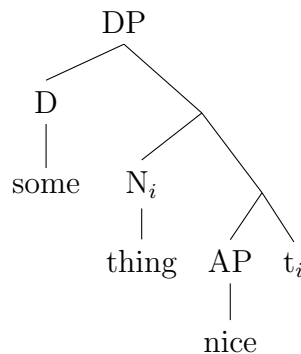
- (i) Voglio dare questo libro a qualcuno di speciale  
 ‘I want to give this book to someone special’

Why this should be the case is a question that I leave open for future research.

they are predicates of reduced relative clauses (for discussion of the two domains theory of nominal modification, see §2.2.1). Larson and Marušič 2004 use these facts mainly to argue against a type of analysis where the noun raises around a prenominal adjective (like in Abney’s analysis in (15)). For our purposes, the fact that the adjective displays the behavior of a predicate (a reduced relative) will be crucial to draw a parallel with the postnominal superlatives discussed in §3.5.

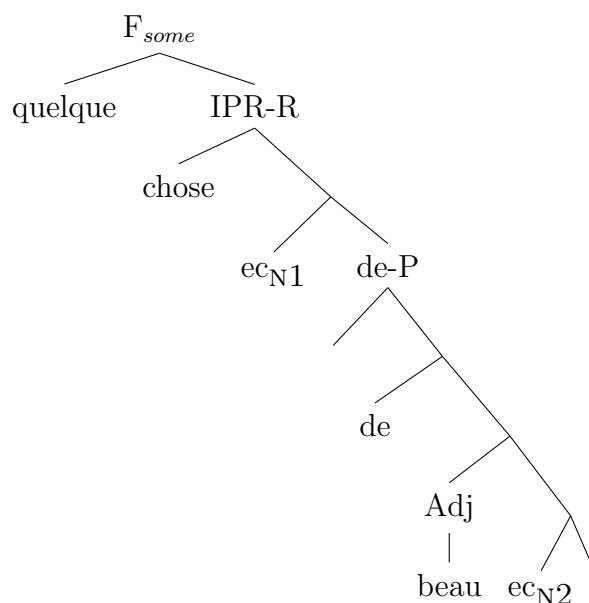
One of the issues debated in the literature is whether these constructions are better analyzed as involving a MONO-nominal or a BI-nominal structure (see Leu 2005 and Roehrs 2008 for discussion). An example of mono-nominal structure is the movement analysis proposed by Abney 1987. As illustrated in (15), the light noun *thing* moves around the prenominal adjective and gets incorporated to form the indefinite pronoun *something* (see Leu 2005 and Larson and Marušič 2004 for a critical review of this proposal).

(15) **Mono-nominal structure à la Abney 1987**



Leu 2005 was the first one to propose a BI-nominal structure (also see Roehrs 2008). He proposed that that the Q-de-A construction (and indefinite pronoun constructions *IPR* more generally) involves two separate nominal projections with two empty nominal categories, as shown in (16). *Chose* is treated as a functional element which behaves as the restrictor (*R*) of the determiner-like element, *quelque*.

(16) **Bi-nominal structure à la Leu 2005**



In what follows, I will adopt the simpler MONO-nominal structure but I will agree with Leu 2005 in considering *thing* and their cross-linguistic counterparts as functional nouns, that semantically are turned into variables at LF. In order to distinguish the functional noun from the nominal [<sub>NP</sub> thing ], I will use the notation THING.

We observe that in Italian the counterparts of *thing* and THING (*cosa* and COSA) show different agreement patterns.

- (17) a. qualcosa di { bello/ \*bella}  
 something of beautiful.M beautiful.F  
 ‘something beautiful’
- b. una cosa { bella/ \*bello}  
 a thing beautiful.F beautiful.M  
 ‘a beautiful thing’

As briefly mentioned in Section 4.2, whereas the “Q-of-Adj” construction is compatible with intensifiers and comparative forms of adjectives (as shown in (18)), it is not *per se* compatible with superlatives unless something else is done to the structure to derive a definite phrase.



This is perhaps not surprising given their semantic indefiniteness.

- (18) Ho qualcosa di molto/ più prezioso  
I.have something of very more valuable  
'I have something very/ more/\*most valuable'

Relative clause formation (more specifically, extraction out of a clause containing a “Q-of-adj” construction to form a definite relative clause) is the main strategy capable of deriving a definite phrase with superlative import both in French and Italian. This brings us back to the main focus of this chapter: *di*-free relatives.

#### 4.4 The structure of *di*-relatives

In this section, I argue that the examples in (1) (and repeated in (19)) are free relative constructions that embed (some stage of the derivation of) the indefinite “Q-of-A” construction discussed in Section 4.3.

- (19) a. quello che ho di più prezioso [ITA]  
b. ce que j'ai de plus précieux [FRE]  
That that I.have of more valuable  
≈ ‘the most valuable thing I have’

Crucially, *di* is assumed to be merged VP-externally (as suggested by Kayne 2002). As a result, “Q-of-A” constructions are analyzed as always involving a clausal structure. As I will show, this assumption will play a major role in my proposal. It is the main focus of §4.4.1. Sections 4.4.2 and 4.4.3 spell out the rest of the syntactic derivation.

#### 4.4.1 VP-external *di*

A core ingredient of the syntactic derivation of this construction that I will defend is the proposal made by Kayne 2002 that many instances of *of* in English and *de* in French should be analyzed as being merged VP-externally. I claim that this simple assumption makes it possible to account for the differences between postnominal superlatives and definite constructions involving *de/di* introduced in Section 4.2, namely (i) the lack of polydefiniteness in French and (ii) the mandatory presence of a relative clause.

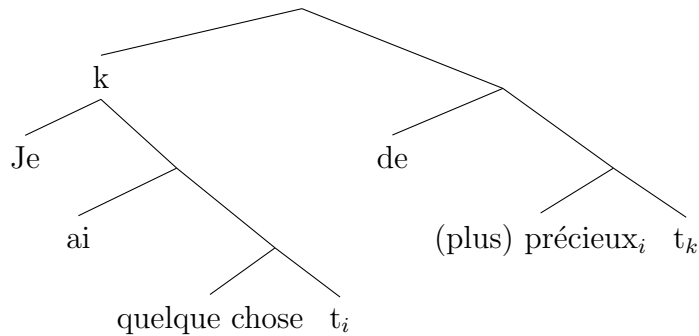
A sketch of (a simplified version of) the derivation of (20) is shown in (21). The preposition *de* is merged VP-externally (see (21b)) and the extraposed position of *de (plus) précieux* is derived by leftward attraction followed by further leftward movement of the remnant (simplified in (21c)). Thus I assign to (20) the structure in (21c):

(20) J' ai quelque chose de (plus) précieux  
I have some thing of more valuable  
'I have something more valuable'

(21) a. J'ai quelque chose (plus) précieux  
b. de (plus) précieux<sub>i</sub> [ Je [ ai [ quelque chose t<sub>i</sub> ] ] ]  
c. [ [ je [ ai [ quelque chose t<sub>i</sub> ] ] ]<sub>k</sub> [ de (plus) précieux<sub>i</sub> t<sub>k</sub> ] ]

In (21c) *quelque chose de (plus) précieux* does not form a syntactic constituent and its existence requires the presence of an entire VP. This is further shown in the tree structure below:

(22)

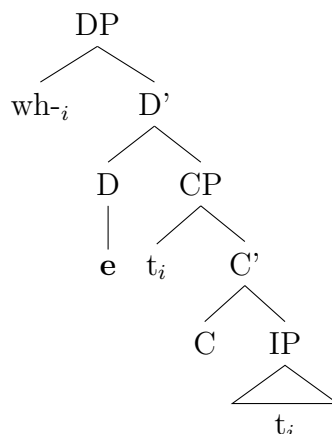


This simple fact will account for the mandatory presence of the relative clause in *di*-free relatives. Assume the derivation in (21c) as part of the underlying structure of (19b). Then, in order for *(quelque) chose* to be extracted and go higher than the predicate, the entire VP has to be built. Also, as we will see, this derivation will have the welcome property of guaranteeing the scopal configuration necessary for the calculation of the comparison class of the superlative without extra machinery.

#### 4.4.2 The structure of free relatives

There is a general consensus that free relatives involve a reduced structure. That is, they lack some syntactic layer. In what follows, I will adopt Caponigro's (2002) proposed structure for free relatives. He argues that free relatives are DPs with a covert D that takes the CP as complement, as shown in (23).

(23) **The structure of free relatives (Caponigro 2002)**

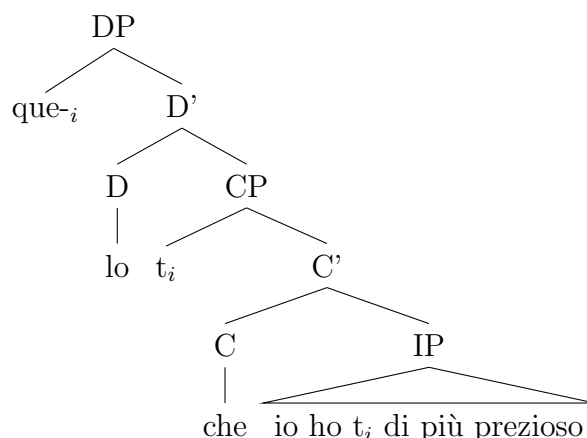


In (23), Caponigro 2002 justifies the movement of the *wh*-phrase to spec, DP based on the Spec-Head relation required to license the silent D. In the *di*-relatives under discussion D will be argued not to be silent. We also observe that Italian displays movement to spec, DP overtly, while French does not. Let me discuss the Italian derivation first.

- (24) quello che ho di più prezioso  
That that I.have of more valuable  
≈ ‘the most valuable thing I have’

I break down *quello* in (24) into two parts: a *wh*- component (*que(l)*) and a D component. The first part is homophonous with other *wh*-words in Italian, whereas the second part is homophonous with the determiner *lo*, ‘the’. I take *lo* to occupy the D position whereas the *wh* operator *qu-* occupies the specifier position of DP. Semantically, this operator binds the restrictor *COSA*, which is just a variable. The proposed derivation for (24) is given in (25).

(25) **The structure of *di*-free relatives in Italian**



Let us consider French next.

- (26) ce que j'ai de plus précieux  
 That that I.have of more valuable  
 ≈ 'the most valuable thing I have'

French uses *ce* in *di*-relatives and in free relatives more generally:

- (27) Jean apprécie ce que tu dis  
 Jean appreciates *ce* that you say  
 'Jean appreciates what you say'

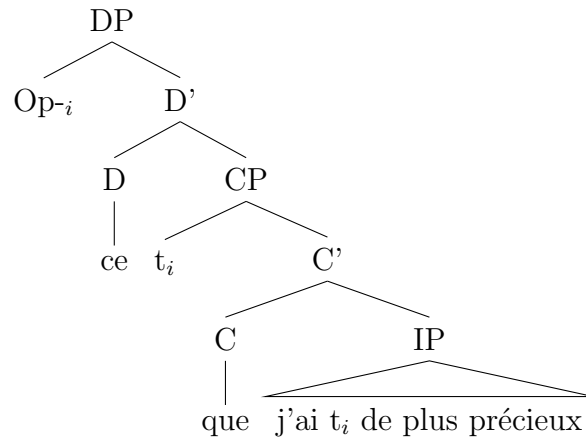
Kayne and Pollock 2010

I will follow Kayne and Pollock 2010, who argue that *ce* should be considered a definite determiner akin to *the*. Interestingly, partially from that assumption, they make the generalization in (28) which is fully compatible with our data.

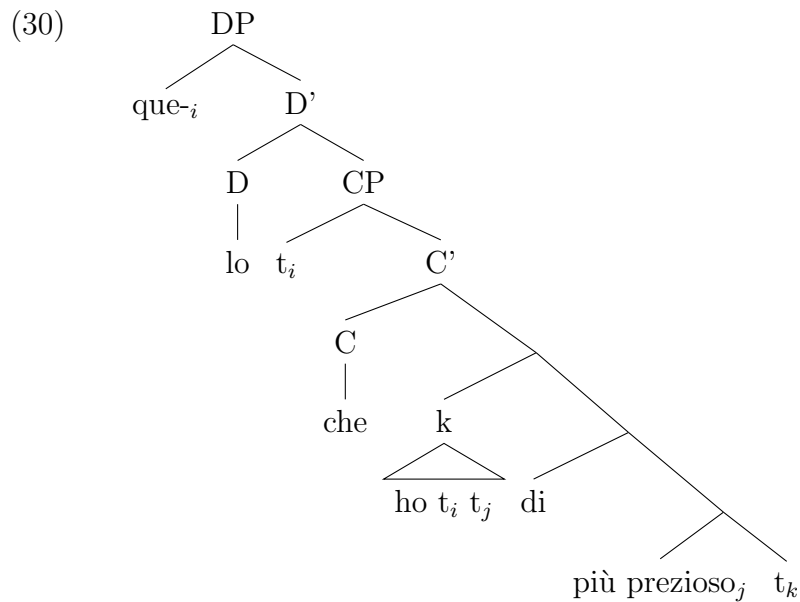
- (28) When a definite article accompanies a light element such as *ones* or **THING**, there must be an overt (reduced) relative clause present. Kayne and Pollock 2010

The proposed derivation for (26) is given in (29). The movement to Spec, DP of the operator binding the variable within the IP is not a crucial property of the derivation. It is included for no better reason than to assign to (29) a structure identical to (25).

(29) **The structure of *di*-free relatives in French**



Altogether, the derivation for Italian (24) is represented below:



#### 4.4.3 Deriving the differences with simple postnominal structures: the mandatory presence of a relative clause

As established in §4.2, a remarkable difference between simple definite DPs like (31) and *di*-constructions is that the latter require a mandatory full relative clause in order to obtain a definite phrase. Thus, (32b) is ungrammatical without the relative clause *that I have*.

- (31) a. una cosa preziosa  
a thing valuable  
'a valuable thing'  
b. la cosa (più) preziosa  
the thing more valuable  
'the (most) valuable thing'
- (32) a. Ho qualcosa di prezioso  
I.have something of valuable  
'I have something valuable'  
b. quello \*(che ho) di (più) prezioso  
what that I.have of more/most valuable

We observe that the mandatory presence of a relative clause to get a definite phrase extends to many other inherently indefinite cases, such as extraction out of existential sentences (such as (33)) and predicate relativization (such as (34)):

- (33) a. There were (\*the) three books on the table  
b. I read the three books that there were on the table
- (34) a. Maria Callas was a/\*the sublime singer  
b. She is definitely not the sublime singer that Maria Callas was

Constructions that normally require an indefinite, including idiomatic ones, show the same pattern: a definite DP can replace the indefinite only within a relative clause structure.

- (35) a. Hanno preso una/ \*la/ \*∅ posizione diversa  
 they.have taken a/ the position different  
 ‘They have taken a different position’
- b. La posizione diversa che hanno preso  
 the position different that they.have taken  
 ‘The different position that they have taken’ Cinque 2013
- (36) a. Ha preso un/ \*la/ \*∅ granchio  
 (s)he.has caught a/ the crab  
 ‘(S)he made a mistake (idiomatic expression)’
- b. Il granchio che ha preso...  
 The crab that (s)he.has caught  
 ‘The mistake that (s)he made...’ Cinque 2013

In all the examples from (33) through (36) the indefinite is part of a full clausal structure, such as an existential sentence, a copular clause, an idiomatic expression. But superficially, the “Q-of-Adj” construction under discussion (repeated in (37)) is not.

- (37) a. quelque chose de lourd  
 some thing of heavy  
 ‘something heavy’ Kayne 2005b

Given the fact that *di*-constructions apparently look like simple predicative structures, the impossibility of a definite without a full relative clause construction appears mysterious. On the other hand if we let go of the idea that (37) forms a constituent and we assume (mainly following Kayne’s (2002) insight) that a VP structure is always involved in the derivation of (37) (as I did in §4.4.1), then the behavior of *di*-constructions follows.

More generally, what these data suggest is that the definite determiner is external to the relative clause and that the head of the relative clause is in fact indefinite, as suggested by Cinque 2013. In other words, definiteness is acquired derivationally starting from an inherently indefinite phrase.



#### 4.4.4 *Di-free relatives with quanto in Italian*

Italian has another type of *di*-free relative, which looks more similar to other free relatives in the language. An example is given in (38).

- (38) quanto un uomo può      volere di più    bello  
wh    a man can.IND want of more beautiful  
'The most beautiful thing a man may want'

As in other free relative clauses (see (39) and (40)), the wh-element *quanto* can have the meaning of 'what' (as opposed to its canonical meaning 'how much') and there is no overt complementizer.

- (39) Maria non ha fatto quanto mi sarei aspettato che facesse  
Mary NEG has done WH    I would expect she would do  
'Mary didn't do what I would expect her to do'                      adapted from Donati 1997

- (40) ho    letto quanto hai      scritto  
I.have read WH    you.have written  
'I read what you wrote'                                                      adapted from Bracco 1980

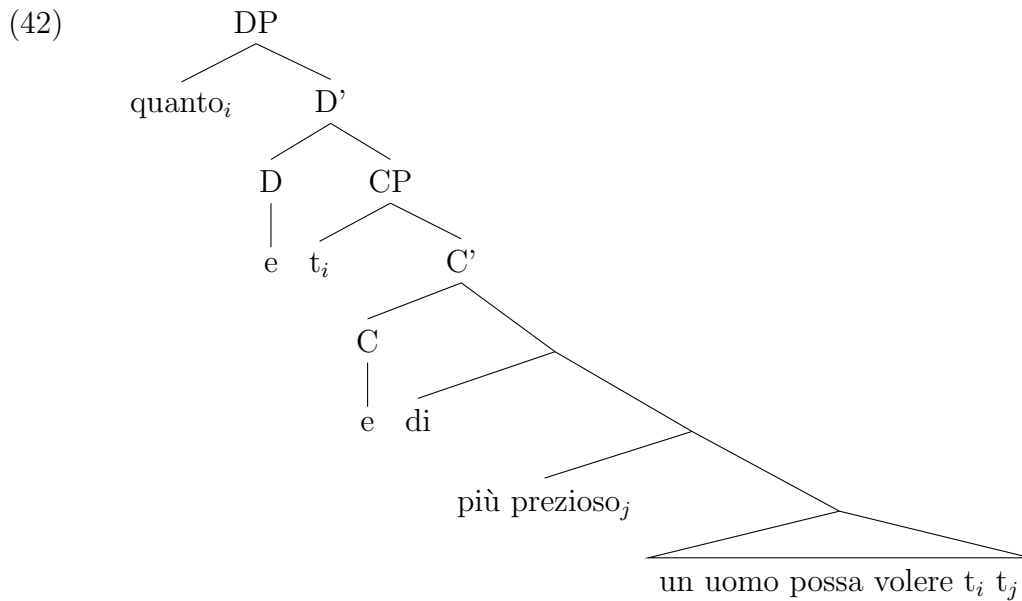
I take the derivation of this type of *di*-free relatives to be structurally the same as the one proposed in (30). I note, however, that in the case of relatives with *quanto*, movement of the remnant is not required. The absence of remnant movement of *un uomo possa volere* ('a man could want') generates the word order in (41), where the superlative is also able to license subjunctive mood inside the relative.<sup>5</sup> The resulting structure is given in (42).

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<sup>5</sup>In the case of *quello*-relative clauses, apparent absence of remnant movement generates the less than perfect (i). which is especially deviant if pronounced with plain intonation.

- (i) ?quello che di più prezioso ho  
That that of more valuable I.have  
≈ 'the most valuable thing I have'

- (41) quanto di più bello un uomo possa volere  
 wh of more beautiful a man could.SUBJ want  
 ‘the most beautiful thing a man could want’



## 4.5 The interpretation of *di*-relatives

In this section, I turn to the interpretation of *di*-free relatives. At first, the fact that they can have superlative import is surprising. Apparently, this results from the process of relativization out of an indefinite construction with a stranded predicate. This unusual derivation raises the question of how the meaning is derived compositionally: (i) how is the scope of the superlative achieved and (ii) how is the comparison class determined?

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The fact that subjunctive mood is not licensed here also suggests that the derivation may be different than the one in (42).

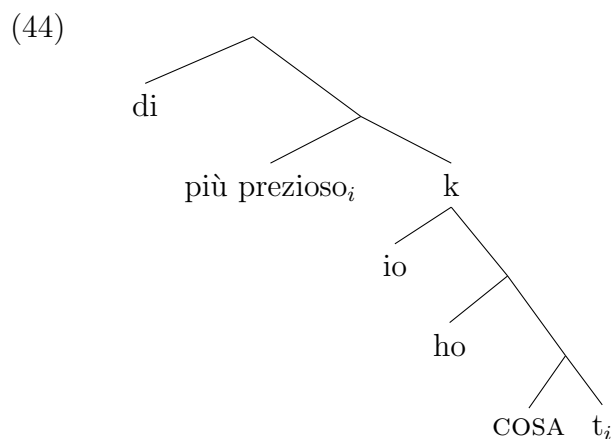
- (ii) ??/\*quello che di più prezioso io abbia  
 That that of more valuable I have.SUBJ

#### 4.5.1 The composition of *di*-relatives

With respect to the second question, we note that the relative clause is clearly part of the constituent that determines the comparison class. Informally speaking, in (1a) (repeated in (43)), the comparison class is understood to be restricted to things the speaker owns.

- (43) quello che ho di più prezioso  
 That that I.have of more valuable  
 ≈ ‘the most valuable thing I have’

On the present proposal, this syntactic constituent is provided by undoing remnant movement that is, by interpreting the remnant in (22) (k) in the pre-movement position. This is shown in the tree structure below:



As for their interpretative features, these superlative predicates contained in free relatives turn out to share the major properties that we assigned to superlatives in relative clauses more generally. In particular, they involve abstraction and maximalization over degrees in their derivation. Yet, they end up denoting an entity.<sup>6</sup>

For this reason, I assign them a similar semantic analysis. In particular, as in the case of other (reduced) relatives, I follow Grosu and Landman 2013 and assume that abstraction

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<sup>6</sup>I refer the reader to §3.5.4 for discussion.

is not over degrees *simpliciter* (as in the case of modal superlatives). Rather, it is over individual-degree pairs, for which we have been using the variable  $\delta$ . Let me quickly sketch the derivation of (43) assuming such a framework.

First, we derive the predicate of type  $\langle e \times d, t \rangle$  spelled out in (45).

$$(45) \quad \lambda\delta. \exists x. \exists d [I \text{ own } d\text{-valuable } x \ \& \ \delta = \langle x, d \rangle]$$

Then MAX maps the set in (45) to the singleton that contains only its maximal element. In a context where the most valuable thing I have is my bike *Dama*, that would contain a singleton including my bike and the singleton of its associated value.

$$(46) \quad \text{MAX}(\lambda\delta. \exists x. \exists d [I \text{ own } d\text{-valuable } x \ \& \ \delta = \langle x, d \rangle]) = \{ \langle \text{dama}, \$\$ \$ \rangle \}$$

At this point we need to convert this predicate of type  $\langle e \times d, t \rangle$  into a set of individuals (type  $\langle e, t \rangle$ ). As in Chapter 3, we use an operation that picks out the first projection of the relative, which is a singleton containing the only object which is associated with the highest value. Finally the definite determiner performs the uniqueness test and returns that unique object. In the case of (43), my bike *Dama*.

If the first projection of the maximal pair contained more than one member (i.e. if it was not a singleton), then the expression would be undefined.

We saw that the “Q-of-A” construction is not compatible with superlative import *per se*. (18) (repeated as (47) below) was used to make this point. This may be surprising at first given the fact that the derivation provides the comparative/ superlative with a suitable constituent for the calculation of the comparison class.

$$(47) \quad \begin{array}{l} \text{Ho qualcosa di pi\`u prezioso} \\ \text{I have something of more valuable} \\ \text{'I have something more/*most valuable'} \end{array}$$

On the present proposal, the lack of superlative import in (47) follows from the fact that maximalization happens at the CP level of a definite relative clause construction. In (47), this layer is obviously missing. The restrictor *COSA* is instead existentially bound within the VP and the predicate can only get a comparative interpretation (*more valuable than something previously mentioned*).

Moreover, the compositional analysis I sketched here with abstraction over individual-degree pairs should be taken as a simplified way of representing the result of two processes that are interleaved and difficult to tease apart in the semantic derivation. Note that in order to form the relevant pairs in (45), two sets have to be identified:

- a. the set of  $x$  such that I own  $x$  and  $x$  has some value;
- b. the set of  $d$  such that I own things of value  $d$ .

The formation of the degree set in a superlative contained within a relative clause can have effects in the visible syntax. In §3.5.2.3, I argued that determiner doubling in French was an example of that. The lack of polydefiniteness in *di*-free relatives is what I discuss next.

#### **4.5.2 Deriving the differences with simple postnominal structures: definiteness**

In §3.5.2.3, I speculated that determiner doubling in French postnominal superlatives is the result of preposing of the adjectival phrase. This movement only happens in superlatives as a result of their quantificational component. I also showed that a related type of movement is visible in some varieties of Spanish.

In Section 4.2, I showed that in the case of *di*-free relatives, French cannot have a dedicated definite determiner preceding *plus* and, as a result, the difference between Italian and French that was discussed in Chapter 3 disappears. (8) is repeated here:

- (48) Ce qu' il y a de/ \*du plus beau  
 that that there is of of.the more beautiful

Here I speculate that the reason why *di*-free relatives do not show polydefiniteness is because their derivation provides the superlative with the right scopal configuration without extra machinery being needed. This is visible in the tree structure in (44).

In other words, both *de* and the second determiner can be thought of as the byproduct of leftward movement of the AP, just at two different levels: at the clausal level in the case of *de* and the DP-level in the case of the determiner. Also, whereas the second determiner is a unique property of superlatives, *de* is not specific to this construction.

#### 4.6 The contrast between question-formation and relativization

According to the Italian speakers I consulted, the *wh*-question in (49) does not seem to be able to have superlative import. In this respect, it differs from the *di*-free relative in (50).

- (49) cos' hai di più prezioso  
 what you.have of more valuable  
 'What do you have of more value?'  
 #'What is the most valuable thing you have?'

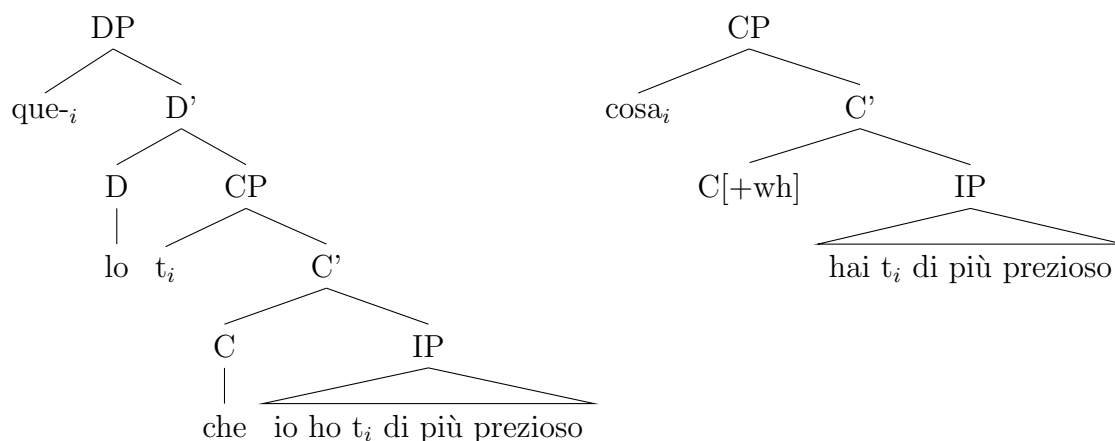
- (50) { quello che/ quanto } ho di più prezioso  
 that that what I.have of more valuable  
 'What I have of more value' or  
 'What I have that is the most valuable'

This raises the question of why *wh*-extraction cannot generate a superlative interpretation, especially given the fact that questions are normally taken to involve maximality, in that

they require an exhaustive answer.<sup>7</sup> Take the question-answer pair in (51) and consider a domain that includes Alec, Sanjay and Bret. From the answer (51b), we would infer that Sanjay was not invited. In other words, (51b) has the exhaustive interpretation *I invited only Alec and Bret*.

- (51) a. Who did you invite for dinner?  
 b. I invited Alec and Bret.

If we assume that both (50) and (49) involve a process of maximalization and that they can be reasonably be assigned the structures below, then the difference seems to rest of the presence of D in the relative clause case but not in the question. We associated this determiner with an operator performing the uniqueness test on the individual paired with the maximal degree of some property. Wh-operators don't embed this function.




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<sup>7</sup>Non-exhaustive answers are considered satisfactory in some contexts. (i) for example does not require an exhaustive answer. It can be answered just by mentioning some coffee shops (for discussion, see Dayal 2017 and references cited therein) .

- (i) Where can I buy a good coffee in LA?

Thanks to Ivano Caponigro (p.c) for bringing this up and for providing the example (i).

The same asymmetry is found in simple predicative structures. While the (reduced) relative clause in (52a) can have a superlative interpretation, the *wh* question in (52b) cannot.

- (52) a. la cosa più preziosa  
the thing more valuable  
'the most valuable thing'
- b. Che è più prezioso?  
what is more valuable  
'what is more/\*most valuable?'

To sum up, questions may involve maximality, as they normally require an exhaustive answer, but not uniqueness, which in turn is necessary in order to get superlative import in these constructions.

## 4.7 Conclusion

In this chapter I have provided an account of phrases such as (53).

- (53) a. Ho qualcosa di più prezioso
- b. J'ai quelque chose de plus précieux  
I.have something of more valuable  
'I have something more valuable'

I proposed that (53) should be analyzed as free relatives lacking a nominal projection, which are (partially) built on the so-called “Q-di-A” construction. I argued that in these predicative constructions, *de/di* is merged VP-externally (as in Kayne 2002) and the extraposed position of the predicate is derived by leftward movement. I also suggested that this peculiar derivation can provide the superlative with the scopal configuration necessary for the calculation of the comparison class without extra machinery. In §4.5.2, I speculated that this results in the lack of polydefiniteness in French.



The semantic composition of *di*-free relatives is very similar to that of superlatives contained in more standard (reduced) relative clauses. For this reason (in §4.6) I sketched a compositional semantic analysis that replicates the analysis developed in Chapter 3. At the CP level, these constructions involve a process of maximalization over an individual-degree pair, followed by an operation of extraction of the unique referent associated with that maximal pair. This last operation is missing in the composition of questions, which - as a result - do not have superlative import.

## CHAPTER 5

### Quantity and adverbial superlatives in Romance

#### 5.1 Introduction

The discussion has so far revolved around so-called *quality* superlatives, that is superlatives involving (degrees of properties denoted by) adjectival phrases. In this chapter, I turn to two new types of superlatives, namely (i) adverbial superlatives and (ii) quantity superlatives, with particular focus on the latter. They are exemplified by the English sentences below:

(1) **Adverbial superlatives**

- a. Senna drove the fastest
- b. Callas sang the loudest

Matushansky 2008

(2) **Quantity superlatives**

- a. Peter won the most awards
- b. Fred drank the most wine

In English, quantity superlatives involve superlative forms of quantity items such as *much/many* (and *little/few*). Italian and French do not use an overt counterpart of *much/many*, which are *molto/e/i* and *beaucoup* respectively (as shown in the (a)-examples below).<sup>1</sup> In these

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<sup>1</sup>Romanian is exceptional among Romance languages in using overt amount items in quantity comparatives and superlatives, as in *cei mai mulți elevi*, lit. ‘the more many students’.

languages the same comparative morpheme used in quality comparative (and superlatives) is used and it combines with the NP either directly (in Italian) or as part of a pseudopartitive construction (in French) (see the (b)-examples below).<sup>2</sup>

- (3) a. Nino legge molti libri  
 Nino reads many.PL books  
 ‘Nino reads many books’  
 b. Nino legge più libri di Stefano  
 Nino reads more books of Stefano  
 ‘Nino reads more books than Stefano’ [ITA]

- (4) a. Nino lit beaucoup de livres  
 Nino reads many of books  
 ‘Nino reads many books’  
 b. Nino lit plus de livres que Stefano  
 Nino reads more of books than Stefano  
 ‘Nino reads more books than Stefano’ [FRE]

In this chapter I introduce and analyze Romance facts with respect to three different types of constructions, exemplified by the English data below. In Section 5.2, I provide an account for modal cases such as (5). Section 5.3 discusses adverbial and quantity superlatives at the sentential level (like (6)). Data and analysis of superlatives inside relative clauses (as (7)) are the focus of Section 5.4.

- (5) **Modal cases**  
 a. John drove the fastest possible  
 b. John read the most books possible

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<sup>2</sup>The (b)-examples include comparatives instead of superlatives to avoid the complications of definiteness.

(6) **Sentential cases**

- a. John drove the fastest
- b. John read the most books

(7) **Superlatives inside relative clauses**

- a. The American boy who drove the fastest
- b. The American boy who read the most books

What we will observe is that adverbial and quantity superlatives pattern with the predicative superlatives discussed in Chapter 3 in many respects. In particular, modal superlatives are possible in all the languages considered and will be argued to involve *bona fide* amount (or degree) relatives. When it comes to sentential and DP-internal level (exemplified by English (6) and (7)), Italian-type languages and French-type languages differ systematically and they do so in a way that is reminiscent of what we observed in the case of predicates. First, French but not Italian has sentential level adverbial and quantity superlatives. Second, French but not Italian shows polydefiniteness in relative clauses.

It is well established that the quantity superlative in (2) is only compatible with a relative reading. That is, *Peter won the most awards* can only be interpreted as *Peter won more awards than any other relevant person*. The reading known as proportional interpretation, which roughly says that Peter won more than half of the relevant awards, requires the determinerless construction in (8) instead.

(8) Peter won most awards

In Section 5.5, I discuss the way in which the proportional reading is achieved in Romance. It turns out that the Italian and French equivalents of *most* lack this interpretation. As an example, French *le plus de NP* ‘the most of NP’ can only have the relative reading of English *the most NP*. The proportional interpretation requires an overt ‘part’ noun and a partitive

construction as in *la plupart de DP*.

## 5.2 Modal Cases

In this section, I discuss the Romance counterpart of (5), repeated here.

- (9) a. John drove the fastest possible  
b. John read the most books possible

First, I show that all Romance languages have this type of modal superlatives. Then I extend the proposal made in §3.3.4 for predicates. I argue that modal superlatives involve a *bona fide* amount relative (that is an amount-interpreted relative clause) which denotes a maximal degree/amount and serves the role of a measure phrase. This account is able to derive their peculiar syntactic and interpretative properties. For discussion of the previous accounts (mainly Larson 2000a, Schwarz 2005 and Romero 2013), I refer the reader to §3.3.3.

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### 5.2.1 The data

Adverbial and quantity modal superlatives turn out to pattern together. That is, they show the same type of variation within Romance languages. In the discussion of the analysis I develop in §5.2.2, I will only show how the derivation works for quantity modal superlatives. With few adjustments, the same account can be extended to adverbial modal superlatives.

### 5.2.1.1 Adverbial Superlatives

Adverbial modal superlatives in Romance like those in (11) resemble the quality modal superlatives in (10) discussed in §3.3. In both cases, Italian allows either omission of the determiner or the use of a non-agreeing form. Spanish uses the pronominal form *lo* and French always requires a definite determiner preceding *plus*.

- (10) a. Maria voleva essere (il) più carina possibile [ITA]  
 Maria wanted.to be the.SG.M. more pretty.SG.F. possible
- b. María quería estar \*(lo) más guapa posible [SPA]  
 Maria wanted to.be it.M.S. more pretty.7s.f. possible
- c. Maria voulait être \*(la) plus belle possible [FRE]  
 Maria wanted to.be the more beautiful possible  
 ‘Maria wanted to be the prettiest possible.’
- (11) a. Mario ha corso (il) più velocemente possibile [ITA]  
 Mario has run the more fast possible
- b. Mario corrió \*(lo) más rápidamente posible [SPA]  
 Mario ran the more fast possible
- c. Mario a couru \*(le) plus vite possible [FRE]  
 Mario has run the more fast possible  
 ‘Mario ran the fastest possible’

As in the case of quality superlatives (see (12)), Italian also allows the *wh*-word *quanto* (‘how much’) to be used instead of the determiner.

- (12) Dovevo essere quanto più carina possibile  
 I.had.to be how.much more pretty possible  
 ‘I had to be the prettiest possible’
- (13) Mario è arrivato quanto più velocemente possibile  
 Mario is arrived how.much more fast possible  
 ‘Mario arrived the fastest possible’

### 5.2.1.2 Quantity Superlatives

In the case of quantity modal superlatives, we find the same pattern. Once again Italian allows determiner omission. French does not.

- (14) a. Leggo più libri { che posso/ possibili/??e } [ITA]  
 I.read more books that I.can possible.PL/.SG
- b. Je lis (\*le) plus de livres { que je peux/ possible } [FRE]  
 I read the more of books that I can possible  
 ‘I read the most books {that I can/possible}’

The fact that French uses a pseudo-partitive construction involving *de* in quantity superlatives and the mandatory presence of the definite marker are at least partially independent phenomena. Evidence from this comes from Middle French, which had the former without the latter.

- (15) à plus de gens qu’ il pourra  
 to more of people that he can.FUT  
 ‘to the most people he can/will be able to’ Lottini 1584

In the case of quantity modal superlatives, the option of a non-agreeing determiner turns out to be subject to a great deal of speaker variation (for which I use the symbol %) and it is definitely more marginal. It also seems to have an effect on the inflection of the adjective *possibile*. When a neutral determiner is added, a non-agreeing form of the adjective is strongly preferred.

- (16) %Leggo il più libri possibile/??i.  
 I.read the more books possiblePL/.SG  
 ‘I read the most possible books’

The *wh*-word *quanto* ('how much') in Italian is again an option and, as in the cases discussed previously, it cannot co-occur with the determiner. Interestingly, unlike the determiner, *quanto* has to agree in gender and number with the head noun. As a result, the plural form *quanti* has to be used in (17).

- (17) Leggo {quanti/ \*quanto} più libri possibile/i.  
 I.read how.many how.much more books possiblePL/.SG  
 'I read the most possible books'

Note that this type of free-relative involving *quanto* is incompatible with the presence of an overt complementizer:<sup>3</sup>

- (18) \*Leggo quanti più libri che posso.  
 I.read how.many more books that I.can

As in the case of predicates, in Italian *the -est possible* can form a unit to the exclusion of the nominal phrase, but this clearly results in an adverbial interpretation. As the translation in (19) suggests, quantification is over reading events and not over books. Whereas (14a) (and all its variants introduced in this subsection so far) implies that the speaker reads as many books as they can, (19) simply means that they read books as much as they can, with no implication about the number of books. As an example, the speaker in (19) could be reading the same few books over and over.

- (19) Leggo libri il più possibile  
 I.read books the more possible  
 'I read books as much as I can'

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<sup>3</sup>The *quanto*-free relative discussed here is very different from the *di*-free relatives discussed in Chapter 4. The two constructions should not be confused. In particular, whereas *quanto* here has a clear amount interpretation, *quanto* in *di*-free relatives means 'what'.



Lastly, French displays the two possible orders shown below.

- (20) a. Trouvez-moi le plus possible de photographies inédites  
Find-me the COMP possible *de* photos unpublished  
'Find me the most unpublished photos possible'
- b. Nous inviterons le plus de collègues possible  
We invite.FUT the COMP *de* colleagues possible  
'We will invite the most colleagues possible'

### 5.2.2 Proposal: modal superlatives are degree descriptions

In §3.3.4, I rejected both Schwarz's (2005) and Romero's (2013) analyses of modal superlatives. Instead, I argued that they involve an amount relative which denotes a single degree and whose semantic contribution is similar to that of a Measure Phrase.<sup>4</sup> Here, I extend that analysis to quantity superlatives, using (21) as a representative example.

- (21) Leggo più libri che posso  
I.read more books that I.can  
'I read the most books {that I can/possible}'

I take the degree description in (21) to have the structure in (22). The Degree Phrase combines with a second occurrence of the NP *libri* that is deleted under identity.

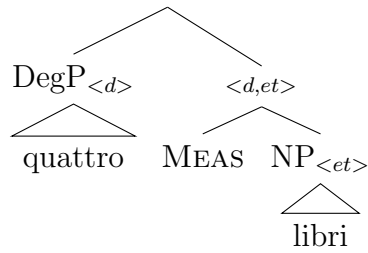
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<sup>4</sup>I refer the reader to §3.3 of Chapter 3 for discussion of previous accounts.



names of degrees (type  $d$ ).

(25)

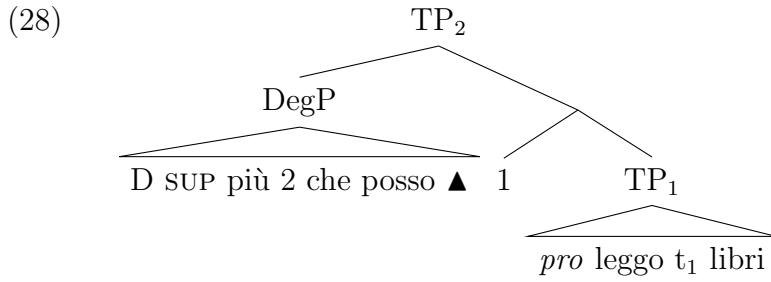


- (26) a.  $\llbracket \text{MEAS libri} \rrbracket = \llbracket \text{MEAS} \rrbracket(\llbracket \text{NP} \rrbracket) = \lambda d.\lambda x.\text{libro}(x) \ \& \ |x| \geq d$   
 b.  $\llbracket \text{quattro MEAS libri} \rrbracket = \llbracket (26a) \rrbracket(\llbracket \text{DegP} \rrbracket) = \lambda x.\text{libro}(x) \ \& \ |x| \geq 4 =$   
 “the property of pluralities which are at the same time books and of cardinality four”

In a sense, MEAS here plays the linking role of unpronounced NUMBER or AMOUNT that Kayne posits for:

- (27) a. poche NUMBER idee [ITA]  
 few ideas  
 b. peu AMOUNT d' argent [FRE]  
 little of money  
 c. few NUMBER books adapted from Kayne 2002 and Kayne 2005a

I refer the reader to Kayne 2005a for syntactic arguments supporting the need of a phonologically null linking head and I now turn to a compositional account for (21). I assume that the DegP moves out to gain sentential scope (as in Romero 2013) and ACD is resolved (with  $\text{TP}_1$ , as shown in the tree structure in (28)).



The structure in (29) is fed to semantic interpretation.

(29) [ [ D SUP più 2 che posso <for me to read  $t_2$  MEAS libri > ] [ 1 *pro* leggo  $t_1$  MEAS libri ] ]

The semantic composition of the Degree Phrase is spelled out in (31). The individual variable associated with the NP *libri* is existentially closed as shown in (31a). Also, as in the case of superlative predicates, for simplicity and readability, in (31d) I use the notation MAX() to refer to three different operations as summarized in (30): (i) the formation of a total ordering of degrees (*più*), (ii) the operation of returning the singleton containing the maximal degree (SUP) and (iii) the uniqueness test performed by the definite determiner.

(30)  $D \circ \text{SUP} \circ \text{più} = \text{MAX}$

- (31)
- $\llbracket \langle \text{for me to read } t_2 \text{ MEAS libri} \rangle \rrbracket = \exists x. \text{libro}(x) \ \& \ \text{read}(I,x) \ \& \ |x| \geq g(2)$
  - $\llbracket \text{posso } \langle \text{for me to read } t_2 \text{ MEAS libri} \rangle \rrbracket = \diamond[\exists x. \text{libro}(x) \ \& \ \text{read}(I,x) \ \& \ |x| \geq g(2)]$
  - $\llbracket 2 \text{ che posso } \langle \text{for me to read } t_2 \text{ MEAS libri} \rangle \rrbracket = \lambda d. \diamond[\exists x. \text{libro}(x) \ \& \ \text{read}(I,x) \ \& \ |x| \geq d]$
  - $\llbracket D \text{ SUP più } 2 \text{ che posso } \langle \text{for me to read } t_2 \text{ MEAS libri} \rangle \rrbracket = \text{MAX}(\lambda d. \diamond[\exists x. \text{libro}(x) \ \& \ \text{read}(I,x) \ \& \ |x| \geq d])$

As a result, the DegP denotes a unique maximal number of books. Given the semantics of MAX introduced in Chapter 3,  $[\text{MAX}(\lambda d. \diamond[\exists x. \text{libro}(x) \ \& \ \text{read}(\text{I}, x) \ \& \ |x| \geq d])]$ , should be thought as a shorthand for:

$$(32) \quad \iota d [ \diamond [ [ \exists x. \text{libro}(x) \ \& \ \text{read}(\text{I}, x) \ \& \ |x| \geq d ] ] \ \& \ \forall d' [ \diamond [ \exists x. \text{libro}(x) \ \& \ \text{read}(\text{I}, x) \ \& \ |x| \geq d' ] ] \ \& \ d \neq d' ] \rightarrow d' < d ]]$$

“the unique number  $d$  s.t. the speaker can read  $d$ -many books but no more than that”

We are now ready to calculate the meaning of  $\text{TP}_2$  that is, the entire sentence. The unique maximal amount denoted by the DegP combines with a constituent of type  $\langle d, t \rangle$  and saturates the degree argument introduced by MEAS, which in our case specifies the cardinality of books the speaker reads. The whole sentence then asserts that the speaker reads *that* number of books, where *that* is equal to the largest number such that they cannot possibly read more than that. This is shown in (34).

$$(33) \quad (21) \approx \text{I read } \textit{that} \text{ many books (where } \textit{that} = (32))$$

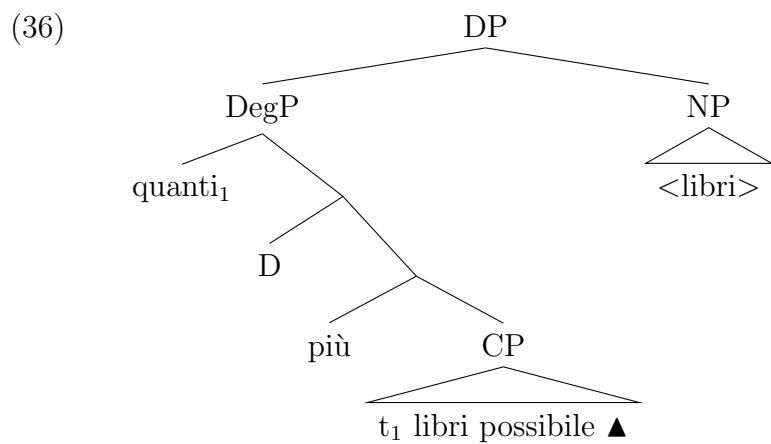
$$(34) \quad \llbracket (21) \rrbracket = \text{read}(\text{I}, \text{MAX}(\lambda d. \diamond[\exists x. \text{libro}(x) \ \& \ \text{read}(\text{I}, x) \ \& \ |x| \geq d]))$$

Imagine that there are four worlds accessible from  $w$ :  $w_1$ ,  $w_2$ ,  $w_3$  and  $w_4$  and that S is the counterpart of the speaker in each of these worlds. Consider then the model in (35).

- $$(35) \quad \begin{array}{l} \text{a. S reads 21 books (a day) in } w_1 \text{ and no more than that.} \\ \text{b. S reads 15 books (a day) in } w_2 \text{ and no more than that.} \\ \text{c. S reads 7 books (a day) in } w_3 \text{ and no more than that.} \\ \text{d. S reads 21 books (a day) in } w_4 \text{ and no more than that.} \end{array}$$

In this model, [ D *più* che posso ▲ ] returns the cardinality 21 and (21) says that the speaker in the actual world reads 21 books a day. The tie between  $w_1$  and  $w_4$  is not a problem because the uniqueness test is performed at the degree level only (see Chapter 3 for discussion of this point).

*Quanto*-free relatives like the one in (17) also denote maximalized sets of degrees. This type of free relative has a slightly different syntax but semantically it serves the same role that is, that of a Measure Phrase.



Note once again that under the proposed account the identification of a singleton containing the maximal degree and the uniqueness test happen in immediate succession. This results in a *bona fide* amount relative that refers to a maximal amount that can then measure the cardinality (in our case) of the relevant NP in the matrix clause (just like a Measure Phrase would). This also correctly derives the desired “equative” interpretation, namely the fact that modal superlatives can be paraphrased using an equative construction (*as many books as I can*).

We noted that French uses a so-called pseudopartitive construction in quantity constructions. Italian does not.

- (37) a. Gianni legge più libri di Piero  
 b. Gianni lit plus de livres que Piero  
 Gianni reads more (of) books than Piero  
 ‘Gianni reads more books than Piero’

Whereas this difference is likely to be reflected in a different syntactic structure, I do not take it to play any role in the semantic composition of modal cases and I consider *de* to be semantically vacuous. This is partly the result of the specific derivation of modal superlatives which involve a DegP-internal relative clause structure. For speculations on the (possible) role of the pseudopartitive construction in sentential-level cases, see 5.3.2 below.

### 5.3 Sentential level and NPI cases

In this section, I discuss the Romance counterpart of (6), repeated here.

- (38) a. John drove the fastest  
 b. John read the most books

Perhaps not surprisingly at this point, the same pattern found in predicative quality superlatives holds for quantity and adverbial superlatives: that is, Italian-type languages behave differently than French-type languages.<sup>5</sup> I start off by showing the relevant data and then I offer some discussion.

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<sup>5</sup>Even though generally speaking predicates and adverbial/quantity superlatives pattern together w.r.t. the variation within Romance, they do not display identical behavior. When it comes to superlatives at the sentential level, data turns out to be much clearer in the case of adverbial and quantity. They normally display clear-cut grammaticality. On the contrary, we saw in §3.4 that relative readings of predicates at the sentential level have a quite limited distribution in French.

### 5.3.1 The data

#### 5.3.1.1 Adverbial superlatives

Italian-type languages and French display the following difference.

- (39) a. \*Maria scrive il meglio [ITA]  
      Maria writes the better
- b. Marie écrit le mieux [FRE]  
      Maria writes the better  
      ‘Maria writes the best’

The recipe “comparative *minus* than-clause *plus* definite determiner” works for French but apparently not for Italian. Starting from the comparative in (40a), the simple omission of the *than*-clause is incompatible with superlative import (see (40b)) and the additional presence of a determiner results in ungrammaticality (shown in (39a)).

- (40) a. Maria scrive meglio di Lucia  
      Maria writes better of Lucia  
      ‘Maria writes better than Lucia’
- b. Maria scrive meglio  
      Maria writes better  
      ‘Maria writes better’

#### 5.3.1.2 Quantity superlatives

In the case of quantity superlatives, Italian-type languages and French display a difference parallel to the one shown in the other non-attributive cases, namely predicates and adverbial superlatives.<sup>6</sup>

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<sup>6</sup>Among Romance languages, Romanian patterns with French w.r.t. to quantity superlatives as well.



- (41) a. \*Claudio ha visto i più paesi [ITA]  
 Claudio has seen the.pl more countries
- b. \*Pedro ha visto los más países [SPA]  
 Pedro has seen the.pl more countries
- c. Guillaume a vu le plus de pays [FRE]  
 Guillaume has seen the.sg more of countries  
 ‘Guillaume saw the most countries’

Once again, the recipe “comparative *minus* than-clause *plus* definite determiner” works for French but apparently not for Italian-type languages. From the comparative structure in (42a), the simple omission of the *than*-clause is incompatible with a superlative interpretation (see (42b)) and the additional presence of a determiner results in sharp ungrammaticality (shown in (41a)).

- (42) a. Claudio ha visto più paesi di Lucia  
 Claudio has seen more countries of Lucia  
 ‘Claudio saw more countries than Lucia’
- b. Claudio ha visto più paesi  
 Claudio has seen more countries  
 ‘Claudio saw more countries’

### 5.3.2 Discussion

We observed that Italian does not have the ‘minimal’ pair *più libri/ i più libri* whereas French does (*plus de livres/ le plus de livres*). So far, I have not proposed an explanation of why Italian disallows the use of the determiners to reflect definiteness of the degree phrase like French does. In this section I offer some speculations.

- 
- (i) Ionuț a intervievat cele mai multe fete  
 Ionuț has interviewed the.f.p more many.f.p girl.f.p.  
 ‘Ionuț interviewed the most girls’

Teodorescu 2009

Like French, Romanian also allows relative readings of predicates at the sentential level. See footnote 13 in Chapter 3.

### 5.3.2.1 The role of the pseudopartitive construction in French

One could try to relate this difference to the fact that French, unlike Italian, employs a pseudopartitive construction in quantity superlatives. Let me quickly show what a possible line of reasoning in that direction would be. A full evaluation of the proposal is left for future research.

The advocate of the “pseudopartitive hypothesis” could try to relate the fact that French has quantity superlatives at the sentential level with the fact that the language allows splitting of quantity phrases such as *combien/peu/beaucoup/trop de NP* ‘how many/ few/ many/ too many of NP’, whereas Italian does not. This is shown in (43) and (44) respectively.

- (43) a. Jean a **beaucoup/ peu/ trop** acheté **de livres** cette année  
Jean has lots few too(many) bought of books this year  
‘Jean has bought lots of/ few/ too many books, this year’
- b. **Combien** a-t-il acheté **de livres**?  
how-many has.he bought of books  
‘how many books has he bought?’ Kayne 2002
- (44) a. \*Gianni ha molti/ pochi/ troppi comprati (di) libri quest’ anno  
Gianni has lots few too(many) bought of books this year
- b. \*Quanti ha comprato (di) libri?  
how-many has bought of books

More marginally (and preferably associated with a cleft/relative clause construction), *le plus* can also appear displaced to an (arguably) VP-external position:

- (45) a. Les nations qui ont **le plus** acheté **de produits mexicains**  
 The nations which have the most bought of products Mexican  
 ‘The nations that have bought the most Mexican products’
- b. Ce sont les femmes entre 30 et 44 ans qui ont **le plus** lu **de**  
 It is the women between 30 and 44 years who have the most read of  
**livres** pour le plaisir pendant 2011.  
 books for the pleasure during 2011  
 ‘It’s women between 30 and 44 yo who read the most books for pleasure in 2011’

Kayne 2002 argues that these cases of apparent subextraction in French are cases of remnant movement, where *de* is merged VP-externally<sup>7</sup>. For (43a) he defends the derivation in (46).

- (46) a. ... acheté [ livres peu ] → merger of K-de  
 b. ...K-de acheté [ livres peu ] → movement of livres to Spec,K-de  
 c. ...livres<sub>i</sub> K-de acheté [t<sub>i</sub> peu ] → merger of de  
 d. ...de livres<sub>i</sub> K-de acheté [t<sub>i</sub> peu ] → movement of VP to Spec, de  
 e. ...[acheté [t<sub>i</sub> peu ] ]<sub>j</sub> de livres<sub>i</sub> K-de t<sub>j</sub> → movement of [t<sub>i</sub> peu AM/NUM]  
 f. ...[ t<sub>i</sub> peu ]<sub>k</sub> [ [acheté t<sub>k</sub> ]<sub>j</sub> de livres<sub>i</sub> K-de t<sub>j</sub> ]

If we assume a parallel derivation for quantity superlatives (as shown in (47)), we notice that the type of overt movement displayed here is very close to the sentential (VP-external) scope that it is normally assumed under a Scope Theory, which is represented in (48) (see §5.4.2.2 for discussion and full derivation).

- (47) ...[vu [t<sub>i</sub> le plus ] ]<sub>j</sub> de pays<sub>i</sub> K-de t<sub>j</sub> → (*c*)overt movement of [t<sub>i</sub> le plus ]  
 ...[ t<sub>i</sub> le plus ]<sub>k</sub> [ [ vu t<sub>k</sub> ]<sub>j</sub> de pays<sub>i</sub> K-de t<sub>j</sub> ]

- (48) Guillaume [ [-est **C** ] λd.λx [x saw d-many countries ] ]

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<sup>7</sup>See §4.4.1, where I adopted this proposal in my account of *di*-free relatives.

The hypothesis then would be that French but not Italian allows the scope splitting underlying the LF of quantity superlatives.

It also turns out that prepositions have the same blocking effect in quantity superlatives that they have in the other cases of subextraction. Thus, *à peu d'enfants* in (49) cannot be split (as shown by ungrammatical (49b)) and the superlative in (50) cannot be interpreted.

- (49) a. Jean a souri à peu d'enfants  
 Jean has smiled at few of children  
 'Jean smiled to few children' Kayne 2002
- b. \*Jean a peu souri à d'enfants  
 Jean has few smiled at of children
- (50) \*Jean à parlé au plus de personnes  
 Jean has talked to.the more of people  
 'int. Jean talked to the most people'

Under the current hypothesis, (49) and (50) could be taken to be ungrammatical for the same reason: the movement (which is overt in (49) and covert in (50)) would create a preposition stranding violation, as shown below.

- (51) (49) f. ...[ t<sub>i</sub> peu AM/NUM]<sub>k</sub> [ [sourire à t<sub>k</sub> ]<sub>j</sub> de personnes<sub>i</sub> K-de t<sub>j</sub> ]

- (52) (50) f. ...[ t<sub>i</sub> le plus AM/NUM]<sub>k</sub> [ [ parlé à t<sub>k</sub> ]<sub>j</sub> de pays<sub>i</sub> K-de t<sub>j</sub> ]

However, this line of reasoning would have to deal with some obvious counterarguments. First, the same variation between Italian and French is found in predicates and adverbs that do not use a pseudopartitive construction. Second, the data from Middle French seem to suggest that the presence of *de* and the facts about definiteness should be taken as (at least partially) independent phenomena. We cannot confirm that quantity superlatives at the sentential level were ungrammatical in Middle French but we know that omission of the

determiner was licensed despite the presence of the pseudopartitive structure (see (15) and (60) below). If (i) determiner omission and (ii) ungrammaticality of sentential level relative superlatives are related facts, then the Middle French data strongly militate against the hypothesis under discussion.

## 5.4 Relative Clauses

In this section, I discuss the Romance counterpart of (7), repeated below.

- (53) a. The American boy who drove the fastest  
b. The American boy who read the most books

In Italian-type languages, where the most naive version of the recipe for superlatives “comparative *minus* than-clause *plus* definite determiner” does not work, relativization is extensively used as a strategy to form relative interpretations of superlatives. In these constructions definiteness is overtly expressed at the individual-level whereas - I will argue - maximalization happens at the CP level. Following insights from Grosu and Landman 1998, 2013, I take abstraction to apply to a variable over degree-entity pairs. This will be argued to capture the non-intersective behavior of relative superlatives embedded in relative clauses first noticed by Schueler 2006.

### 5.4.1 The data

I start off by showing the basic data for both adverbial and quantity superlatives embedded inside definite relative clauses. I then show occurrences of movement of the comparative form inside this type of relative clause. Broadly speaking, the facts reported here are very similar to what we saw in §3.5.1 in the case of predicates inside relative clauses.

#### 5.4.1.1 Adverbial superlatives

Once again, we face the familiar pattern of variation between French and Italian. Whereas French requires a local definite determiner in superlatives, Italian cannot have one.<sup>8</sup> In the case of comparative forms inside relative clauses, the overt definiteness of the whole phrase is enough in Italian to get superlative import.

- (54) a. la segretaria che scrive (\*il) meglio. [ITA]  
the secretary who writes the better  
'the secretary who writes the best'
- b. La secrétaire qui écrit \*(le) mieux [FRE]  
the secretary who writes the better  
'the secretary who writes the best'

The definiteness of the relative clause is a necessary condition. Thus, (55) is not compatible with superlative import. However, it is not a sufficient condition. (54a) is in fact ambiguous between the superlative interpretation reported above and a comparative one, "the secretary who writes better".

- (55) una segretaria che scrive meglio  
a secretary who writes better  
'a secretary who writes { better/\*the best }'

Middle French patterns with Italian and not with Modern French. In the examples below the superlative does not require a determiner preceding *plus*.

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<sup>8</sup>The only exceptions are modal superlatives that are sometimes compatible with neutral forms of determiners, as we saw.

- (56) a. Ces trois dames ont esté les trois plus belles, & plus fameuses  
 These three ladies have been the three more beautiful and more famous  
 femmes mondaines qui furent iamais nées en l' Asie, & nourries en l'  
 women social who were (n)ever born in the Asia and nourished in the  
 Europe, & desquelles les historiographes ont **plus** parlé [...] Europe and of.the.which the historiographers have more talked  
 'These three ladies were the most beautiful and most famous social women who  
 were ever born in Asia and nourished in Europe and of whom historiographers  
 have talked **the most** about' Boaistuau 1564
- b. **Arbataze:** Adieu celuy que i' ay plus estimé  
 A. Goodbye the.one who I have more esteemed La Taille 1573

#### 5.4.1.2 Quantity superlatives

The same pattern holds in the case of quantity superlatives. Apparently, a comparative form embedded inside a relative clause is enough to yield a superlative interpretation in Italian. It is not in French, where a dedicated definite determiner preceding the comparative is necessary to get superlative import. Adding a local determiner in Italian would result in sharp ungrammaticality, as shown in (57a).

- (57) a. la ballerina che ha (\*i) più soldi [ITA]  
 the dancer who has the more money  
 'the dancer who has the most money'
- b. La fille qui a \*(le) plus d' argent [FRE]  
 the girl who has the more of money  
 'the girl who has the most money'

Note once again that (i) the external determiner has to be definite to license a superlative interpretation (see (58)) and that (ii) the Italian example in (57a) is ambiguous between a comparative and a superlative interpretation. This is further shown by the compatibility with a *than*-clause (see (59)).

- (58) una ballerina che ha più soldi  
 a dancer who has more money  
 ‘a dancer who has {more/ \*the most} money’
- (59) la ballerina che ha più soldi (di Elena)  
 the dancer who has more money than Elena  
 ‘the dancer who has more money than Elena’

Lastly, the datapoint from XVI century French below confirms that this specialized determiner in Modern French is an innovation:

- (60) [...] celuy doit estre estimé le plus vray Prince; qui a **plus** d’  
 that.one has.to be considered the more true Prince who has more of  
 esgard au fondement de la principauté: & qui pense [...]  
 respect to.the foundation of the principality and who thinks  
 ‘that one has to be considered the **truest** Prince; who has the *most* respect for the  
 foundation of the principality : and who thinks...’ Lottini 1584

### 5.4.1.3 Overt DP-internal movement

In the data above I showed that in languages like Italian, a comparative *plus* a definite relative clause can be enough to get superlative import. Yet, they are not a sufficient for the superlative interpretation to obtain. As we saw, both (54a) and (57a) are compatible with a comparative interpretation.

When available, (partial) overt movement of the comparative form has a disambiguating effect. In §3.5.2.3, this was shown w.r.t. predicates in some Atlantic varieties of Spanish, since neither Standard Spanish nor Italian display this type of movement with predicates. Here we show that quantity and adverbial superlatives on the contrary can (to some extent) front in these languages as well. I start with Standard Spanish which exhibits movement with a wider range of constructions. The data below (mainly drawn from Rohena-Madrado 2007) show the result of fronting to a preverbal position both in the case of adverbial (61)



and quantity comparatives (62).

- (61) a. Los jueces felicitaron al que corrió **más rápido**  
The judges congratulated to.the that ran more fast  
'The judges congratulated to the one who ran {faster/the fastest}'
- b. Los jueces felicitaron al que **más rápido** corrió  
The judges congratulated to.the that more fast ran  
'The judges congratulated to the one who ran {the fastest/\*faster}'
- (62) a. Juan es el niño que leyó **más libros**.  
Juan is the boy that read more books  
'Juan is the boy that read {the most books/ more books}'
- b. Juan es el niño que **más libros** leyó.  
Juan is the boy that more books read  
'Juan is the boy that read {the most books/ \*more books}'

Movement of this type is only possible inside definite relative clauses. It is not possible inside an indefinite relative clause, nor it is allowed at the sentential level.

- (63) \*Juan es un niño que más libros leyó.  
Juan is a boy that most books read

- (64) a. \*Juan más libros leyó.  
Juan most books read
- b. \*Juan más rápido corrió  
Juan most fast ran

In Italian overt movement of the comparative form is more limited than it is in Spanish, being restricted to bare adverbial superlatives. The disambiguating effect is however the same.

- (65) a. la persona che mi interessa di **più**  
 the person who me interests of more  
 ‘the person who interests me {the most/ more}’
- b. la persona che **più** mi interessa  
 the person who more me interests  
 ‘the person who interests me {the most/ \*more}’

Lastly, we note that Modern French has lost this type of movement. Middle French data on the other hand show that it was once possible.

- (66) les deux choses que **plus** nous ayons eues en recommandation depuis le  
 the two things that more we had had in recommendation since the  
 commencement de nostre regne, soyent l’ honneur de Dieu & de la Religion,  
 beginning of our reign, be.SUBJ the honor of God and of the religion,  
 & la conservation de nostre estat  
 and the conservation of our State  
 ‘the two things that we’ve advocated the most since the beginning of our reign are  
 the honor of God and religion, and the conservation of our State’

François II 1560

## 5.4.2 Discussion

### 5.4.2.1 The interpretation of quantity superlatives in relative clauses

Quantity superlatives contained in free relatives share the major properties that we assigned to superlatives in relative clauses more generally (see §3.5.4 and §4.5 for discussion). They involve abstraction and maximalization over degrees but they end up denoting an entity. They are also characterized by a CP-internal interpretation of the head noun.

As in the case of other (reduced) relatives, I will follow Grosu and Landman 2013 and assume that they are *maximalizing relative clauses*. In particular they are argued to belong to the category of what Grosu and Landman 2013 refer to as *ep-relatives*. Unlike amount relatives

(such as the modal cases discussed in §5.2), abstraction is not over degrees *simpliciter*. Rather it is taken to be over individual-degree pairs.

Consider (57a), (repeated in (67)) as an example. In this particular case, abstraction over entity-degree pairs derives the predicate of type  $\langle e \times d, t \rangle$  in (68):

(67) la ballerina che ha più soldi  
 the dancer.F who has more money  
 ‘the female dancer who has the most money’

(68)  $\lambda\delta.\exists x.\exists d[x \text{ is a dancer who has } d\text{-much money \& } \delta = \langle x, d \rangle]$

Then MAX maps the set in (68) to the singleton that contains only its maximal element. In the context represented in Table 5.1, the dancer with the most money is Lina. The maximal pair would then contain a singleton including that individual and the singleton of her associated money. This is shown in (69).

Table 5.1: Context of evaluation of (67)

| RELEVANT FEMALE DANCERS | WEALTH   |
|-------------------------|----------|
| Elena                   | \$74,000 |
| Lina                    | \$91,000 |
| Gigliola                | \$34,000 |
| Melina                  | \$64,000 |

(69)  $\text{MAX}(\lambda\delta.\exists x.\exists d[x \text{ is a dancer who has } d\text{-much money \& } \delta = \langle x, d \rangle]) = \{ \langle \text{lina}, \$91,000 \rangle \}$

We know that the relative clause (67) ends up denoting an individual. For this reason, we need to convert the predicate of type  $\langle e \times d, t \rangle$  into a set of individuals (type  $\langle e, t \rangle$ ). As in §3.5.4 and §4.5, we use an operation that picks out the first projection of the relative. For predicates of type  $\langle e \times d, t \rangle$ , it was defined as in (70), where  $n$  picks out the  $n^{\text{th}}$  element.

- (70) Let  $\Delta$  be a predicate of type  $\langle e \times d, t \rangle$ , a set of individual-degree pairs.  
 $\Delta^1 = \lambda x. \exists \delta [\Delta(x, \delta)]$  the first projection of type  $\langle e, t \rangle$ , a set of individuals.

This operation returns a singleton that contains the only individual who is a dancer and is associated with the largest amount of money.

- (71)  $\llbracket \text{ballerina che ha pi\`u soldi} \rrbracket =$   
 $\lambda x. \text{SUBSTANCE}(\text{MAX}(\text{CP})) =$   
 $\lambda x. \text{MAX}(\text{CP})^1 =^9$   
 $\{ \text{lina} \}$   
 ‘The singleton set consisting of the female dancer who is associated with the largest amount of money’

Finally the definite determiner performs the uniqueness test and returns the only member of the set. In our case, Lina.

I should draw the reader’s attention to a particular aspect of my analysis of relative superlatives inside relative clauses as *maximalizing relative clauses*. Grosu and Landman 2013 assume that the external head of the relative plays a role in the interpretation. In particular, they propose that it triggers SUBSTANCE (see §3.5.4.2). In my (71), the noun phrase *ballerina* does not play any role externally to the maximalized CP.<sup>10</sup> Also recall that Grosu and Landman 1998 propose that given their entity-modifying status, degrees are paired with the entity they modify or measure. In our case, the entity-degree pairs do not bear that semantic relationship. In (67) for example the individual variable ranges over dancers whereas the

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<sup>9</sup>Where  $\text{MAX}(\text{CP})^1$  is the first element of  $\text{MAX}(\text{CP})$

<sup>10</sup>A compositional analysis more faithful to Grosu and Landman 2013 would replace (71) with:

- (i)  $\llbracket \text{ballerina che ha pi\`u soldi} \rrbracket = \lambda x. \text{dancer}(x) \ \& \ \text{SUBSTANCE}(\text{MAX}(\text{CP})) =$   
 $\lambda x. \text{dancer}(x) \ \& \ \text{MAX}(\text{CP})^1 =$   
 $\{ \text{lina} \}$

degree variable measures amounts of money (that dancers have).

#### 5.4.2.2 Deriving Schueler's (2006) observation

In §3.5.4, I showed that superlative predicates contained in relative clauses do not behave like intersective modifiers. This turns out to be a general property of relative readings of superlatives contained in relative clauses. To the best of my knowledge, the first to notice this fact was Schueler 2006. He observed that the comparison class of the relative reading of a sentence such (72) necessarily depends on the head noun *student*. As a result (72) does not entail (72b).

- (72) Peter is the student who climbed the highest mountain
- a.  $\Rightarrow$  Peter climbed the highest mountain ABS
  - b.  $\not\Rightarrow$  PETER climbed the highest mountain REL  
(some non-student may have climbed a higher mountain than Peter)

Bhatt and Pancheva 2012 show that this also extends to superlatives that have a relative reading only that is, adverbial and quantity superlatives.

- (73) a. John is the boy who runs the fastest.  
 $\not\Rightarrow$  JOHN runs the fastest  
(some girl may run faster than John)
- b. Annie is the basketball player who scored the most points.  
 $\not\Rightarrow$  ANNIE scored the most points  
(some non-basketball player may have scored more points than Annie) (adapted from Bhatt and Pancheva 2012)

Both Schueler 2006 and Bhatt and Pancheva 2012 adopt the Scope Theory of superlatives and the three-place lexical entry for *-est* in (74), that was introduced in §2.5.3.1.

- (74) a.  $\llbracket \text{-est} \rrbracket = \lambda \mathbf{C} \langle e,t \rangle . \lambda P \langle d,et \rangle . \lambda x \langle e \rangle . \exists d (P(x,d) \ \& \ \forall y \in \mathbf{C} [y \neq x \rightarrow \neg P(y,d)])$   
 b. Presuppositions: (a)  $x \in \mathbf{C}$ ; (b)  $\forall y [y \in \mathbf{C} \rightarrow \exists d [D(d)(y)]]$

Under a scope theory, ambiguities are the results of different comparison classes, which in turn depend on the structural position of *-est* at LF. In Chapter 2, we saw that the absolute interpretation is derived scoping *-est* DP-internally. Relative readings are instead taken to be the result of sentential scope of the superlative morpheme. This is shown below for (75a), which has the LF in (75b). The shape of the comparison class is determined by the position of *-est*. For (75a), it turns out to be a set of people who climbed some mountain or another (as in (76a)). The second argument for *-est* is shown in (76b) and the derived meaning is given in (76c).<sup>11</sup>

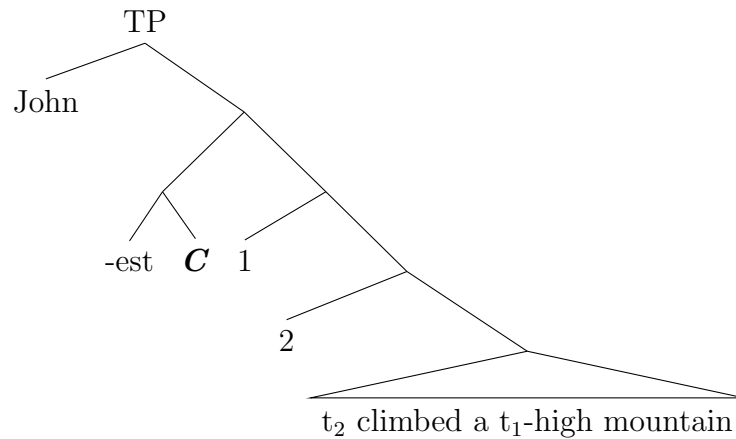
- (75) a. John climbed the highest mountain  
 b. John [ [-est  $\mathbf{C}$  ]  $\lambda d . \lambda x$  [x climbed a d-high mountain ] ]

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<sup>11</sup>Within this framework, DP-external scope correlates with replacing the definite determiner with an indefinite.

“[...] the options of choosing an indefinite determiner and of moving *C -est* out of the DP [...] are not independent of each other: Since definite DPs are generally islands for extraction, movement of *C -est* across D is only allowed when D is occupied by the indefinite article *A*”  
 Heim 1999

See Szabolcsi 1986, Heim 1999 among many others.



- (76) a.  $C = \{x: \exists d \text{ } x \text{ climbed a } d\text{-high mountain}\}$   
 b.  $P = \lambda d. \lambda x [x \text{ climbed a } d\text{-high mountain}]$   
 c.  $\llbracket \text{TP} \rrbracket = \text{there is a degree } d \text{ s.t. john climbed a } d\text{-high mountain and no other individual in the comparison class climbed a } d\text{-high mountain.}$

The same DP-external scope is assumed for quantity superlatives, which as we saw are relative only. Thus, (77a) is paired with the LF in (77b).

- (77) a. John saw the most countries  
 b. John [ [-est **C**]  $\lambda d. \lambda x [x \text{ saw } d\text{-many countries}] ]$

Now, the lack of intersectiveness is not expected under a scope theory. That is, it does not follow from it in any obvious way. Consider the quantity superlative in (73b). There is no principled reason why *-est* cannot scope to the position represented in (78). Yet, it cannot. (78) would correspond to the unavailable intersective reading *the individual who is a basketball player and who scored more points than anybody else*.

- (78) [ the basketball player [  $\lambda x. [ [-est \mathbf{C}] \lambda d. \lambda x [x \text{ scored } d\text{-many points}] ]$  ]

Given the semantic type of the superlative morpheme, the landing site in (78) is a suitable candidate of the right type. Therefore some other constraints must prevent *-est* from adjoining to  $[\lambda d.\lambda x [x \text{ scored } d\text{-many points}]]$ .

In their handout, Bhatt and Pancheva 2012 propose a matching or raising analysis of these relative clauses as a solution. The internal head itself would restrict the denotation of the relative clause and in turn the calculation of the comparison class will depend on the interpretation of the internal head. In the case of the relative clause in (73b) for example, the predicate of individuals denoted by  $[\text{NP basketball player}]$  would be part of the sister node of  $[-est \mathbf{C}]$  and of the comparison class as a consequence.

(79)  $[\text{the } \langle \text{basketball player} \rangle [\lambda x. [ [-est \mathbf{C}] \lambda d.\lambda x [\langle \text{basketball-player} \rangle x \text{ scored } d\text{-many points} ] ] ]]$

If the lower copy of the NP is interpreted, the comparison class comes out to be a set of basketball players who score any number of points. Non basketball players are therefore excluded from the calculation, which is a welcome result.

(80)  $\mathbf{C} = \{x: \exists d.x \text{ is a basketball player and } x \text{ scored } d\text{-many points} \}$

The problem with this account is that in order for it to work, the mandatory interpretation of the low copy has to be stipulated. It does not follow from either the raising or the matching analysis of relative clauses.

Under our proposal, the fact that the head is interpreted CP-internally is taken to be a general property of the derivation of *maximalizing* superlatives, which should be distinguished from restrictive superlatives.



### 5.4.2.3 Overt movement and the difference with comparatives

In §5.4.1 I showed that in Italian or Spanish comparatives occurring inside (the right type of) relative clauses are generally ambiguous.

- (81) El niño que leyó más libros.  
the boy that read more books  
'the boy that read {the most books/ more books}'

On the present proposal the two interpretations are the result of structurally different relative clauses. Unlike the superlative interpretation, the comparative reading does not involve maximalization at the CP level, that is it is not a *maximalizing* relative clause. It behaves like a standard restrictive relative clause, where the head noun and the relative provide an equal contribution to the meaning of the complex expression and can combine through intersection, roughly as shown in (82):

- (82)  $\iota x$  [x is a boy & x read > than  $d$ -many books(x)]

We also showed that overt movement of the quantified phrase has a disambiguating effect.

(83) is an example of that.

- (83) El niño que más libros leyó.  
the boy that more books read  
the boy that read {the most books/ \*more books}'

Recall that we provided an analysis of these construction involving a functional dependency between two sets, a set of individuals and a set of degrees. All the members of the former set are paired to members of the other, similarly to pair-list answers to multiple *wh*-questions. And then maximalization happens over these pairs. This *de facto* makes it possible for the head noun to be part of the calculation of the degree set that gets maximalized. In the case

of (81) for instance, the maximal pair is the one containing the highest cardinality of books such that *some boy or another read that number of books*. What we see in (83) is that the formation of this (maximalized) degree set can have effects in the visible syntax.

## 5.5 The proportional interpretation of quantity superlatives in Romance

In English *most* is used in both relative and proportional readings of quantity superlatives. The presence of the definite article disambiguates the two interpretations.<sup>12</sup>

- (84) a. Fred read the most books. REL  
        $\cong$  Fred read more books than anybody else  
       b. Fred read most books. PROP  
        $\cong$  Fred read more than half of the books

Unlike English *most*, French *le plus de NP* cannot have a proportional reading. Since (85a) is constructed in a way that *le plus d'étudiants* cannot have a relative interpretation, the sentence turns out to be ungrammatical. To obtain a proportional interpretation, *la plupart de DP* is used instead, which is a partitive construction and has an overt nominal element *part*, 'part' (see (85b)).

- (85) a. \*Le plus d'étudiants ont passé l'examen de philo.  
       The plus of.students have passed the.exam of phylosophy  
       b. La plu-part des étudiants ont passé l'examen de philo.  
       The plu-part of.the students have passed the.exam of philosophy  
       'Most students passed the the philosophy exam'

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<sup>12</sup>On the proportional reading of *most* see Hackl 2009.

Italian and Spanish<sup>13</sup> require a partitive construction with overt ‘majority’ for proportional interpretations. In addition to the more common *la maggior parte* (lit. ‘the greater part’), Italian also marginally uses the familiar morpheme *più* as in *il più di DP* with proportional interpretation only:

- (86) a. Melissa ha corretto la maggior parte degli esami  
 Melissa has graded the greater part of the exams  
 ‘Melissa graded most exams’
- b. Melissa ha (già) corretto il più degli esami  
 Melissa has already graded the more of the exams  
 ‘Melissa (already) graded most exams’

I take *il più di DP* to correspond to French *la plupart* with a null PART à la Kayne and I summarize the available readings for partitive and pseudopartitives in Table 5.2.

Table 5.2: Readings of partitive and pseudopartitive constructions

|         | Pseudopartitive                          | Partitive                                                                 |
|---------|------------------------------------------|---------------------------------------------------------------------------|
| Italian | not available                            | <i>il più di DP</i><br><i>la maggior parte di DP</i><br><b>Prop. only</b> |
| French  | <i>le plus de NP</i><br><b>Rel. only</b> | <i>la plupart de DP</i><br><b>Prop. only</b>                              |

The question then arises of why the pseudopartitive construction is incompatible with a proportional interpretation, which requires a partitive construction instead. Dobrovie-Sorin and Giurgea 2015 suggest that unlike *most*, *le plus* cannot be analyzed as a quantificational

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<sup>13</sup>In the Romance family, Romanian is exceptional on allowing a proportional reading of the counterpart of ‘most’.

- (i) Cei mai mulți elevi din clasa mea au plecat devreme  
 the more many students in y class have left early  
 ‘Most students in my class left early’ Dobrovie-Sorin and Giurgea 2015

The proportional reading of the superlative of *mult* is restricted to the plural. For the singular, Romanian patterns with other Romance languages. It has to use *mare parte*, ‘much part’. See Dobrovie-Sorin and Giurgea 2013 for data and discussion.

determiner. Rather, it is a measure phrase. This is very much in agreement with the analysis we provided in this chapter, where we made use of a functional head (MEAS) with a measuring function parallel to Kayne’s silent NUMBER of AMOUNT. If the syntax of the pseudopartitive construction *le plus d’étudiants* is as in (87), then the lack of a proportional interpretation is less mysterious.

(87) le plus NUMBER d’étudiants

Note that French has a parallel construction with overt NUMBER and a fairly similar distribution to *le plus de*, including the absence of a proportional interpretation. Similarly, English *the greatest number of votes* does not have one.

(88) Seront élus les candidats qui auront obtenu le plus grand nombre de  
 will.be elected the candidates who will.have obtained the more big number of  
 suffrages  
 votes  
 ‘The candidates who obtain the largest number of votes, will be elected’

Given its morpho-syntactic and semantic properties of a measure phrase, Dobrovie-Sorin and Giurgea 2015 explain that the absolute interpretation of *le plus* would correspond to the meaning of all:

[...] the comparison class provided DP-internally consists of all the pluralities in the denotation of the NP, in this case [students]; in the absence of a criterion which may sort out some of these pluralities, the only plurality of [students] that is highest than all the others is the supremum of the set of all pluralities of [students], i.e., the set of all the [students]. By applying the semantics of absolute superlatives to quantitatives, we would thus obtain that ‘most’ means ‘all’, which is not what we observe.

The partitive construction with the (c)overt functional noun *part* on the other hand can clearly introduce partition of the domain of students or exams and then reference to the bigger one.

## 5.6 Conclusion

In this chapter, I discussed the properties of superlative forms of adverbs and quantity words in Romance. They turn out to pattern with predicates in many respects.

First, they can take a modal (reduced) relative clause to form a *bona fide* amount relative in all the language considered. This relative clause was argued to denote a degree description that serves the role of a measure phrase. Modal superlatives have unique properties. They are the only case of superlative where maximalization and the uniqueness test happen in immediate succession and at the degree level only. This results in peculiar semantic and syntactic properties that were discussed mainly in §3.3.4 and marginally in this chapter.

Second, Italian-type languages systematically differ from French in the three types of relative superlatives (predicates, adverbs and quantity), in that (i) only French allows these superlatives at the sentential level and (ii) only Italian licenses (and mandates) determiner omission inside a certain type of relative clause that I analyzed as a case of *maximalizing* relative clauses (in the sense of Grosu and Landman 2013).

## CHAPTER 6

### Conclusion

Superlatives in Romance lack a visible superlative morpheme and are normally described as not being morphologically distinguished from comparatives. This state of affairs raises the question of how superlative interpretations arise in these languages. This dissertation has argued that despite the lack of overt superlative morphology, Italian has *bona fide* superlatives which are (morpho-)syntactically distinguished from comparative structures.

In particular, I identified three different strategies that yield superlative import.

1. A superlative interpretation can arise as a result of an attributive structure (**Chapter 2**). This option is only available to quality superlatives and is characterized by the following core properties. (i) The adjective appears unusually high in the DP. (ii) They are unambiguously superlative in their interpretation and incompatible with overt *than*-clauses. (iii) These expressions do not associate with focus to yield relative readings. (iv) There is no variation in Romance when it comes to the determiner heading these phrases.

I claimed that prenominal superlatives, elliptical structures and *of*-partitive constructions use this strategy and I analyzed them as follows. First, the high position in which the adjective appears is the result of movement to the position of an ordinal-like element that plays a crucial role in the composition of the meaning of these expressions. Second, the comparison class for the superlative in this type of construction is overtly specified by the nominal phrase, which explains the incompatibility with *than*-clauses. Third, I defended a compositional analysis where the superlative morpheme picks out

the first-ranked equivalence class (i.e. a set of objects equal with respect to some measure) in a linear order of classes. Lastly, the definite determiner tests whether this class has a unique member and in case that it does, returns such an individual.

2. More commonly, superlatives in Italian result from a predicative/ relative clause structure. This strategy has the following properties. It (roughly) results from embedding a non-attributive (i.e. predicative) quality superlative (**Chapters 3-4**), a quantity superlative, or an adverbial superlative (**Chapter 5**) inside a definite relative clause of the right type. Postnominal superlatives in Romance are an example of (a reduced version of) this strategy. In contrast to attributive construals, we observed a systematic variation in Romance in how definiteness is marked inside these constructions (French *vs.* Italian).

I analyzed these phrases as *maximalizing relative clauses* (*à la* Grosu and Landman 1998) where abstraction over degrees operates in a construction that denotes entities. In particular, I took abstraction to be over entity-degree pairs whereas the complex DP ends up referring to the unique entity associated with the maximal pair.

3. The third and last strategy to obtain superlative import is that of modal superlatives (§3.3 and §5.2). They have distinctive syntactic and semantic properties that distinguish them from their non-modal counterparts. For instance they can appear with a dedicated determiner in languages like Italian and Spanish, where determiners seem to be otherwise only able to embed nominal phrases (and therefore only be compatible with attributive structures). Unlike their non modal relatives, they can also appear as the main predicate at the sentential level. Semantically, what makes them special is their “equative force” (Schwarz 2005) and their compatibility with ties.

I analyze Romance modal superlatives as free degree relatives. They are *bona fide* degree relatives which denote a degree description and whose semantic contribution is similar to that of a Measure Phrase. I take their distinctive properties to be the result of a peculiar derivation where maximalization and the uniqueness test happen

in immediate succession and at the degree level only.

In our investigation, we observed that determiners can play different roles in superlative phrases. In attributive structures, the determiner embeds a nominal phrase. All the Romance languages pattern together in this case. That is, they all require an overt determiner which agrees with the nominal head. In predicative cases, in contrast, we found variation between Italian-type languages and French. French mandates the pronunciation of a dedicated definite marker preceding *plus* whereas Italian requires a null determiner. Lastly, the free relatives involved in modal superlatives can (as in Italian) or must (as in Spanish) have a non-agreeing pronominal form.

Definite determiners cannot attach to non-modal, non-attributive structures in Italian and Spanish. Thus, these languages do not have an exact equivalent to *John ran the fastest* or *John read the most books*. Unfortunately, I was not able to offer an explanation for this restriction and I left this issue open to future research. Another (less language-specific) open question is why the free degree relative strategy is only available with modal cases. No other superlative allows the same type of derivation with the same syntactic and semantic properties, including “equative force” and compatibility with ties. As an example, *John read the most books* cannot mean ‘John read as many books as the greatest number of books that anyone read’. Nor can ‘Mary was the kindest she has ever been’ mean ‘Mary was as kind as she has ever been’.

Lastly, note that I made use of two different notions of degrees. In the case of attributive superlatives, I referred to degrees as equivalence classes of individuals. According to this view, tallness degrees are simply sets (type  $\langle et \rangle$ ) of individuals who are indistinguishable with respect to their height. In the case of modal superlatives, however, I made use of the atomic notion of degrees as semantic primitives of type  $d$ . Mendia 2017 argues that both notions are needed in order to account for amount relatives cross-linguistically.<sup>1</sup> Our investigation reached the same conclusion.

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<sup>1</sup>See in particular his interesting discussion in §6.2.2..



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