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UNIVERSITY OF CALIFORNIA

Los Angeles

Comparative Constructions

in Spanish and San Lucas Quiaviní Zapotec

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

in Romance Linguistics and Literature

by

Michael Rene Galant

1998

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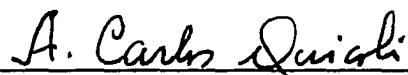
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The dissertation of Michael Rene Galant is approved.



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1998

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ABSTRACT OF THE DISSERTATION

Comparative Constructions  
in Spanish and San Lucas Quiaviní Zapotec

by

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Doctor of Philosophy in Romance Linguistics and Literature

University of California, Los Angeles, 1998

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This dissertation examines the syntax, semantics, and morphology of comparative constructions and other degree constructions in English, Spanish, and San Lucas Quiaviní Zapotec. Previous descriptions and analyses of comparatives in English and Spanish are reviewed. New data from San Lucas Quiaviní Zapotec, involving comparisons, other degree expressions, and other lexical and functional morphemes, is presented. Attention is called to MUCH, the abstract adjectival quantifier contained in English *much* and *many*, SLQZ *zye:einy*, *zi:i'ly*, and *-dya'/-tya'*, and any Spanish degree adverbial showing number and gender agreement, but not inherently in *mucho*, an allomorph of *muy*. In SLQZ, the sequence MUCH-ER is transparently segmentable as such in amount comparisons (contra English and Spanish), ER being the morpheme inherent in comparisons of

inequality. In other degree constructions explored in English, Spanish, and SLQZ, the nominal system consistently provides a QP slot occupied by a form of MUCH, contra the adjectival system (with certain exceptions such as in the case of *different*). Non-predicative nominal expressions interact with a Deg only via the intermediary of MUCH, whereas most adjectives must interact directly with a Deg. Therefore, there are two instances of *more* and *más*:: (i) the instance used in amount comparisons, subdividable into MUCH (plus agreement) and ER, and (ii) the instance used in adjectival degree comparisons, containing only ER. NEG combines with: (i) MUCH plus agreement to form *little*, *few*, *poco*, or *du:u'zh*, plus ER to form *less*, *menos*, or *du:u'zhru'* in the nominal system, or (ii) nothing else to form *poco* or *wzhi:i:a'* in adjectival system (note lexical gap in English), plus ER to form *less*, *menos*, or *uzhi:i:eru'* in adjectival system. Subordination and coordination are shown to not be consistently distinguishable on syntactic grounds. ER complementation is typically either via a preposition plus numeral, measure phrase, or degree relative, or via an adversative conjunction structure. The former type is introduced by *de* in Spanish and *ta'* or *cah* (with subsequent *nih*) in SLQZ, whereas the latter type is introduced by *que* in Spanish and *cah* (without *nih*) or *lohoh* in SLQZ. Both types are introduced by *than* in English.

## Introduction

In this dissertation I discuss a complex linguistic phenomenon displaying great variety across languages – comparative constructions. Comparisons, both those which fall syntactically within the range of what I will later delineate as comparative constructions, and others in general, serve a fundamental role in the interpretation of a large number of properties. This is so because many properties that we attribute to objects are not absolute but are instead held by those objects in varying degrees. For example, consider the sentences in (1):

- (1)    a.    Los Angeles is big.  
          b.    Jupiter is big.

Both sentences may be true, but by no stretch of the imagination are Los Angeles and Jupiter of the same size. Thus, in (1) the property of being big is understood within an implicit context – Los Angeles is relatively big among the set of all cities, and Jupiter is relatively big among the set of all planets.

The relevant context for interpreting the relative value of the property in question can also be expressed explicitly. For example, one can use a prepositional phrase introduced by *for* followed by the class of objects to which the entity under discussion belongs:

- (2)    a.    Los Angeles is big for a city.  
          b.    Jupiter is big for a planet.

That is, Los Angeles is big compared to the size of a typical city, and Jupiter is big compared to the size of a typical planet. This is the most likely type of interpretation for sentences like those in (1), although the discourse context may of course provide a standard of “bigness”, i.e., size, different from the overall class of objects that the entity in question belongs to (cf. (5b), (5d), (6), and (7) below, for example).

The type of *for* construction seen in (2) may also be used in relation to prop-

erties which are expressed not as adjectives but as other elements such verb phrases, as in (3):

- (3)    a. Alicia works a lot of hours off campus for a student.  
          b. Lupe runs really fast for a five-year-old.

Here, Alicia works a lot of hours off campus compared to other students, and Lupe runs really fast compared to other five-year-olds.

Another strategy that is available, if the property under discussion is realized as an adjective, is to place the adjective in prenominal position with respect to a noun representing the class of objects that the object in question belongs to:

- (4)    a. Los Angeles is a big city.  
          b. Jupiter is a big planet.

A third strategy used to specify the degree to which an entity holds a given property is through the use of a complex prepositional expression such as *relative to*, *compared to*, *in comparison to*, *compared with*, or *in comparison with*, which may be followed either by a class of objects or an individual entity:

- (5)    a. Los Angeles is (very / relatively) big {compared to / in comparison to / in comparison with / compared with} other cities.  
          b. Los Angeles is (very) big relative to other cities.  
          c. Los Angeles is (very / relatively) big {compared to / in comparison to / in comparison with / compared with} San Francisco.  
          d. Los Angeles is (very) big relative to San Francisco.  
          e. Los Angeles has a relatively large amount of crime {compared to / in comparison to / in comparison with / compared with} other cities.  
          f. Los Angeles has a lot of crime {relative to / compared to / in comparison to / in comparison with / compared with} other cities.  
          g. Los Angeles has a relatively large amount of crime {compared to / in comparison to / in comparison with / compared with} San Francisco.  
          h. Los Angeles has a lot of crime {relative to / compared to / in comparison to / in comparison with / compared with} San Francisco.

This type of comparative strategy will prove relevant in Chapter 5 with regard to a particular type of comparative construction in San Lucas Quiavini Zapotec.

Another strategy for indicating the degree to which a property is held by an entity, of a somewhat different nature, is to use a superlative, as in (6):

- (6)    a.    Jupiter is the largest of all the planets in our solar system.  
          b.    Los Angeles is the largest city in California.

In this type of construction, an entity is envisioned as holding a certain property to a greater degree than any other entity in its class. I will not be addressing superlatives *in this dissertation*.

Even though properties like being big are not absolute, we nevertheless often appear to treat them as such from the look of the syntactic form they take. This occurs, for example, when we choose another object which holds the same property to a lesser or greater degree as the first object and treating either it or the first entity, respectively, as though it did not possess the relevant property at all.

Note the following contrasts:

- (7)    a.    Los Angeles is big, but Cuernavaca isn't.  
          b.    The moon isn't big, but Jupiter is.

Cuernavaca is denied the property of being big but only in comparison with Los Angeles, and likewise, the moon is not considered to be big when compared with the planet Jupiter. Similarly, Los Angeles and Jupiter are granted the property of being big but only relative to Cuernavaca and the moon, respectively. All four objects have some size – whether their size is considered to be large or not depends on what serves as our reference point. These all-or-nothing judgments are mere conveniences for classifying the objects in our world relative to each other since the property in question is not understood in absolute terms. In a different context, Cuernavaca and the moon might very well be considered big by the same speaker who would utter (7):

- (8)    a.    Cuernavaca is big, but the village I come from isn't.  
          b.    The moon is big, but that lunar vehicle on its surface isn't.

Gradable properties, then, are understood not in absolute terms but either in

comparison to a covert standard, such as (a typical member of) the class of objects to which the object under study belongs, or in comparison to an overt standard. An overt standard may be the overall class of objects to which the object under study belongs, a distinct individual or set of objects, or even a cardinal amount or degree expressed in the form of a number or measure phrase. This last case will be exemplified in Chapter 3.

The existence of gradable properties, then, necessitates the existence of comparisons, either covert or overt. This notion is captured within the often quoted (e.g., in Stassen (1985) and Price (1990)), illustrative description given by Small (1929, pp. 12-13) of the cognitive function of comparisons:

the speaker who uses comparison as a means of indicating the intensity of a given quality in an object casts about in his mind for a second object well known to the hearer which has that same quality, perhaps in a greater or lesser degree. If he is fortunate enough to hit upon a second object that, to the best of his judgement [sic], has the quality in exactly the *same* degree as the object he is discussing, he may indicate the intensity of the quality by equating the first object with the second, thus: John is as tall as the gate-post, or, The dog runs as rapidly as the bird flies. Instead of a second *object* of comparison the speaker may also refer to a second *condition* of the first object itself, thus: John is just as accurate as he was in the rifle match a year ago. This way of pointing out the intensity of a given attribute may be termed the *comparison of equality*.

Should the hypothetical speaker be unable to hit upon a second object or condition that exactly matches the first in the quality observed, or should he desire to contrast the first object with the second, he will call up to the attention of the hearer another object having the same quality, but either in a higher or lower degree of intensity. Thus: John is taller than Mary; Dogs are friendlier than cats; The patient *is* now weaker than he *was*; the poet *wrote* more vividly than the artist *painted*. This sort of thing may best be referred to as the *comparison of inequality*.

All the examples given here by Small fall within a very specific syntactic type of realization available for comparisons, namely those which I delineate as comparative constructions per se – X as much as Y (in comparisons of equality), on the one hand, and X more than Y or X less than Y (in comparisons of inequality), on the other, where X is a proposition and Y is a clause or phrase. The two latter schema comprise, in fact, the range of expressions that will receive the primary focus in this dissertation.

Note that there are many other syntactic manifestations of comparisons. For example, recall the sentences in (2) and (3), repeated here, where one entity is compared to typical members within the same set of objects:

- (2) a. Los Angeles is big for a city.  
b. Jupiter is big for a planet.
- (3) a. Alicia works a lot of hours off campus for a student.  
b. Lupe runs really fast for a five-year-old.

These sentences meet Small's functional description of comparisons, specifically comparisons of inequality, and in fact, they may be paraphrased to more closely mirror syntactically the examples he gives:

- (2') a. Los Angeles is bigger than the average city / an average city / a typical city / other cities.  
b. Jupiter is bigger than the average planet / an average planet / a typical planet / other planets.
- (3') a. Alicia works more hours off campus than a typical student / an average student / other students.  
b. Lupe runs (much) faster than an average five-year-old / a typical five-year-old / other five-year-olds.

The strategy of using an adnominal adjective in (4) also falls within the description of comparisons proposed by Small, and it, too, may be paraphrased so as to parallel his examples syntactically (cf.(2')).

Examples (7) (repeated here) and (8) are also examples of constructions which fit Small's description of comparisons (of inequality in this case) and yet which do not look like his examples in form:

- (7) a. Los Angeles is big, but Cuernavaca isn't.  
b. The moon isn't big, but Jupiter is.

Stassen actually includes this type of comparison among the major world types of comparative constructions, although English also permits the less all-or-nothing comparative type exemplified in the passage above from Small and imitated here for (7):

- (7') a. Los Angeles is bigger than Cuernavaca (is).  
b. The moon isn't as big as Jupiter (is).

In (7a), one gets the immediate impression that Cuernavaca is not big at all, even though as I explained earlier, it is impossible for a physical object to have no size at all. In (7'a), however, Cuernavaca might very well be big, just not as big as Los Angeles.

Similarly, the moon is claimed to completely lack the property of being big in (7b), whereas the weaker claim that it merely holds that property to a lesser degree is what (7'b) expresses.

Despite the synchronic syntactic differences between (7) and (7'), I should point out that it has been claimed (e.g., Stassen (1985)) that comparatives such as those in (7'a) are in fact derived historically from the type of structures shown in (7a).

I will not treat in detail comparisons of equality, that is comparisons such as (7'b) with or without a negation. Stassen (p.15) similarly avoids discussing comparisons of equality – witness the following semantic definition that he proposes of what qualifies as a COMPARATIVE CONSTRUCTION:

*Definition:* a construction in a natural language counts as a comparative construction...if that construction has the semantic function of assigning a graded (i.e., non-identical) position on a predicative scale to two (possibly complex) objects. [emphasis mine]

Nor will I say much about constructions which may taken to be constructions but which are not of the syntactic type X more than Y, X less than Y, or X as much as Y. For example, I will not discuss metaphors, similes, or anthropomorphicizations, such as in (9), (10), and (11), respectively:

- (9) Your followers are real sheep.  
(10) Your room is like a pig sty.  
(11) The earth roared with fury.<sup>1</sup>

In (9), the hearer's followers are compared to sheep, probably in their will-

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<sup>1</sup> I thank Luis Silva-Villar for suggesting (p.c.) the Spanish version of this sentence, which I have translated into English, as a type of comparison.

ingness to follow the leader no matter where he leads them. In (10), the hearer's room is apparently very messy and/or dirty, just as a pig sty would be expected to be. In (11), the earth is treated as though it were a live animal capable of being angry and willfully making a loud, threatening sound, even though this is not possible in any literal sense.

Such comparisons can be paraphrased in such a way so to appear more like one of the types of quantitative comparisons, specifically comparisons of equality, treated earlier:

- (9') Your followers are (every bit) as gullible / obedient as sheep.
- (10') Your room is as messy and dirty as a pig sty.
- (11') The earth made as loud and vehement a sound as an angry animal would make.

The constructions in (9)-(11) might also be paraphrased as qualitative comparisons (i.e., involving referential identity or non-identity) rather than as quantitative comparatives (i.e., involving degree of a shared property):

- (9'') Your followers are just like sheep. / Your followers act the same way (as) sheep would. / Your followers act like sheep would.
- (10'') Your room has the same type of unattractiveness as a pig sty.
- (11'') The earth made the same kind of noise as you would expect an angry animal to.

Qualitative comparisons also include dissimilarities in quality:

- (12) You aren't anything like me.
- (13) You are different from / than me.

Qualitative comparisons often do not involve degree at all. That is, they are either all or nothing:

- (14) I bought the same book as you did.
- (15) I bought a different book than you did.

Qualitative comparisons receive little attention in this dissertation, although they will be discussed briefly in Chapter 4. Much of what I wish to discuss involves degree expressions, and although some qualitative comparisons involve de-

grees ((16)-(17)), many do not ((14)-(15)):

- (16) He is somewhat / very / too / quite different from me.
- (17) He is somewhat / very / too / quite similar to me.

The dissertation is set up as follows:

Chapter 1 outlines the theoretical framework assumed in the dissertation.

Chapter 2 provides some general background information on San Lucas Quiaviní Zapotec.

Chapter 3 presents the terminology needed to discuss the comparative constructions in Spanish, SLQZ, and English contained in the dissertation and establishes the issues that must be dealt with in the remaining chapters.

Chapter 4 refines the semantic notion of compared property, the syntactic notion of the head of a comparison and discusses the syntax of the comparative morpheme ER.

Chapter 5 explores the syntax of the constituent serving as a standard of comparison in some types of comparative constructions.

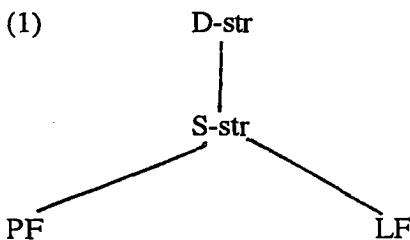
Chapter 6 concludes the dissertation with a brief overview of what has been accomplished in the course of the previous chapters.

## Chapter 1 Theoretical assumptions

Many elements of this dissertation are compatible with various theoretical orientations. This is due in part to the fact that I have attempted to provide a largely descriptive contribution to the body of linguistic investigation in addition to any theoretical contributions.

Nevertheless, there is an underlying current of generative syntax. For the most part, I follow the Extended Standard Theory (EST) as described by Chomsky in his *Lectures on Government and Binding* (1981).

First, I note that I adopt the so-called T-shaped model as the schematic representation of a linguistic structure:



In this model, a given linguistic structure is associated with various levels, one of which is the interface of all the others, namely S-str. D-str, often thought of as the underlying structure, represents the satisfaction of lexical thematic roles (see discussion below). PF (Phonological form) and LF (Logical Form) represent interfaces with extra-linguistic systems: the speech-production motor system and the cognitive-interpretive system, respectively.

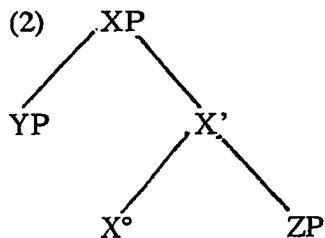
In EST, several modules of grammar are proposed. Of the various modules of the grammar identified within EST, the ones that are especially relevant for the present work are theta theory, X'-theory, trace theory, and case theory.

Theta theory concerns itself with the fact that predicates are subcategorized in the lexicon for one or several arguments of a specific type of syntactic category or of various types of syntactic categories. For example, the verb *kill*, in its literal

sense, is subcategorized for an agent and a patient, both of which must be animate entities manifested as noun phrases.<sup>1</sup> The verb *know*, on the other hand, selects a theme in the form of a noun phrase, an embedded declarative clause, or an embedded interrogative clause. It is not as clear what the selectional properties of abstract and/or functional elements, such as the comparative morpheme ER, are – this issue is less intuitive and straightforward.

One formal element of theta theory is a requirement called the theta-criterion. Stated by Chomsky (1981, p.36, example #4), “Each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument.” Thus, there can be no arguments in a sentence which do not fill a theta-role of any predicate, and by the same token, enough arguments must be present in order to fill all of the available theta-roles since no given argument can do doubly duty. This follows from the conception of D-str and the Projection Principle adopted here.<sup>2</sup>

I assume that at D-str, a sentence is constructed according to X-bar theory and lexical subcategorization properties. In the version of X-bar theory that I adopt, lexical heads project a specifier position and a complement position, in conformance with the schema in (2), where YP and ZP are in specifier and complement position, respectively. I assume that each of these two positions may only be occupied by a maximal, i.e., phrasal, projection. The symbol  $X^\circ$  stands for a lexical head, and  $X'$  stands for the single bar level projection of  $X^\circ$ , which is neither a head nor a maximal projection but is instead an intermediate type of position.




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<sup>1</sup> I claim below that the noun phrases referred to here are technically DP's, i.e., determiner phrases.

<sup>2</sup> I thank Dominique Sportiche for pointing this out.

Note that only binary branching is allowed in such a schema. No ternary or higher-order branching is allowed. Although I do not enter into the argumentation here, such a constrained structure can be derived by Kayne's (1994) LINEAR CORRESPONDENCE AXIOM. Essentially, this axiom requires the terminal nodes of syntactic trees to observe strict ordering as determined by dominance and asymmetric c-command of non-terminal nodes. Only the types of binary structures proposed here can meet the conditions that Kayne outlines.

Kayne's (1994) Antisymmetry framework also rules out rightward and/or downward movement. Rightward extraposition, for example, is not allowed in his framework. Instead, what appears to have been extraposed to the right has actually been stranded, while the related constituent appearing to the left has been "intraposed" to the left. I will adopt Kayne's position on such matters.

A sentence uttered by a speaker is not identical to the sentence's D-str, i.e., the underlying structure as described above. Instead, various elements move via transformations, motivated by morphological and interpretative considerations, eventually yielding an S-str, which corresponds roughly to the notion of SPELLOUT in Chomsky's (1993) more recent Minimalist Program. The S-str more or less resembles the uttered string, except that the S-str must first undergo any phonological rules occurring at PF (Phonological Form) before being shuttled off to the speech-production motor system.

The structure at S-str is also subject to covert transformations which fulfill any morphological or interpretative requirements not yet met by S-str. The result of these transformations is the level called LF (Logical Form). Languages vary as to which transformations occur prior to S-str (overt transformations) and which occur afterwards (covert transformations). Although I do not particularly adopt Chomsky's Minimalist Program, I signal it as an interesting account of cross-linguistic differences with respect to overt (i.e., pre-Spellout) vs. covert (i.e., post-Spellout) transformations.

The transformations that occur between D-str and S-str and between S-str and LF are not unconstrained. Such transformations have locality restrictions. Some of these constraints on transformations are language-specific while others are universal. Some of the latter include the STRUCTURE-PRESERVING PRINCIPLE and the PROJECTION PRINCIPLE. The first of these two constraints prevents, among other things, heads from occupying phrasal positions and phrases from occupying head positions under transformational modifications. The latter, proposed by Chomsky (1981, p.29), states that “representations at each syntactic level (i.e., LF, and D- and S-structure) are projected from the lexicon in that they observe the sub-categorization properties of lexical items.” That is, elements with semantic content (predicates or arguments) cannot simply be removed from a tree, although they may be moved to a new position, as long as a sufficiently local anaphoric relationship between the new position and original position is established. I will assume that a moved element leaves a trace in the position in which it originates. Note that the existence of traces presupposes that silent categories may exist in the structure of a sentence. Trace theory concerns itself with the legitimacy of traces in terms of the position of their antecedent.

Case theory is an attempt to account for the distribution of overt noun phrases<sup>3</sup> based on their ability to receive or check case-marking in the position or positions they originate in or come to occupy at some later point in the sentence’s derivation. Some languages do not mark case overtly in the morphology, whereas others do, but it is assumed by Chomsky (1981), following suggestions of Vergnaud’s (1981) that all overt noun phrases need to receive case at least abstractly. Otherwise they violate the CASE FILTER, which is simply a stipulative bar on any overt noun phrase without case.

An attempt to explain the Case Filter is the notion of VISIBILITY. According to Haegeman (1991, p.177), “A predicate can only assign a theta role to NP’s that

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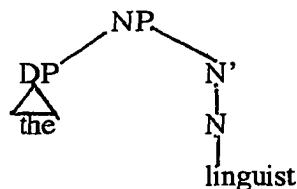
<sup>3</sup> I will take the relevant entity to be DP’s rather than NP’s.

are visible. Abstract case renders an NP visible.” Thus, case allows noun phrases to be eligible to serve as arguments for predicates. From this point of view, case theory and theta theory are intricately related.

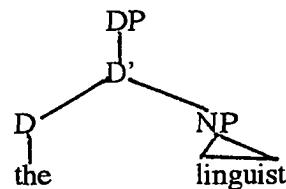
### The functional head analysis

Abney (1987) proposes that noun phrases are actually headed by determiners rather than nouns. That is, he rules out the structure in (3) in favor of the structure in (4):

(3)



(4)



Thus, rather than being base-generated in the specifier position of the NP *the linguist* as a determiner phrase, the determiner *the* takes an NP as a complement. As discussed in Chapter 4, Corver (1997) proposes that this motif should be generalized so that functional categories always take lexical phrases as their complement rather than being base-generated in their specifier position. That is, Corver favors a FUNCTIONAL HEAD ANALYSIS over a LEXICAL HEAD ANALYSIS. I also adopt this position.

## Chapter 2 An Introduction to San Lucas Quiaviní Zapotec<sup>1</sup>

### 2.0 General Introduction

This chapter presents a brief description of San Lucas Quiaviní Zapotec (henceforth SLQZ), in order that the data and discussions pertaining to SLQZ in the remaining chapters of this dissertation may be optimally appreciated.

SLQZ is spoken in San Lucas Quiaviní in the state of Oaxaca, Mexico. It belongs to the Zapotecan language family, which in turn belongs to the Otomanguean stock. Within the Zapotecan language family, mutual intelligibility declines rapidly within relatively short distances. It is not uncontroversial how many Zapotec languages there are. Terrence Kaufman (p.c.) currently believes that “there are five divisions in Zapotec: Northern Zapotec, Central/Eastern Zapotec, Southern Zapotec, Papabuco Zapotec, and Solteco Zapotec. Zapotecan has 6 branches, adding Chatino to Zapotec...Northern may include 3-4 languages, Central/Eastern 2-3 languages [of which one is SLQZ], and Southern 2 languages, for a total of about 10 languages. Some of these languages have serious internal diversification at the dialect level.” Pamela Munro (p.c.), on the other hand, feels that there are actually many more Zapotec languages, on the order of 50-60.

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<sup>1</sup> This description is based quite heavily on the introduction to an SLQZ dictionary in preparation by Munro, Lopez, et al. (in preparation), to which I refer the reader for a more detailed description. Some of the data is also taken from the SLQZ dictionary.

Additionally, Pamela Munro, to whom I am very grateful, checked almost all of the SLQZ spelling of the data which I elicited from Rodrigo García, and she elicited a large part of the SLQZ data for me.

Lastly, the remaining data comes from my own notes and the notes shared among the members of the SLQZ group, i.e., myself, Pamela Munro, and the students who took field methods in the fall of 1994 in the linguistics department at UCLA, taught by Pamela Munro. The students who took that class were Virginia Casillas, Christopher García, Felicia Lee, Olivia Méndez, Marie Provost, Aria Razfar, Cynthia Walker, and Ada Wan.

I am also extremely grateful to my primary consultant, Rodrigo García, who has given me countless hours of his time so that I could obtain data, as well as Felipe López, who has also given me some data.

I of course assume all responsibility for any errors in the data and/or the description of SLQZ.

## 2.1 Phonology

### 2.1.1 Consonants

SLQZ, like other Zapotecan languages, shows a lenis / fortis contrast in most of its consonant inventory (Munro, Lopez, et al. (in preparation)). With stops and fricatives, this distinction correlates roughly to a voiced / voiceless contrast. More generally, the lenis vs. fortis contrast is accompanied by a relatively longer or shorter duration, respectively, of a preceding vowel.<sup>2</sup>

The SLQZ consonant inventory in the orthography of Munro, Lopez, et al. (in preparation) is as shown in the following table:

**Table 2.1 SLQZ consonant inventory**

	labial	dental	retroflex	alveopalatal	velar
<b>stops:</b>					
lenis	b	d			g / gu
fortis	p	t			c / qu
<b>fricatives:</b>					
lenis		z	zh:	zh	
fortis	(f)	s	x:	x	(j)
<b>affricates:</b>					
	fortis		ts	ch	
<b>nasals:</b>					
lenis	m	n			ng
fortis	mm	nn			nng
<b>laterals:</b>					
lenis		l			
fortis		ll			
<b>tap</b>					
trill		r			
<b>glides:</b>					
labiovelar	w				
palatal	y				

---

<sup>2</sup> For other differences in the behavior of lenis vs. fortis consonants, I refer the reader to Munro, Lopez, et al. (in preparation).

**Notes:**

1. The phonemes /f/ and /j/ occur primarily in loan words. Nevertheless, they apparently behave as other fortis consonants do.
2. The phoneme /g/ is spelled *g* everywhere except before the vowels *i* and *e*, where it is spelled *gu*.
3. The phoneme /k/ is spelled *c* everywhere except before the vowels *i* and *e*, where it is spelled *qu*.
4. *Rr* does not appear morpheme-internally in native SLQZ words but does in Spanish loan words. It also appears at morpheme boundaries in native SLQZ inflected forms. It manifests itself as a trill, behaving phonologically as part of the class of fortis consonants. *R*, which is a tap and behaves as part of the class of lenis consonants, may appear morpheme-internally in native SLQZ words.
5. There are no lenis affricates.

### 2.1.2 Vowels and the syllable

The vowels of SLQZ are: *a*, *e*, *i*, *ɛ*, *o*, and *u*. For some speakers, *ɛ*, which is a high, back, unrounded vowel, occurs almost exclusively in suffixes, whereas for others, it occurs quite freely in stems as well.

Vowels may be plain (unmarked), breathy (indicated by a following *h*), checked (indicated by a following apostrophe), or creaky (indicated by a following colon). Vowels may occur together in groups of up to three. The syllable template proposed by Munro, Lopez, et al. (in preparation) is as follows:

$$(1) \quad CCGV(L)V(L)V(L)CG$$

where C represents a true consonant, G represents a glide, V represents a vowel, and L represents a laryngeal feature (i.e., breathy, checked, or creaky).

According to Munro, Lopez, et al. (in preparation), there are some words in which a final breathy vowel identical in oral quality to the vowel preceding it, can fail to be realized, if the preceding vowel is either checked or breathy, when the word is uttered nonfinally in a phrase. Hence the word in (2) may be pronounced without the final breathy vowel in a sentence such as (3):

- (2)      lohoh  
           'face'
- (3)      Zyuu:a'll-ru' Jwaany loh Beed.  
           tall-ER<sup>3</sup> Juan face Pedro  
           'Juan is taller than Pedro'

Thus, the reader should not be surprised to encounter SLQZ data in which a given morpheme appears alternatingly with or without a final breathy vowel.

SLQZ is a tone language, but Pamela Munro (p.c.) claims that tone in SLQZ is entirely predictable based on a given vowel's phonation type as well as the number and phonation type of immediately adjacent vowels.<sup>4</sup> In any case, SLQZ tone is not indicated in this dissertation.

## 2.2 Morphosyntax

### 2.2.1 Clausal syntax

The basic word order in SLQZ is VSO. This can be seen in the following example:

- (4)      B-guhty bzhihny behlld.  
           perf<sup>5</sup>-kill mouse fish  
           'The mouse killed the fish'

There are, however, several types of exceptions to the basic VSO word order. Elements which may precede the verb include focussed elements (5), quantified elements (6), interrogative elements in wh-questions (5)-(7), a special type of third person independent pronoun called a nominal pronoun (cf. discussion on pronouns below), and certain adverbs (8) (including some negative elements – these are discussed below).

- (5)      Q.      Tu b-ta:a'az Gyeeihly ?  
           who perf-hit Mike  
           'Who hit Mike ?'

---

<sup>3</sup> The morpheme ER will be discussed in Chapter 3 and Chapter 4.

<sup>4</sup> Munro, Lopez, et al. (in preparation).

<sup>5</sup> Verb morphology is discussed below in §2.2.2.

- A. (La:a:a') Lieeb b-ta:a'az Gyeeihilly  
 focus Felipe perf-hit Mike  
 'FELIPE hit Mike'
- (6) Zye:einy cansyoony b-i:i'lly ra zhya:a'p.  
 MUCH.sol/abs<sup>6</sup> song perf-sing<sup>7</sup> pl<sup>8</sup> girl  
 'The girls sang many songs'
- (7) Xi r-uhny Lieeb ?  
 what hab-do Felipe  
 'What does Felipe do ?'
- (8) Na:a'y z-e:e Beed.  
 yesterday def-go Pedro  
 'Pedro left yesterday'

Munro, Lopez, et al. (in preparation) indicate that SLQZ rarely shows overt markers of subordination. Very often related sentences simply abut one another, i.e., they appear in a paratactic configuration. For example, the only difference between (9) and (10) is that there is a subordinating matrix verb in (9) but none in (10):

- (9) Zyuu:a'll Lieeb.  
 tall Felipe  
 'Felipe is tall'
- (10) N-a:ann-a' zyuu:a'll Lieeb.  
 neut-know-1sg tall Felipe  
 'I know that Felipe is tall'

Munro, Lopez, et al. also point out that there is almost no morphological distinction between finite and nonfinite clauses. Verbs that would appear in the infinitive form in languages with infinitives are translated by finite verbs in SLQZ,

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<sup>6</sup> This abbreviation, which I use for space considerations, indicates that the SLQZ word *zye:einy* translates into English as 'many' when found before a plural count noun and 'much' when found before a solid mass noun or an abstract noun. Similarly, the word *zi:i'lly* will be glossed as 'MUCH.liq/gas', since this word is used before liquid and gas mass nouns, always translating into English as 'much'.

<sup>7</sup> This verb also means 'read', but I will continue to gloss it as 'sing' for consistency.

<sup>8</sup> The element *ra* is used to mark plurality but does not occur everywhere plurality would in languages such as English and Spanish.

typically in either the habitual (11) or irrealis aspect (12):<sup>9</sup>

- (11) R-yu'la:a:a'z-a' r-a'uwa' bx:aa:ady.  
hab-like-1sg hab-eat-1sg chapulin  
'I like to eat chapulines'<sup>10</sup>

- (12) R-ca:a'z-a' g-a'uwa' bx:aa:ady.  
hab-want-1sg irr-eat-1sg chapulin  
'I want to eat chapulines'

Speakers of SLQZ often use subordinators borrowed from Spanish in order to approximate subordination structures when translating from English or Spanish into SLQZ. For example, the English word *since* and the Spanish word *desde* can sometimes be translated as *dehsdех* in SLQZ, as in (13):

- (13) Dehsdех b-zěhnny-a' b-yu'la:a:a'z-a' ru'c.  
since perf-arrive-1sg perf-like-1sg here  
'Since (the) time I arrived I liked it here'

Similarly, the English word *before* and the Spanish expression *antes (de) que* can sometimes be translated as *antehsdех nih* in SLQZ, as shown in (14):

- (14) Antehsdeh nih ch-iia Gyeeihlly No'rt n-a:a pahr ch-iia Gyeeihlly  
before rel irr-go Mike US neut-be for irr-go Mike  
ydo:o:o'.  
church  
'Before Mike goes to the US, he has to go to church'

One of the few types of overt subordination in SLQZ using a native subordinator is relativization, of which one type of comparative structure is a subcase, as I claim in Chapter 5. I will exemplify the comparative subcase in Chapter 3, but I present here a non-comparative relative clause for the sake of illustration:

- (15) Liebr nih b-de:e:i'dy Lieeb studya'aannd n-u' re:e'.  
book rel perf-give Felipe student neut-be here  
'The book that Felipe gave to a student is here'

Note that the word *nih*, which I claim is a relative pronoun, appears only in relative

---

<sup>9</sup> The irrealis aspect also corresponds to many instances of the subjunctive mood in languages such as Spanish.

<sup>10</sup> Chapulines are a type of edible grasshopper.

clauses and the one type of comparative sentence I am alluding to here.<sup>11</sup>

Matrix yes/no questions are formed by the particle *e:ee* which is postclitic to the entire sentence, whereas matrix wh-questions are formed by raising the question word to sentence-initial position. A yes/no question is exemplified in (16), whereas a matrix wh-question can be seen above in (7).

- (16) Sēhnny Gyeeihlly yzhih e:ee?  
def.arrive Mike tomorrow y/n?  
'Will Mike arrive tomorrow?'

Negation is expressed in various ways, the most common of which is the following: the negative element *cei'ty* is prefixed to the verbal complex while *-dya'* is simultaneously suffixed directly to the verb stem. SLQZ is a negative concord language (Lee (1996)).

- (17) Cei'ty ca:a'-dya' Cri'sy liebr x:te:e'n-ni'.  
not neut.have-neg Cris book poss-3sg.anaposs<sup>12</sup>  
'Chris; doesn't have his; book'

Another type of negation can be seen in (18), in which the negative element *a'ti'zh:* precedes a predicate nominative:

- (18) A'ti'-zh: x:-liebr asu'all-u' nnde:e'.  
not-emph poss-book blue-2sg this  
'This is not your blue book'

---

<sup>11</sup> In fact, Lee (1997) takes *nih* to be a complementizer, basing this claim on causatives such as (i) [gloss is Lee's]:

(i) X:-la'mm-ëng b-e:e:i'ny nih b-gwah-ng loh gyihzhy'a'ah.  
poss-boss-3s perf-make that perf-cut-3s on grass  
'His boss caused him to cut the grass'

Although this is not an unreasonable claim, I take *nih* in (i) to be a relative pronoun indicating the notion of 'a state of affairs in which', a sort of headless relative. In other words, (i) means something like:

(ii) {His boss brought about (lit., made) a state of affairs in which he cut the grass.}

Here and henceforth, I use curly brackets to indicate an interpretation for a preceding string, regardless of whether the preceding string is grammatical or whether the interpretation is a grammatical sentence.

<sup>12</sup> Pronominal morphology is discussed below.

## 2.2.2 Verbs and pronouns

The verb stem consists of an aspectual prefix, a theme,<sup>13</sup> and sometimes additional elements such as valence suffixes or incorporated lexical items. The theme may be complex, containing not only a verb root but also causative and directional elements (Munro, Lopez, et al. (in preparation, Introduction)).

The aspects which occur in SLQZ are as follows: Habitual, Perfective, Irrealis, Progressive, Definite, Subjunctive, and Neutral. It should be noted that the aspect markers in SLQZ represent not only aspect but also tense and modality. I refer the reader to Munro, Lopez, et al. (in preparation, Introduction) for a description of the uses of each aspect as well as the shapes that the various aspectual prefixes usually take, but I exemplify each of these aspects with the verb meaning ‘put on (a shirt)’ in SLQZ:<sup>14</sup>

- (19) R-a'ahcw Gyeeihlly x:-cotoony-ni'.  
hab-put.on Mike poss-shirt-3sg.anaposs  
'Mike puts on his shirt'
- (20) B-da'ahcw Gyeeihlly x:-cotoony-ni'.  
perf-put.on Mike poss-shirt-3sg.anaposs  
'Mike put on his shirt'
- (21) G-a'acw Gyeeihlly x:-cotoony-ni'.  
irr-put.on Mike poss-shirt-3sg.anaposs  
'Mike will put on his shirt'
- (22) Z-a'ahcw Gyeeihlly x:-cotoony-ni'.  
def-put.on Mike poss-shirt-3sg.anaposs  
'Mike will surely put on his shirt'
- (23) Cay-a'ahcw Gyeeihlly x:-cotoony-ni'.  
prog-put.on Mike poss-shirt-3sg.anaposs  
'Mike is putting on his shirt'
- (24) Cei'ty ny-a'ahcw-dya' Gyeeihlly x:-cotoony-ni'.  
not subj-put.on-neg Mike poss-shirt-3sg.anaposs  
'Mike didn't put on his shirt'

---

<sup>13</sup> This is a morphological term, not a semantic term.

<sup>14</sup> See Table 2.2 below for guide to abbreviations for aspect prefixes.

- (25) N-a'ahcw Gyeeihlly x:-cotoony-ni'.  
 neut-put.on Mike poss-shirt-3sg.anaposs  
 'Mike is wearing his shirt'

SLQZ verbs in this dissertation will be glossed according to the following template, to be explained immediately below:

- (26) (Cei'ty) asp. pref. - verb stem - (val. mark. / adv.) - (dya') - (SAM) - (OAM)

The elements *cei'ty* and *dya'*, as mentioned earlier, are used together in verbal negation.<sup>15</sup>

The aspectual prefixes will be abbreviated as follows:

**Table 2.2 Aspectual prefixes in SLQZ glosses**

<u>full name</u>	<u>abbreviation</u>
Habitual	hab
Perfective	perf
Irrealis	irr
Progressive	prog
Definite	def
Subjunctive	subj
Neutral	neut

The verb stem includes the verb theme plus any elements which have been incorporated to it, such as body parts. For example the word *la:a:a'z* 'heart' is incorporated to the verb theme *ahc* 'be' in the verb stem *a'cla:a:a'z* 'want', e.g. *ra'cla:a:a'z* 'hab.want'.

Valence markers include the comitative *-ne:e* 'with' (27), and adverbial suffixes include *-daa:a'n* 'very (much)' (28) and *-ta'* 'too (much)' (29).

- (27) B-zu'aht-ne:e Jwaany na:a'.  
 perf-play-with Juan 1sg  
 'Juan played with me'.
- (28) R-yu'la:a:a'z-daa:a'n Jwaany na:a'.  
 hab-like-very Juan 1sg  
 'Juan likes me very much'

---

<sup>15</sup> There are cases where one of these words may occur without the other, although the instances of *-dya'* that occur without *cei'ty* indicate things other than negation, such as extent, and may constitute a separate lexical item. In any case, this template is general enough for the purposes of this dissertation.

- (29) Nahll-ta' (cay-ahc) pahr y-rii:a' bu:unny jweer.  
 cold-too prog-be for irr-go.out person outside  
 'It's too cold to go outside'

SAM's and OAM's are explained below.

Verb stems, other than imperatives, auxiliaries, and certain types of phenomenological verbs, must be either: (i) followed by an independent subject noun phrase or a suffixed subject agreement marker, henceforth SAM, or (ii) preceded by a nominal pronoun.<sup>16</sup> The available SAM's, which are also used as possessor suffixes on possessed nouns, are shown in the following table along with the corresponding independent pronouns:<sup>17</sup>

**Table 2.3 SLQZ subject agreement markers (SAM's) and corresponding independent pronouns**

	<u>singular</u>	<u>correspond. indep. pron.</u>	<u>plural</u>	<u>correspond. indep. pron.</u>
1st person	-a'	na:a'	-enn	dannohnn
2nd person				
informal	-u:u'	li:u'w	-ad	la:a:a'd
formal (R.G.) <sup>18</sup>	-yibu:u'	yibu:u'	-yibuad	yibuu:aad
formal (F.L.)	-yuu'	yu'uu'	-yuad	yuu:ad
3rd person				
proximate	-ëng	la:anng	-réng	la:a'rëng
distal	-ih	laih	-rih	la:a'rih
animal	-ëmm	la:a'mm	-rämm	la:a'rämm
respectful	-ahzh:	la:a:a'zh:	-rahzh:	la:a'rahzh:
formal	-ëb	la:a:a'b	-réb	la:a'rëb
reverential <sup>19</sup>	-iny / -ni'	la:a:iny / la:a:a'ni'	-riny	la:a'riny

<sup>16</sup> Nominal pronouns are a special type of third person independent pronoun discussed in Munro, Lopez, et al. (in preparation, Introduction) which precede a verb but are not mirrored by a matching SAM. They may express either a subject or a focussed object. As none of the data in this dissertation exemplifies nominal pronouns, I refer the reader to Munro, Lopez, et al. (in preparation, Introduction) for a complete list of them.

<sup>17</sup> This chart is based on information from Munro, Lopez, et al. (in preparation).

<sup>18</sup> R.G. and F.L. are abbreviations for Rodrigo Garcia and Felipe Lopez, respectively, the two primary consultants for the SLQZ data. They do not use the same set of SAM's as one another to represent second person formal, so the forms that each gives are mentioned here.

<sup>19</sup> Pamela Munro claims (p.c.) that the two forms given for the singular reverential clitic pronouns occur in free variation, as do the two forms given for the singular reverential independent pronouns. Also, there is another suffix *-ni'* which functions as an anaphoric possessive pronoun (Munro (1995)). I abbreviate it as '3sg.anaposs'.

Of the six different third person SAM's, I restrict data in this dissertation to the proximate type most of the time, so I will simply gloss all third person SAM's as third person singular or plural except where the type is other than proximate, in which case I mention the type.

An independent pronoun may surface before the verb in order to receive focus, but if it corresponds to the subject of the sentence, then it must be mirrored by an overt copy of the matching SAM suffixed to the verb, as in (30):

- (30) La:anng b-da'uhw-ëng comiied.  
           3sg   perf-eat-3sg   food  
           'HE ate the food'

Pronominal objects may be expressed in one of two ways. First, they may be expressed by the independent pronouns given in Table 2.3, following the subject, whether the subject is a SAM (31) or an independent lexical noun (32):

- (31) R-yu'la:a:a'z-ëng na:a'.  
           hab-like-3sg   1sg  
           'He likes me'  
  
  (32) R-yu'la:a:a'z Jwaany na:a'.  
           hab-like       Juan   1sg  
           'Juan likes me'

Alternatively, in the case of some third person objects, one of the two SAM's -ëng (3sg. proximate) and -ih (3sg. distal) may be used, either enclitic to the complex formed by the verb stem plus any SAM if present (33), or enclitic to an independent nominal subject if present (34):

- (33) R-umbe:e'-nn-ih.  
           hab-know-1pl-3sg.dist  
           'We know him'  
  
  (34) R-umbe:e' Jwaany-ih.<sup>20</sup>  
           hab-know     Juan-3sg.dist  
           'Juan knows him'

---

<sup>20</sup> Note that a construction parallel to the examples in (31) and (32), i.e., sentences with third person independent pronouns, may also be used to express the meaning of (34):

- (i) R-umbe:e' Jwaany la:anng.  
           hab-know Juan   3sg  
           'Juan knows him.'

It should be noted that SLQZ pronouns do not show gender. Therefore, I will usually translate SLQZ third person pronouns and suffixes using masculine pronouns in English and Spanish, although this is merely a convention used for the sake of exposition and should be understood as such.

### 2.2.3 Prepositions

Pronominal objects of native SLQZ prepositions are indicated with the appropriate SAM's, as shown in (35), whereas pronominal objects of prepositions borrowed from Spanish are indicated with independent pronouns, as shown in (36):

- (35) De'ts-a' zuu mee's.  
back-1sg neut.stand table  
'The table is behind me'
- (36) Z-ya:all-a' cēhnn la:anng.  
def-come-1sg with 3sg  
'I came with him'

Native SLQZ prepositions are identical to body part words.<sup>21</sup> One such preposition, which is used in some comparisons, is *lohol*, which literally means 'face' but is used to introduce some locative (37) and dative (38) complements and the standard of comparison in some types of comparisons ((39) and further explained in Chapter 3):

- (37) Liebr zur:ub loh mee's.  
book neut.sit face table  
'There's a book on the table'
- (38) B-cwa:a:-a' Jwaany pelo't loh Beed.  
perf-throw-1sg Juan ball face Pedro  
'Juan threw the ball to Pedro'

---

<sup>21</sup> Under some analyses, in fact, these might be taken to be nouns rather than prepositions. However, some of these SLQZ nouns-qua-prepositions correspond, in meaning and distribution, to prepositional expressions in English containing nominal expressions, such as *in front of*, *beside*, *instead of*, *on top of*, *behind*, and the like.

- (39) Zyuu:a'll-ru' Jwaany loh Beed.  
 [= (3)] tall-ER Juan face Pedro  
 'Juan is taller than Pedro'

Other native prepositions include *gue'ehcy* 'head' > 'on', *cwe'eh* 'side' > 'beside' / 'next to', *dehts* 'back' > 'behind', and *ni'ih* 'foot' > 'under'.

#### 2.2.4 Nouns and their modifiers

Nouns are not morphologically case-marked in SLQZ. Plural nouns are sometimes preceded by the proclitic plural marker *ra*, as in (40), but this is not always the case.

- (40) R-umbi:-a'      ra    studya'aann.  
 hab-know-1sg   pl    student  
 'I know the students'

The distribution of *ra* has not been studied in detail, hence an analysis of its behavior is not yet possible.

Some nouns may never be possessed, others optionally so, while yet others obligatorily so. A possessed noun is usually simply prefixed by *x:-*, as in (41):

- (41) a. liebr  
 'book'  
 b. x:-liebr    Lieeb  
 poss-book   Felipe  
 'Felipe's book'

However, this is not always the case. One example where it is not the case can be seen in (42), where the possessed word meaning 'house' is lexically unrelated to the non-possessed word meaning 'house' and is not prefixed by *x:-*:

- (42) a. yu'uh  
 'house'  
 b. liihahz Lieeb  
 house Felipe  
 'Felipe's house'

Some nouns are obligatorily possessed. Of these, some, such as *ru'uh* 'mouth', are not preceded by the prefix *x:-*, while others, such as *x:azhi'ih* 'nape',

always include this prefix:

- (43)      ru' Lieeb  
          mouth Felipe  
          ‘Felipe’s mouth’
- (44)      x:-azhi' Lieeb  
          poss-nape Felipe  
          ‘The back of Felipe’s neck’

Sometimes the prefixation of *x*:- causes predictable changes in a noun such as converting an initial lenis consonant into a fortis consonant, as in (45), but the prefixation of *x*:- may instead cause unpredictable changes in a noun, as in (46).

- (45)    a.    bu'uhuhdy  
          ‘chicken’
- b.    x:-pu'uhuhdy Lieeb  
          poss-chicken Felipe  
          ‘Felipe’s chicken’
- (46)    a.    be:e'cw  
          ‘dog’
- b.    x:-ye:e'cw Lieeb  
          poss-dog Felipe  
          ‘Felipe’s dog’

A possessed noun is followed either by a nominal possessor (cf. (42)-(46), above) or by an appropriate SAM (47):

- (47)    x:-pu'uhuhdy-a'  
          poss-chicken-1sg  
          ‘my chicken’

## 2.2.5 Adjectives

Elements manifested as adjectives in certain other languages such as English and Spanish may behave syntactically in various ways in SLQZ. First, they may manifest themselves as verbs. That is, they take aspectual prefixes, they take SAM’s in case of a pronominal subject, and they do not occur with a copula (even in the neutral aspect). The following adjectival verb, for example, is shown with

various aspectual prefixes<sup>22</sup> and the first person singular SAM:

- (48) R-dyaa:a'n-a'.  
hab-hungry-1sg  
'I get hungry'<sup>23</sup>
- (49) Cal-dyaa:a'n-a'.<sup>24</sup>  
prog-hungry-1sg  
'I am hungry'
- (50) Il-dyaa:a'n-a'.  
irr-hungry-1sg  
'I will be hungry'
- (51) B-dyaa:a'n-a'.  
perf-hungry-1sg  
'I was hungry'
- (52) Cei'ty n-dyaa:a'n-dy-a'  
not subj-hungry-neg-1sg  
'I didn't get hungry'
- (53) S-dyaa:a'n-a'.  
def-hungry-1sg  
'I will surely get hungry'

Secondly, there are adjectives which may optionally cooccur with a copula in any aspect including the neutral aspect, either *nu'uh* or *na:a / na:c* (in the appropriate aspect), this last pair being somewhat interchangeable (Munro, Lopez, et al. (in preparation)):

- (54) Xniaa liebr.  
red book  
'The book is red'
- (55) Xniaa n-a:a liebr.  
red neut-be book  
'The book is red'

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<sup>22</sup> This verb does not occur in neutral aspect.

<sup>23</sup> I provide here the translations given to me by Pamela Munro, who provided me with the data. Some of those given here with a stative translation can also be used in an inchoative sense and vice-versa.

<sup>24</sup> This form is in free variation with the following form in (i)  
(i) Candyaa:a'na'.

The copula is apparently required rather than optional in aspects other than the neutral aspect with such adjectives.<sup>25</sup>

- (56) Xniaa g-uhc liebr.  
red perf-be book  
'The book was red'

- (57) Xniaa g-a'c liebr.  
red irr-be book  
'The book will be red'

Thirdly, there are some adjectives (58) which in neutral aspect cannot occur with a copula (59), but which Pamela Munro (p.c.) nevertheless does not consider to be verbs, not even in the neutral aspect, an aspect which corresponds to a state of affairs, just like adjectives do:<sup>26</sup>

- (58) Ua's nsehe's cabai.  
very fast horse  
'The horse is fast'

- (59) \*Ua's nsehe's n-a:a cabai.  
very fast neut-be horse

She justifies this position based on the following four considerations: (i) such adjectives cannot take aspectual prefixes, whereas true verbs do, (ii) such adjectives do occur with a copula in aspects other than the neutral aspect ((60)-(61)), whereas true verbs cannot cooccur with a copula in any aspect, (iii) such adjectives may be used attributively (although sometimes requiring an alternate form), whereas true verbs, even in the neutral aspect, can never be used attributively, and (iv), those verbs beginning with the aspectual prefix *n-* in the neutral form can never lose this prefix, whereas some adjectives beginning in *n-* may lose this *n* when used attributively:

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<sup>25</sup> Either of these two sentences would simply yield (54) if the copula were removed, hence losing perfective or irrealis aspect, respectively.

<sup>26</sup> According to Pamela Munro (p.c.) when the particular adjective chosen is used predicatively (rather than attributively), there is a strong preference to include the word *ua's* at the beginning of the sentence, which apparently means 'very'.

- (60) Ua's nsehe's g-uhc cabai.  
           very fast perf-be horse  
           'The horse was fast'

- (61) Ua's nsehe's g-a'c cabai.  
           very fast irr-be horse  
           'The horse will be fast'

Lastly, there are some adjectives which always require the presence of a copula, either *nu'uh* or *na:a / na'c* (in the appropriate aspect):

- (62) Asua'll n-a:a liebr.  
           blue   neut-be book  
           'The book is blue'

- (63) \*Asu'all liebr.  
           blue   book

If a predicative adjective occurs with a copula, the default word order is adjective–copula–subject. Hence, (62) is perfectly grammatical, whereas all of the following word orders are either marked or ungrammatical:

- (64) Liebr n-a:a asu'all.  
           book neut-be blue  
           'The BOOK is blue'<sup>27</sup>  
           [focus reading]

- (65) ?Na:a liebr asu'all.  
        (66) \*Asu'all liebr na:a.  
        (67) \*Liebr asu'all na:a.  
        (68) \*Na:a asu'all liebr.

A predicative adjective used without a copula follows the same word order as an intransitive verb: adjective–subject (69).

- (69) Nahll cafee.  
           cold coffee  
           'The coffee is cold'

If this order is reversed, the string will still be grammatical for those adjectives which may be used attributively and whose attributive form is identical to the

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<sup>27</sup> This could for example be the answer to the question in (i):

(i) Xi   n-a:a   asu'all ?  
       what neut-be blue  
       'What's blue ?'

predicative form, but the string will be interpreted as a noun phrase rather than as a sentence:

- (70) \*Cafee nahll.  
coffee cold  
'The coffee is cold' [out as sentence]
- (71) cafee nahll  
cofee cold  
'cold coffee' [ok as noun phrase]

Adjectives used attributively occur post-nominally and as mentioned above, sometimes have a form distinct from the one used when the adjective is used predicatively.<sup>28</sup> This idiosyncratic information may be found in Munro, Lopez, et al. (in preparation). The following adjective is given first in its predicative form, with (72) and without (73) a copula, then in its attributive form (74).

- (72) Nde:e n-a:a x:-cotoony Gyeeihlly.  
tight neut-be poss-shirt Mike  
'Mike's shirt is tight'
- (73) Nde:e x:-cotoony Gyeeihlly.  
tight poss-shirt Mike  
'Mike's shirt is tight'
- (74) B-le:egwu:u'an Gyeeihlly cotoony de:e x:te:e' Gyeeihlly.  
perf-throw.away Mike shirt tight poss Mike  
'Mike threw away his tight shirt'

Related to this adjective is the adjectival verb given in (75):

- (75) B-de:e x:-cotoony Gyeeihlly chih b-zalloh ca-ro' Gyeeihlly.  
perf-get.tight poss-shirt Mike when perf-begin prog-grow Mike  
'Mike's shirt got tight when he started growing'

## 2.2.5 Determiners

There is no definite article in SLQZ although the numeral *tē'ihby* 'one' sometimes functions as an indefinite article. Other determiners include cardinal numbers (prenominal), demonstratives (postnominal) and quantifiers (prenominal)

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<sup>28</sup> Some adjectives may not be used attributively at all, such as *confo'rmm* 'contented / pleased' (Munro, Lopez, et al. (in preparation)). A relative clause must be used instead.

such as *raa* ‘all’ and *zye:einy* ‘many/much’. Quantified DP’s often occur preverbally, possibly due to an overt instance of quantifier raising (QR) equivalent to the covert QR suggested by May (1985).

I include here an example of a complex noun phrase to give the reader an idea of how the various elements discussed thus far can fit together:

- (76) ro'pta' (ra) liebr xniaa re:e' x:te:e' Gyeeihly  
the.two pl book red this poss Mike  
'these two red books of Mike's'

## Chapter 3 Nomenclature and Issues to be Resolved

### 3.0 Introduction

Comparative constructions are a fascinating object of study involving several different phenomena, some unique to comparatives, others not. In this chapter, I will define several terms often used to describe the fundamental aspects of comparative constructions (3.1), and then I will discuss some key issues that arise in the study of comparatives to be addressed in the following chapters (3.2-3.6).

### 3.1 Fundamental Nomenclature

#### 3.1.1 The compared property

Recall from the Introduction Stassen's definition of what qualifies as a COMPARATIVE CONSTRUCTION:

*Definition: a construction in a natural language counts as a comparative construction...if that construction has the semantic function of assigning a graded (i.e., non-identical) position on a predicative scale to two (possibly complex) objects. [emphasis mine]*

Thus, comparisons are formed with respect to gradable properties. Such a property is, according to Stassen, a COMPARATIVE PREDICATE corresponding to a PREDICATIVE SCALE. Consider the following example:

- (1) Rodrigo is taller than Felipe.

In (1), the property whose degree is being compared is tallness, i.e., height. This property forms a predicative scale, since some entities possess it to relatively smaller degrees, whereas others possess it to relatively larger degrees. That is, some objects are taller than others. Instead of referring to this property as "the property whose degree is being compared", I will refer to it instead as the COMPARED PROPERTY, even though it is actually its degree and not the property itself which is being compared. Note that the term COMPARED PROPERTY is a semantic notion.

There are also other terms found in the literature for what I call the compared property. Anderson (1983, quoted in Price (1990)), for example, mentions QUALITIES and PROPERTIES which are used in forming a comparison. Small (1929), as quoted in the Introduction,<sup>1</sup> refers to a QUALITY possessed by two objects in potentially different amounts which may serve as a basis for comparing one of these objects to the other. Prytz (1979) uses the Spanish term RASGO COMPARADO ‘compared feature’, which he defines as “*lo que se compara*” (‘that which is compared’) in the two terms of the comparison.<sup>2</sup>

It is not always clear exactly what the compared property is in a given comparison. I return to this issue in Chapter 4.

### 3.1.2 The morpheme ER

The morphosyntactic elements of comparisons, however, are somewhat more easily identified. For example, there is in many languages, including English, Spanish, and San Lucas Quiavinf Zapotec, a morpheme that appears uniquely in comparisons of inequality. In English, it manifests itself either as the suffix *-er*, as a proper subpart of the word *more* or the word *less*, or as the whole word *more* itself.<sup>3</sup> I will refer to it as ER. Its properties will be discussed briefly later in this chapter and in depth in Chapter 4.

Likewise, there is a similar morpheme which is involved in comparisons of equality instead, which Rivara (1990) terms EG, based on the French word meaning ‘equality’: *égalité*. Recall from the Introduction, however, that not much emphasis will be placed on comparisons of equality in this dissertation.<sup>4</sup>

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<sup>1</sup> I am referring here to the introduction of this dissertation.

<sup>2</sup> I return shortly to Prytz’s notion of the two terms of the comparison.

<sup>3</sup> I explain this characterization in more detail and justify it in Chapter 4.

<sup>4</sup> For data and analysis of comparisons of equality in Romance, the interested reader should consult Price (1990).

### 3.1.3 Head of the comparison

As a syntactic correlate of the compared property, there is often a lexical head which is traditionally assumed to be more intimately tied to ER (or EG in comparisons of equality) than any other constituent is. I will refine this notion in Chapter 4,<sup>5</sup> but I provide here an intuitive notion of what I mean in terms of the syntactic manifestation of ER.

Prytz (1979) refers to an element such as ER and EG more generally as a CUANTIFICADOR COMPARATIVO ‘comparative quantifier’. He lists the following three CUANTIFICADORES COMPARATIVOS: *más* ‘more’, *menos* ‘less’, and *tanto* ‘as’. Notice that he treats ER not as one primitive element but as two primitive elements: (i) the positively-oriented *más*, involved in what is referred to in traditional grammars as a COMPARISON OF SUPERIORITY, and (ii) the negatively-oriented *menos*, involved in what is referred to in traditional grammars as a COMPARISON OF INFERIORITY.

I instead take Rivara’s (1990) approach and consider *más* and *menos* to contain a common, primitive element – an indication of inequality – with the additional presence of an orientation reverser in the case of *menos*. I assume with Rivara that the default orientation in measuring amounts is from small quantities to large quantities, and, similarly, that the default orientation for measuring degrees is from small degrees to large degrees. Thus, an orientation reverser, such as *few* or *little* (contained in *fewer* or *less*, for example), inverts the scale so that counting or measuring proceeds from large to small amounts or large to small degrees.

As for the constituent which is “most intimately tied to ER”, Price (1990, p.10) refers to “categories which may be the OBJECTS OF COMPARISON” [caps mine]. These objects of comparison “range over nouns, adjectives, adverbs,

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<sup>5</sup> The main complications arise in the case of amount comparisons and verbal extent comparisons.

prepositional phrases, verbs and even whole clauses.”<sup>6</sup>

To see how such categories are linked to ER, consider the following examples given by Huddleston (1967, p. 92):<sup>7</sup>

- (2) a. Mary bought more records than Peter.  
b. Mary achieved more than Peter.  
c. Mary talks more than Peter.  
d. Mary is more talkative than Peter.  
e. Mary bought a more expensive car than Peter.  
f. Mary talks more quickly than Peter.

[= Huddleston's #8]

According to Huddleston, *more* (which is as a first approximation what I am calling ER) is assigned the following VALUES/FUNCTIONS in each of the previous examples, respectively:

- (3) a. ordinator in a nominal group (NGp)  
b. head in a NGp  
c. head in an adverbial group functioning as an adjunct  
d. modifier of an adjective head  
e. submodifier of an adjective modifier  
f. modifier of an adverb head

I interpret these values/functions roughly as follows:

- (4) a. comparison of the amount of an overt, concrete common noun denotation  
b. comparison of the amount of an abstract common noun denotation  
c. comparison of the extent of a verb phrase denotation, where extent is understood as frequency, length, duration, intensity, etc.  
d. comparison of the degree of an adjective denotation  
e. comparison of the degree of an adjective denotation or a compound adjective plus noun denotation<sup>8</sup>

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<sup>6</sup> I later claim that non-predicative nouns and most verbs cannot truly be the object of a comparison in Price's terms (the head of a comparison in my terms). Note that the values/functions that Huddleston attributes to ER below (30) are not compatible with non-predicative nouns or most verbs being the head of a comparison.

<sup>7</sup> Huddleston's sentences do not include an example in which a prepositional phrase or a whole clause is the object of a comparison, in the way that Price (1990) seems to intend. The following would be examples of these two types of comparison:

(i) Mary is more inside our circle of friends than Peter / than outside of our circle of friends.  
(ii) What I am trying to say is more that I miss you than that I am madly in love with you.

For the most part, I will ignore such types of comparisons for the sake of simplicity, although they pose challenges of their own worthy of future research.

<sup>8</sup> See Pinkham (1982) for an interesting analysis of compared adjectives in attribute position.

f. comparison of the degree of a (manner) adverb denotation

Prytz refers to the element intimately tied to the CUANTIFICADOR COMPARATIVO as the NÚCLEO DE LA COMPARACIÓN ‘nucleus of the comparison’.

According to him, this can be an adjective, an adverb, a noun, or  $\emptyset$ , as illustrated in (5) [taken from Prytz, p. 262, glosses and translations mine]:<sup>9</sup>

- (5) a. Juan escribe cartas más aburrid-a-s que María.  
Juan write.3sg<sup>10</sup> letters ER boring-f-pl that Maria  
'Juan writes more boring letters than María.'  
[i.e., letters that are more boring]
- b. Juan escribe cartas más frecuente-mente que María.  
Juan write.3sg letters ER frequent-ly that Maria  
'Juan writes letters more often than María.'
- c. Juan escribe más cartas que María.  
Juan write.3sg ER.MUCH.f.pl<sup>11</sup> letters that Maria  
'Juan writes more letters than María.'
- d. Juan escribe más que María.  
Juan write.3sg ER.MUCH that Maria  
'Juan writes more than María.'

That is, the CUANTIFICADOR COMPARATIVO can:

- (6) a. modify a predicate adjective or an adjective that determines a noun  
b. modify an adverb  
c. modify a noun  
d. not modify any particular word, other than possibly the verbal predicate.

[adapted from Prytz, p. 260]

Rojas Nieto (1990) considers the ELEMENTO GRADUADO ‘graduated/graded

<sup>9</sup> Here, we see that Prytz does not take verbs to be able to function as the nucleus of a comparison (cf. my notion of the head of a comparison). He does take non-predicative nouns to be capable of being the nucleus of a comparison, although I do not.

<sup>10</sup> I will not gloss present tense or indicative mood in the Spanish data in this dissertation, so the reader should take present tense to be the default tense and the indicative mood as the default mood of Spanish verbs in my data. Verbs found in other tenses and/or moods will be glossed as such.

<sup>11</sup> I will gloss Spanish *más* as ‘ER.MUCH.m.pl’ or ‘ER.MUCH.f.pl’ when it occurs before count nouns, ‘ER.MUCH.m’ or ‘ER.MUCH.f’ when it occurs before mass or abstract nouns, or simply ‘ER.MUCH’ when it occurs an extent adverbial after a verb. Elsewhere, I will simply gloss it as ‘ER’. I justify these choices in Chapter 4.

element' in cases such as (5c) and (6d) to be "el graduador mismo" 'the graduator/grader itself'.<sup>12</sup>

Others simply refer to the element under discussion here, i.e., the element most closely involved syntactically with ER, as the HEAD of the comparison (e.g., Bresnan (1973)). This is the term I will use, although we will see in Chapter 4 that the head of a comparison is not always what the traditional analysis claims it to be. This uncertainty necessitates finding the correct correlation between the head, a syntactic element, and the COMPARED PROPERTY, a semantic element.

Now recall sentence (1):

- (1) Rodrigo is taller than Felipe.

Although a more precise definition of the head of a comparison must wait until Chapter 4, I will assume for the moment that in (1), the head of the comparison is the adjective *tall*. Witness the fact that this is the lexical head which serves as a host for the suffix *-er*, i.e., the (here, bound) morpheme ER.

The compared property in this sentence – tallness/being tall – is fairly straightforward to identify in a sentence like this since *tall* is the only lexical item around that could possibly contribute towards a predicative scale.

### 3.1.4 The terms of comparison / the contrasts

Stassen (1985, p.24) claims that in addition to a gradable predicate, a comparison of inequality involves "...two concepts, one of which represents the standard against which the other is measured and found to be unequal." For the most part, he restricts his discussion to those cases in which both concepts are individuals, i.e., nominal expressions. They are NP's in his terms, although I consider them DP's under the functional head analysis.<sup>13</sup> He labels the NP serving as the standard of comparison the STANDARD NP, and he labels the NP being measured

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<sup>12</sup> Hence, Rojas Nieto does not allow verbs or non-predicative nouns to function as the graduate element in a comparison (cf. my notion of the head of a comparison).

<sup>13</sup> Recall the theoretical assumptions discussed in Chapter 1 regarding such matters.

against the standard the COMPAREE NP.

Prytz (1979, p.261) claims that “para establecer una comparación, hacen falta dos elementos distintos, los *términos* de la comparación.” (“In order to establish a comparison, two distinct elements are needed, the terms of the comparison.”). For him, the SEGUNDO TÉRMINO DE LA COMPARACIÓN ‘second term of the comparison’, which I henceforth refer to as simply the SECOND TERM, is usually that which follows the CONJUNCIÓN COMPARATIVA ‘comparative conjunction’, such as *than* in English.<sup>14</sup> When the second term is a nominal expression, it corresponds to Stassen’s Standard NP. In an analogous fashion, Prytz’s equivalent to Stassen’s Comparee NP is, when nominal, the PRIMER TÉRMINO DE LA COMPARACIÓN ‘first term of the comparison’, henceforth the FIRST TERM. Note that for Prytz (p.261), the terms of the comparison are “los elementos distintos en que se compara algo, sin consideración a su función gramatical” (‘the elements in which something is compared, without regard to their grammatical function’). That is, the terms of comparison do not need to be nominal in nature.

Thus, in (1), *Rodrigo* is the Comparee NP or first term, whereas *Felipe* is the Standard NP or second term. Prytz’s terminology is equipped to describe a sentence such as (7) [his #2, p. 265], whereas Stassen’s is not, at least not using the specific terms just discussed (Comparee NP and Standard NP):

- (7) Pilar es más alt-a que antes.  
Pilar be.3sg<sup>15</sup> ER tall-f<sup>16</sup> that before  
'Pilar is taller than before.'

There is neither a comparee NP, nor a standard NP, but there is both a first term – an understood *ahora* ‘now’ – and a second term – *antes* ‘before’. Of course,

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<sup>14</sup> In many cases, the second term is only a subpart of the material following the CONJUNCIÓN COMPARATIVA, an element which I will discuss in detail below.

<sup>15</sup> In Spanish, both *ser* and *estar* are most often translated into English as ‘be’, even though they are not interchangeable. I will gloss both as ‘be’ since the distinctions between these two verbs are not relevant to the argumentation of this dissertation.

<sup>16</sup> Spanish adjectives in this dissertation should be taken to be singular unless marked as plural by the abbreviation ‘pl’.

Stassen's looser notion of the two concepts involved in a comparison (cf. earlier discussion) is compatible with (7) – these two concepts are just the first and second terms of the comparison, respectively.

The term that Price (1990) uses which often corresponds to Prytz's second term is the FOCUS OF CONTRAST. In (1), the focus of contrast is *Felipe*, and in (7), the focus of contrast is *antes*. Note that in (1) and (7), the first term is distinct from the head of the comparison. Price (1990) refers to such a comparison as a FULL COMPARISON.<sup>17</sup>

Now consider the following example given by Prytz (his #3, p.263, gloss and translation mine):

- (8) Pilar es más alt-a que fuerte.  
Pilar be.3sg ER tall-f that strong<sup>18</sup>  
'Pilar is more tall than strong.'

Here, the first term of the comparison is non-distinct from the head of the comparison – *alta*. In this type of comparison, which Price (1990) refers to as a PARTIAL COMPARISON, she does not call the second term of the comparison a focus of contrast, but rather a FOCUS OF COMPARISON.

Note that in (1), it is plausible that a second, covert copy of the word *tall* is present structurally,<sup>19</sup> even though it only surfaces once overtly, since (1) roughly means:

- (9) {Rodrigo is taller than Felipe is tall.}

Price uses her label focus of comparison to refer to the copy of the head

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<sup>17</sup> Some might consider the first term to always be distinct from the head of the comparison by positing that in certain comparisons, such as (8) below, the compared property is pure degree itself, and hence, none of the overt elements is the head of comparison. I do not conceive of partial comparisons in those terms, but the difference between these two perspectives might really be simply a difference in terminology and not a deep, structural one.

<sup>18</sup> Adjectives in Spanish which do not show any overt gender distinction will not be glossed as either masculine or feminine even though they abstractly must agree in gender with the noun that they modify.

<sup>19</sup> The same can be said for the copula *is*. Furthermore, I will claim later that the covert adjective *tall* is modified by a covert degree expression.

found in the second half of the comparison even if it is covert as in (9). For her, a focus of comparison is “the category in the second half of the comparison modified by an (inferable) quantifier, corresponding to an overtly quantified category in the matrix,” (p.22), in other words, a category in the second half of the comparison corresponding to the head of the comparison.

Prytz (1979), in contrast, would apparently not consider such an element a second term at all, since even though he gives no rigorous definition of SEGUNDO TÉRMINO, the second term is always an overt element in all of his examples. In fact, Price’s label is problematic – it is somewhat odd to refer to a covert element as a focus, given that a focus is an element that bears new information and receives focal stress (or is contrastive and bears contrastive stress).

I will adopt the English translations of Prytz’s TÉRMINOS DE LA COMPARACIÓN – i.e., the first term and the second term of comparison, since they apply most generally (Stassen’s terms are limited to nominal terms of comparison) and most consistently (Price’s terms vary according to whether or not the head of the comparison is distinct from the first term of comparison). I will, however, follow Price’s distinction between full comparisons and partial comparisons, a move which I will justify briefly at the end of this section and more so in the course of the dissertation. In addition, I will give a special label to the type of second term that in a partial comparison is equivalent to the previously defined head of the comparison – I will call it the SECOND HEAD. I must first make a modification in Prytz’s terminology and introduce some additional terms.

Sometimes there is not just one pair of contrasts in a comparison but rather, two or even more. Consider the following case:

- (10) José left more books on the floor than Pedro did on the bed.

In (10), there are two contrasts. The first contrast is between the agentive DP’s *José* and *Pedro*. That is, there is a contrast between the quantity of books José left somewhere and the quantity of books Pedro left somewhere.

Similarly, there is a contrast between the locative PP's, *on the floor* and *on the bed*. Some books were left on the floor, whereas others were left on the bed.

If we call *José* and *Pedro* the first and second terms of comparison, respectively, what label should we give to the PP's *on the floor* and *on the bed*? Or alternatively, if we consider *on the floor* and *on the bed* to be the terms of comparison, what are the DP's *Juan* and *Pedro*?

Prytz does not discuss cases like this, so it is not clear how he would accommodate his terminology for such a case.

As Prytz points out, though, we can paraphrase comparisons like (10) so that the head of the comparison *books* appears as the head of each of two relative clauses:<sup>20</sup>

- (11) The quantity of books that Juan left on the floor is greater than the quantity of books that Pedro left on the bed.

This paraphrase has the following two terms: *the quantity of books that Juan left on the floor* and *the quantity of books that Pedro left on the bed*. Notice that there are two common elements that may be factored out of each of the terms in a parallel fashion: *the quantity of books* and *left*. That is, the contrast between the two terms lies within a subpart of the terms.

A passive paraphrase of (11) isolates the contrasts into a proper substring within each term:

- (12) The quantity of books that was left by Juan on the floor is greater than the quantity of books that was left by Pedro on the bed.

Even so, it is not clear that the contrasting string in each term is a constituent. In fact, it is more likely that each PP in (12) acts as a separate contrasting element. By the same token, both the agentive DP and the locative PP in each term of (10) each participate in a distinct contrast. Therefore, I will refer to each term of a comparison as consisting of N-MANY CONTRASTS, often just one, and I will refer

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<sup>20</sup> The head of each of these relative clauses is either *books*, as I have suggested, or *amount*, whose complement contains *books*.

to each contrast as one of n-many contrasts within a given term of a comparison.

Note that a term consisting of more than one contrast is not necessarily a constituent, nor even a contiguous string.

Returning to (10), we see that the first and second term each contain two contrasts. There is an agentive DP contrast in each term, and there is a locative PP contrast in each term. Although there is more than one contrast, Price (1990) would still consider this to be a full comparison since neither of the two contrasts involves the head of the comparison.

Sometimes when there is more than one contrast in a comparison, one of them does involve the head of the comparison.<sup>21</sup> Consider the following example:

- (13) Juan bought more shoes than Pedro sold socks.

In (13), there are three contrasts. One is the contrast between the subject DP's *Juan* and *Pedro*. Another is the contrast between the verbs *bought* and *sold*.<sup>22</sup> The third contrast involves the head of comparison itself, which in this sentence is the type of clothes item functioning as a direct object – *shoes* vs. *socks*. Since at least one of the contrasts involves the head of the comparison, Price (1990) would consider this to be a partial comparison. In this type of comparison, the second head is that contrast within the second term of comparison which is equivalent to the head of the comparison. This would be *socks* in (13).

The second term of a comparison, as Prytz defines it, is contained (collectively if there is more than one contrast present) within, or is identical to, the entire overt portion of that constituent which serves as a STANDARD OF COMPARISON and which Rijkhoek (1996) refers to as the SECOND ASSOCIATE of the comparison.

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<sup>21</sup> This assumes that in such comparisons, the head is a lexical element and not merely an abstract head denoting semantic degree.

<sup>22</sup> Tense is not contrastive here, although it certainly could be:

(i) Juan will buy more shoes today than Pedro socks yesterday.

In fact, tense can be the only contrast in some sentences:

(ii) Juan will buy more shoes today than he bought yesterday.

In this example, there are two contrasts: future vs. past, and *today* vs. *yesterday*.

In English, Spanish, and SLQZ, the second associate is conjoined<sup>23</sup> to roughly what Rijkhoek refers to as the FIRST ASSOCIATE, i.e., the first left-to-right string in the sentence that would be an entire proposition on its own if it were not for the presence of ER.<sup>24</sup> I illustrate these terms using the following example:

- (14) *Felipe is smarter than Rodrigo realizes.*

The first left-to-right string in this sentence that would be an entire proposition on its own if we were to ignore the presence of the morpheme ER (in this case, the suffix *-er* on the adjective *smart*) is *Felipe is smarter*. The constituent that is conjoined to it is *than Rodrigo realizes*. I deviate slightly from Rijkhoek (1996) in that I use the term second associate to include the conjunction separating the first associate from the second associate. Note that the second associate includes the second term of comparison, which in this example consists of the two contrasting elements *Rodrigo* and *realizes (that Felipe is x smart)*.<sup>25</sup> These two contrasts correspond to *Felipe* and *smart* in the first term of comparison.

The standard of comparison goes by many names in the literature. Prytz (1979) rejects the use of the traditional term SEGUNDO TÉRMINO DE LA COMPARACIÓN for the standard of comparison. As we see above, he reserves the term SEGUNDO TÉRMINO exclusively for the contrasting elements within the standard of comparison. He calls the entire standard of comparison the TÉRMINO SUBORDINADO DE LA COMPARACIÓN ‘subordinate term of the comparison’.

Price (1990) uses a similar English equivalent, SUBORDINATE CLAUSE OF

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<sup>23</sup> For now, the reader may take the term conjoined to mean either coordinated or standing in a relationship of matrix and subordinate, but I will show in Chapter 5 that there is no consistent syntactic difference between traditionally labelled matrix/subordination and coordination structures.

<sup>24</sup> In some languages, such as Japanese and Turkish, the second associate appears to be conjoined with or subordinated to an element to the right, at least at S-str.

<sup>25</sup> It is controversial whether the material shown here in parentheses is present at any syntactic level or if it is merely present in the semantic structure. This is part of a more general issue regarding the status of null complement anaphora, both in general and specifically in comparative constructions. The interested reader should consult Hankamer and Sag (1976) for a general discussion of DEEP vs. SURFACE anaphora and Sáez (e.g., 1990) for a discussion on comparative null complement anaphora.

THE COMPARISON, to refer to the standard of comparison in those comparatives which she terms SENTENTIAL COMPARATIVES, i.e., those which she claims contain an underlying entire clause as the standard of comparison.

Note that both Prytz's and Price's terms assume that the second associate of the comparison is subordinated to the first, as opposed to being coordinated with it. As I stated earlier, the issue of the way in which the second associate is linked to a preceding element is discussed in detail in Chapter 5.

Huddleston (1967) refers to the standard of comparison as the COMPARATIVE EXPANSION, the English equivalent to Rojas Nieto's (1990) Spanish term EXPANSIÓN COMPARATIVA.

Many refer to the standard of comparison as the COMPARATIVE CLAUSE, but this is problematic since it is not always an entire clause, at least not on the surface:

- (15) a. Felipe is taller than Rodrigo.  
b. Rodrigo is more silly than Mike is.  
c. Felipe bought more books than Mike bought magazines.

In (15a) the standard of comparison is superficially a mere DP, whereas in (15b), the standard of comparison seems to be a clause missing a predicate. The standard of comparison in (15c) seems like an independent, complete clause, but there appears to be some type of covert quantifier or degree adverbial before *magazines*.<sup>26</sup> This can be seen from the fact that *magazines* cannot be preceded by any overt quantifier when in a comparison such as (15c), whereas an independent clause that looks superficially just like the standard of comparison in (15c) can appear with overt quantifiers before *magazines*:

- (15c') \*Felipe bought more books than Mike bought **several / many / two** magazines.  
(15c'') Mike bought **several / many / two** magazines.

Comparatives such as (15c) are often referred to in the literature as cases of

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<sup>26</sup> It turns out that there is actually both a covert degree adverbial and a covert quantifier before *magazines*, as we will see in Chapter 4.

comparative subdeletion since the string following *than* is a complete proposition and is hence only missing a quantifier or degree expression.<sup>27</sup> Comparisons exhibiting subdeletion, which I take up in more detail later in this chapter and in Chapter 5, are a subcase of partial comparisons, a larger class of comparisons mentioned above and discussed below, some cases of which are missing constituents other than simply a quantifier and/or degree expression.<sup>28</sup>

### 3.1.5 The comparative particle

The second associate of the comparison or standard of comparison is connected to the first associate by an element internal to the former that goes by various names. Bresnan (1973) and Stassen (1985) refer to it as a COMPARATIVE PARTICLE, which corresponds to Prytz's (1979) Spanish term PARTÍCULA COMPARATIVA.

Prytz also uses two other terms to refer to the element connecting the two halves of the comparison. One is the general term PARTÍCULA SUBORDINANTE 'subordinating particle', which just like his term TÉRMINO SUBORDINADO DE LA COMPARACIÓN, implies that the standard of comparison is subordinated to the first part of the sentence. Another term that he uses takes a more neutral stance as to whether subordination or coordination is involved – CONJUNCIÓN COMPARATIVA 'comparative conjunction'. Prytz includes Spanish *de*, *que*, and *como* within this category.

Price (1990), on the other hand, only considers *que* and *como* to fall within her category of CLAUSE INTRODUCERS, a term which when translated into Spanish is similar to Rojas Nieto's (1990) term INTRODUCTOR but used to refer to a slightly

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<sup>27</sup> Some (e.g., Grimshaw (1987)) argue that this clause is not even missing a quantifier or degree, although I will argue otherwise.

<sup>28</sup> Two types of partial comparisons not considered to be cases of comparative subdeletion as I define it later in this chapter are comparative pseudogapping, such as in (i), and some cases of comparative ellipsis, such as in (ii):

- (i) Juan sold more books than Tim did egg cartons.
- (ii) Juan sold more books than egg cartons.

different set of elements. For Rojas Nieto, an introductor can be either *que* or *de* (she does not address comparisons of equality), although she takes *de* to be the marked option. In Price's theory, on the other hand, Spanish *de* introduces only a phrase rather than a clause, so it is a separate type of element than *que* and *como*.

Price also presents some terminology suggested by Anderson (1983). He apparently uses the term LINKS in the same way that Bresnan (1973) and Stassen (1985) use COMPARATIVE PARTICLE. For Anderson, a PARTICLE is only an ordinary LINK – all it does is connect the first clause of the comparison and the standard of comparison. ADPOSITIONS (i.e., prepositions and postpositions) and CASE-MARKING, on the other hand, are examples of actual COMPARATIVE MARKERS. A comparative marker is an element which “distinguishes a comparison of inequality from a comparison of equality” (Anderson (1983), quoted in Price (1990, p.3)). This definition implies that a comparative marker could be something other than the two things mentioned by Anderson – adpositions and case-marking. For example, it could be the comparative particle in the sense of Bresnan (1973) and Stassen (1985) in some cases, such as English *than* or Spanish *que*. It could alternatively be ER itself, or even something like the EXPLETIVE NE that shows up in French comparisons,<sup>29</sup> as suggested by Price.

In any case, I will use the term COMPARATIVE PARTICLE<sup>30</sup> to describe any preposition or clausal conjunction<sup>31</sup> which links the first half of a comparison to the standard of comparison. What I call the comparative particle links the first and second associates of a comparison and is contained within the second associate. As

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<sup>29</sup> I refer the interested reader to Price (1990) for information on the distribution of this element and an analysis of it.

<sup>30</sup> Those elements which I call comparative particles are not particles in the standard usage of the term PARTICLES – i.e., comparative particles are not necessarily prosodically weak, minor sentence constituents.

<sup>31</sup> I use the term CLAUSAL CONJUNCTION to refer to what are traditionally referred to as coordinators and complementizers, and without the adjective *clausal*, the term CONJUNCTION will include not only coordinators and complementizers but also prepositions (following Rijkhoek (1996)).

we will see in this chapter and in Chapter 5, the comparative particle may occur within a string of various elements that separate the first associate from the second term of the comparison. In such cases, I consider only the first element of the string to be the comparative particle.

In many languages, comparisons cannot be or are not always formed with a comparative particle, but I will restrict my discussion to those comparatives that do involve a comparative particle.<sup>32</sup>

The choice of comparative particle in those languages which have more than one available is determined by both the type of comparison, i.e., comparison of equality vs. comparison of inequality, as well as the syntactic and semantic nature of the standard of comparison.

### 3.1.6 Types of standards

Huddleston (1967) makes a distinction between EXPLICITLY DEFINED STANDARDS and IMPLICITLY DEFINED STANDARDS. Of the former type, he offers the following examples, claiming that the comparative expansion is a NGp (a nominal group):

- (16) Mary bought more records than ten.
  - (17) The car was travelling faster than 90 m.p.h.
  - (18) The attacks come as frequently as once a day.
- [Huddleston's examples (9)-(11), underlines mine]

In each of these examples, the standard is a numeral or a measure phrase.

On the other hand, he considers all implicitly defined standards to be clausal in nature, even though such a clause "may be realized in surface structure by a single NGp" (p.92). He takes all of the sentences in (2), repeated here, to involve this type of standard.

- (2)    a.    Mary bought more records than Peter.
- b.    Mary achieved more than Peter.
- c.    Mary talks more than Peter.
- d.    Mary is more talkative than Peter.

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<sup>32</sup>I refer the interested reader to Stassen (1985) for information on non-particle comparisons. Stassen's extensive typology encompasses a wide range of languages and constructions.

- e. Mary bought a more expensive car than Peter.
  - f. Mary talks more quickly than Peter.
- [= Huddleston's (8)]

Thus, whereas *ten* is a number of records smaller than the number of records that Mary bought, *Peter*, in (2a), is not a number of records exceeded by the number that Mary bought, but rather, an individual who also bought some number of records.<sup>33</sup> It is the number of records that this second individual bought, in fact, though not mentioned, that is smaller than the number of records that Mary bought.

In a comparison of adjectival degree, such as (9), repeated here and represented schematically in (9'), it is not as clear whether it is a covert degree adverbial, representing the degree to which Felipe is tall, rather than the DP *Felipe* itself, representing Felipe's height, which serves as a standard of comparison:

- (9) Rodrigo is taller than Felipe is tall.
- (9') {Rodrigo is taller than **Felipe** is [d tall].}<sup>34</sup>  
[where d is the degree to which Felipe is tall]

If the word *Felipe* is construed as standing for Felipe's height, then it is an explicit standard of comparison. Alternatively, if the schema in (9') is correct, then the standard of comparison is implicit. The fact that English always uses *than* in comparisons of inequality may obscure evidence favoring a conclusion either that this comparison has an explicit standard or that it has an implicit standard. Other languages, such as Spanish and SLQZ, use a variety of comparative particles, the choice of which often indicates whether a given comparison has an explicit or implicit standard. The distribution of comparative particles in these languages is given in §3.4 and analyzed in Chapter 5.

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<sup>33</sup> As pointed out to me by Pamela Munro (p.c.), this number could be zero.

<sup>34</sup> Some may claim that there is not actually any degree (or quantifier) in the position indicated (e.g., Grimshaw (1987)). I show in Chapter 4, however, that there in fact is.

### 3.1.7 Justifying the distinction between full and partial comparisons

Before beginning the next section, I would like to pause here to justify Price's (1990) distinction between full comparisons and partial comparisons as promised. Recall that in a full comparison, the first term of comparison is distinct from the head of the comparison, whereas the first term of comparison and head are non-distinct in a partial comparison.

Partial comparisons involve the degrees of two distinct, but compatible gradable properties. Therefore, in partial comparison, an overt element corresponding to what is traditionally taken to be the head of the comparison,<sup>35</sup> which is usually the closest syntactic correlate to the compared property, surfaces in the second associate of the comparison, forming a contrast in addition to any others that may also be present. In fact, this element may serve alone as the second term of comparison in some cases, such as (19),<sup>36</sup> where the pronoun *he* does not form a contrast, under the interpretation indicated by indexation:

- (19) Rodrigo; read more books than he; read **magazines**.<sup>37</sup>

It is not ungrammatical, at least in English, although it is stylistically somewhat marked, to repeat the head of the comparison in the second associate:

- (20) John snores more than Bill snores.<sup>38</sup>

Note that, at first glance, it may appear in a sentence like (20) that the compared property is the denotation of the verb, here the set of those individuals who

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<sup>35</sup> I mainly disagree with this terminology with regard to amount comparisons and in verbal extent comparisons. In the former, I take MUCH, an abstract quantifier, to be the head of the comparison, and in the latter, I take MUCH or a covert extent or frequency adverbial to be the head of the comparison.

<sup>36</sup> The pronoun *he* could be stressed contrastively if used deictically rather than anaphorically, referring to some other individual. In this case, it, too, would serve as a contrast within the second term of the comparison.

<sup>37</sup> In my analysis, *magazines* is not actually the second head. Instead, the covert abstract quantifier MUCH which takes *magazines* as a complement is the second head. For that matter, the first head is also MUCH, not *books*.

<sup>38</sup> I claim that the actual first and second head of a verbal extent comparison such as this are a covert extent adverbial MUCH.

snore. As I discuss in Chapter 4, however, the real compared property in such a comparison is an extent adverbial. This extent adverbial surfaces in disguised form in the first associate, as the abstract MUCH part of *more*<sup>39</sup> – that is, *more* is, at least in this instance, a complex morphological form containing MUCH, singular agreement,<sup>40</sup> and ER. This extent adverbial is entirely covert in the second associate. Thus, although Price (1990) would consider the second instance of *snores* to be a focus of comparison, and although the first instance might be considered by some to be the head of the comparison, the denotation of *snores* is not actually the compared property.<sup>41</sup> That seems to be why it is allowed to surface in the second associate. Any stylistic markedness at all, then, is due to repetition of part of the common ground, a term defined below.

A similar situation arises in an amount comparison such as in (21):

- (21) ??John bought more books than Bill bought books.

Although the traditionally assumed head of the comparison is *books*, there is a covert amount expression associated with it containing MUCH which is the actual compared property. MUCH takes *books* as its complement. The hidden amount expression is composed of this abstract quantifier element MUCH plus plural number agreement, which taken together with ER form the word *more*. That is, this instance of *more* is composed of *many* plus ER. It is unexpected for (21) to be so

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<sup>39</sup> I use the term abstract since MUCH is not transparently a morphological component of *more* and since a non-comparative sentence would employ *a lot* much more naturally than *much*:

- (i) ??John snores much.
- (ii) John snores a lot.

I take MUCH to symbolize an abstract extent adverbial that does not surface alone in post-verbal position. It does surface if it modifies a degree expression (iii) or if a degree expression modifies it (iv):

- (iii) John snores much more than I can take.
- (iv) John snores too much.

<sup>40</sup> I conflate the notions of singular agreement, mass noun agreement, abstract noun agreement, and abstract extent agreement. This may prove to be overly simplistic but I will assume this to be unproblematic in this work.

<sup>41</sup> In fact, recall that neither Prytz nor Rojas Nieto considers the morpheme ER contained in *more* in such an example to definitively modify a verb.

much less acceptable than (20). Perhaps the reason why this is so is that *books* is a complement to the head of the comparison, even though it is not the head of the comparison, whereas *snores* in (20) is neither the head of the comparison nor some sort of complement to it.

In any case, when the head of the comparison truly does coincide with the compared property, then it is almost completely ungrammatical (i.e., even worse than (21)) to repeat it in the second associate:

- (22)   ?\*John is taller than Bill is tall.
- (23)   \*This story is better than that one is good.  
              [where *better* =*good* + ER]
- (24)   \*John runs more quickly than you run quickly.

In fact, if we take MUCH to be the compared property in the following two sentences, we can see that we cannot repeat the syntactic element representing the compared property in the second associate of the comparison here, either:

- (25)   \*John bought more books than I bought many books.  
              [where *more* = ER.MUCH.pl<sup>42</sup> and *many* = MUCH.pl]
- (26)   \*John ran more than I ran (very) much.<sup>43</sup>  
              [where *more* = ER.MUCH and *much* = MUCH]

We get interesting results if we modify (20)-(24) so that the head of the comparison is not repeated in the second associate of the comparison, but rather, is paralleled by a distinct lexical item:

- (20') John snores more than Bill sneezes.
- (21') John bought more books than Bill bought records.
- (22') ?John is taller than Bill is fat.
- (23') \*This story is better than that one is well-known.  
              [where *better* =*good* + ER]

<sup>42</sup> I will gloss *more* as ER.MUCH.pl in amount comparisons involving count nouns, whereas I will gloss *more* as ER.MUCH in amount comparisons involving mass nouns, abstract nouns, or extent adverbials – I omit marking singular agreement to save space. In the case of adjectival or adverbial comparisons, I will gloss *more* as simply ER. The reasons for these choices will become clear in the analysis of *more* and ER that I give in Chapter 4.

<sup>43</sup> It is true that the ungrammaticality of (26) might be partially due to the fact that in general, *a lot* is a more natural post-VP extent adverbial in English than *much*. Nevertheless, (26) would still be out even if we were to take *a lot* to be the syntactic manifestation of the compared property instead of *much*:

(i)   \*John ran more (=*a lot* + ER) than I ran *a lot*.

- (24') John runs more quickly than you run elegantly.

We see in (20'), (21') and (24) that creating an additional contrast in the second term improves the acceptability of the sentence (cf. (20), (21) and (24)). At first glance, it appears that this type of modification does not help much in the case of an adjectival head of comparison (22') and (23'). However, usage of *more* instead of the suffix *-er* accomplishes the improvement that we were seeking:

- (22'') John is more tall than Bill is fat.  
(23') a. ?\*This story is more good than that one is well-known.  
b. ?This story is more interesting than that one is well-known.  
c. This story is more scary than that one is funny.<sup>44</sup>

There seems to be some idiosyncratic variation among adjectives with respect to their ability to appear in a partial comparison. This variation depends on several factors, such as semantic parallelism/compatibility between the two adjectives used and whether or not the comparative form of each one is suppletive or regular.

Nevertheless, we see from the preceding data that in a partial comparison, a compared adjective is often preceded by *more* instead being suffixed with ER, even in the case of adjectives that in full comparisons undergo *-er* suffixation rather than being preceded by *more*. I do pause here to note, though, that a major implication of such a pattern is that the use of *more* may indicate a looser syntactic relationship in a specific case between what I have termed the head of the comparison and ER, and in an analogous manner, a looser semantic relationship between the denotation of the head of the comparison and the compared property. That is, the use of *more* instead of *-er* may indicate in certain instances that ER is taking scope over an entire VP or clause rather than just over a simple lexical head.

As we have just seen, material in the second associate that is identical to material in the first associate tends to be null (whether base-generated that way or

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<sup>44</sup> I thank Pamela Munro for this example and her suggestion (p.c.) that this type of construction seems to be relatively more grammatical when the terms are relatively more parallel.

deleted). Take (27) for example:

- (27) José is more grouchy on Mondays than Juan (is).

According to the terminology I have laid out, *Juan* is the second term of the comparison – it contrasts with the matrix subject *José*. The copula *is* is optionally absent in the second associate. The adjective *grouchy*, which is the head of the comparison, is covert in the second associate of the comparison. Therefore, this is a full comparison.

Prytz (1979) uses the term *fondo común* to refer to the material which is common to both the first and second associate, other than the head of the comparison, whether overt or covert in the second associate. The best English translation of Prytz's Spanish term may be *common ground*, and this is how I will refer to this notion in the course of the dissertation.<sup>45</sup>

In (27), the common ground is the time adverbial *on Mondays*.<sup>46</sup> The adjective *grouchy* represents the property measured in both associates of the comparison, but according to Prytz, this is not part of the common ground. Semantically, it represents the RASGO COMPARADO ‘compared feature’, but syntactically, it is the head of the comparison, according to the terminology I am adopting.

If only the time adverbial differs (28), or if both the subject and time adverbial differ (29), the comparison remains a full comparison, both according to Price's definition and as evidenced by syntactic properties discussed below.

- (28) José is more grouchy on Mondays than (he is) on Tuesdays.  
(29) José is more grouchy on Mondays than Pedro is on Tuesdays.

The common ground in (28) is *José*, whereas in (29), there is no common ground at all.

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<sup>45</sup> For the sake of simplicity, I do not mention tense as part of the common ground even when there is no tense contrast between the two terms of the comparison.

<sup>46</sup> Prytz does not take functional elements such as the copula *es* ‘is’ to be part of the common ground. I sometimes take it to be so in order to simplify the diagnostic operation discussed below, since I believe that nothing important in this diagnostic test hinges on whether or not it is part of the common ground.

In some way left to be refined in Chapter 4, being grouchy alone (cf. (29)), rather than a more complex property composed of being grouchy plus another element of the sentence, such as being grouchy on day X of the week (cf. (27)), or person Y being grouchy (cf. (28)), is the property whose degree is represented syntactically by that constituent which is most directly tied to ER, i.e., the compared property, even if there is a common ground between the two associates of the comparison. Despite the fact that various elements may be covert along with the element equivalent to the head that is understood in the second associate, any of them may surface, especially if contrastive, without changing various syntactic properties to be discussed below. Whether they are overt or covert does not affect whether or not the comparison is classified as full or partial.

On the other hand, if another property parallel to grouchiness/being grouchy is realized overtly in the second term of comparison, i.e., if there is a second (usually distinct) head, then the comparison is classified as a partial comparison, regardless of how many or few other contrasts are present:

- (30) José is more grouchy on Mondays than (he is) sleepy.
- (31) José is more grouchy on Mondays than (he is) sleepy on Tuesdays.
- (32) José is more grouchy on Mondays than Pedro is sleepy (on Mondays).
- (33) José is more grouchy on Mondays than Pedro is sleepy on Tuesdays.

The common ground in (30)-(33) is as follows: (30) *José is...on Mondays*; (31) *José is*, (32) *on Mondays*, and (33) no common ground. We already know that Prytz's definition excludes the head from being considered part of the common ground. Nevertheless, in a full comparison, the head is linked to a property shared by both terms, and one could therefore conceivably prefer to modify Prytz's terminology in order to include the head as part of the common ground. In a partial comparison, however, the head does not represent a property shared by both terms, unless one were to refine the notion of head of a comparison. Semantically speaking, Prytz does refer to the compared feature in partial comparisons as being pure degree alone. Note, though, that this compared feature does not match the syntactic head

of the comparison as the latter has been traditionally envisioned.

To claim that (30)-(33), which are partial comparisons, are fundamentally different from (27)-(29), which are full comparisons, assumes that a semantic degree is represented by a syntactic constituent which is locally associated with a specific lexical item, namely, what I call the comparative head, rather than being loosely related to an entire proposition. If the syntactic constituents denoting degrees were loosely related to an entire proposition, then there should not be a single localizable element whose overtness or covertness determines whether a comparison is full or partial, a distinction which I claim bears syntactic and semantic ramifications. There should be no distinction between a full comparison and a partial comparison, nor any difference between a second head and any other contrast in the second term of comparison.

There is, however, such an element which is treated distinctly from other contrasts in the literature (e.g., Price (1990)) – the second head. Constituents in the second associate other than second head may be covert or overt – they are usually covert unless they form a contrast with some element in the first associate – without changing the classification of the comparison, according to Price's (1990) terminology, from that of full comparison to partial comparison. In contrast, if the second head surfaces overtly, then the comparison is classified as a partial comparison, no matter what the behavior of the other constituents is.

Sáez (1993) makes a distinction that more or less correlates with the full comparison vs. partial comparison distinction. He discusses Keenan's (1987) claims about sentences like the following:

- (33) More students than teachers are vegetarians.

Keenan claims that (33) contains a conservative<sup>47</sup> two-place determiner *more-than*, a claim which Sáez accepts as correct. Sáez distinguishes between this

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<sup>47</sup> See Keenan (1987) or Sáez (1993) for a discussion of conservativity with respect to determiners.

two-place comparative determiner, which he calls *más-que*<sub>2</sub>, and a one-place comparative determiner which he calls *más-que*<sub>1</sub>. The former type maps two common noun denotations into one or more properties, whereas the latter type maps one common noun denotation into two (or more) properties, such as in the following sentence:

- (34)      Más estudiantes son músic-o-s que vegetarian-o-s.  
ER.MUCH.m.pl students be.3pl musician-m-pl that vegetarian-m-pl  
'More students are musicians than vegetarians' [= Sáez's #9, gloss is mine]

Thus, *more-than*<sub>2</sub> maps the denotations of *students* and *teachers* into the property *vegetarians* in (33), while *more-than*<sub>1</sub> maps the denotation of *students* into the two properties *musicians* and *vegetarians* in (34).

In most cases, wherever Sáez proposes the presence of *más-que*<sub>1</sub>, the sentence would be considered by Price to be a full comparison. Similarly, most cases of *más-que*<sub>2</sub> corresponds to cases of partial comparisons, some of which are cases of comparative subdeletion. The distinction between *más-que*<sub>1</sub> and *más-que*<sub>2</sub> corresponds to a semantic difference (a one-place determiner vs. a two-place determiner) and syntactic differences, as seen below.

One type of syntactic difference between full and partial comparisons involves comparative extraposition,<sup>48</sup> which I discuss in § 3.5.

An additional syntactic test which distinguishes full and partial comparisons, which I will term a REDUCTION OPERATION, is mentioned in Prytz (1979) and operates as follows. This operation involves removing all of the following elements from an originally grammatical comparison: ER, the head of the comparison, any complement or adjunct within the head's phrasal projection if there is one, the first term of comparison, any overt elements of the common ground duplicated in the second associate (including pro-forms) if not already removed in the first associate, and the comparative particle. Upon removal of all of this material, a partial

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<sup>48</sup> Under the theoretical framework assumed in this work, these are not really cases of extraposition, but rather, stranding. This is discussed in §3.5.

comparison remains grammatical. In the case of full comparisons, however, the resulting string is either not a grammatical string or is radically different in meaning than what was originally intended:<sup>49</sup>

- (35) full \**José* is ~~more grouchy~~ on Mondays than *Juan*.  
[1st term = *José*, head = *grouchy*, common ground = on Mondays]
- (36) full \**José* is ~~more grouchy~~ on Mondays than on Tuesdays.  
[1st term = on Mondays, head = *grouchy*, common ground = *Juan*]
- (37) full \**José* is ~~more grouchy~~ on Mondays than *Pedro* is on Tuesdays.  
[1st term = *José*...on Mondays, head = *grouchy*, no common ground]
- (38) part. ??*José* is ~~more grouchy~~ on Mondays than *sleepy*.  
[1st term is *grouchy*, head = *grouchy*, common ground = *José*...on Mondays]  
but cf. ✓ *José* is *sleepy* on Mondays. / On Mondays, *José* is *sleepy*.
- (39) part. *José* is ~~more grouchy~~ on Mondays than *sleepy* on Tuesdays.  
[1st term = *grouchy* on Mondays, head = *grouchy*, common ground = *José*]
- (40) part. *José* is ~~more grouchy~~ on Mondays than *Pedro* is *sleepy*.  
[1st term = *José* is *grouchy*, head = *grouchy*, common ground = on Mondays]
- (41) part. *José* is ~~more grouchy~~ on Mondays than *Pedro* is *sleepy* on Tuesdays.  
[1st term = *José* is *grouchy* on Mondays, head = *grouchy*, no common ground]
- (42) full \**John* put ~~more books~~ on the table than on the dresser.  
[1st term = on the table, head = *books*, common ground = *John* put]
- (43) part. *John* has slept on ~~more park benches~~ than real beds.  
[1st term = *park benches*, head = *park benches*, common ground = *John* has slept on]
- (44) full \**John* has ~~more conversations~~ with girls than with guys.  
[1st term = with *girls*, head = *conversations*, common ground = *John* has...with...]

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<sup>49</sup> An example of this latter result comes from Prytz (1979, his #27):

(i) Pedro es más alto que su padre. → *Pedro* es su padre.

This is no longer a statement about height at all, and the reference of *su* must now obligatorily be disjoint from that of *Pedro*.

- (45) full \*John has ~~more conversations with girls from California than~~ from Japan.  
 [1st term = from California, head = conversations, common ground = John has]
- (46) full \*John has ~~more conversations with girls from California than~~ with girls from Japan.  
 [1st term = with girls from California, head = conversations, common ground = John has...with girls from...]
- (47) part. John argues with ~~more girls than~~ boys.  
 [1st term = girls, head = girls, common ground = John argues with]
- (48) full \*John argues with ~~more girls from Japan than~~ from California.  
 [1st term = from Japan, head = girls, common ground = John argues with...from...]
- (49) part. John argues with ~~more girls from Japan than~~ girls from California.  
 [1st term = girls from Japan, head = girls, common ground = John argues with...from...]

Essentially what this test shows is that a full comparison only contains one overt instance of the head, whereas a partial comparison contains one head in the first associate and a second head in the second associate. This is, one again, related to the motivation for the term comparative subdeletion, in that in this subcase of partial comparisons, all that is missing from the second associate is a quantifier or a degree adverbial – no lexical arguments or predicates are missing.

If the head of the comparison is an argument of the matrix predicate, then removing the head from the first associate will result in ungrammaticality except in the case of partial comparisons. This follows from the fact that a partial comparison in which the head is an argument contains a compatible element in the second term, namely the second head, able to satisfy one of the matrix predicate's theta roles after the reduction operation in the same way that the formerly present head of the comparison did.

If the head of the comparison is the matrix predicate itself, then the reduced sentence will be incomplete unless the second associate contains a compatible substitute, i.e., there must be a second head. This is only the case in a partial

comparison.

If the head of a comparison is an adjunct, then the reduction of the original sentence as described above will not create ungrammaticality, even in the case of full comparison, because the presence or absence of a given adjunct does not affect whether a proposition is complete (although a given sentence without a given adjunct has a different interpretation than the same sentence with that adjunct):

- (50) full ✓John goes out ~~more often with girls than~~ with guys.  
[1st term = with girls, head = often, lose info. on frequency]
- (51) full ✓John goes out ~~more often with girls from California than~~ from Japan.  
[1st term = from California, head = often, lose info. on frequency]
- (52) full ✓John goes out ~~more often with girls from California than~~ with girls from Japan.  
[1st term = with girls from California, head = often, lose info. on frequency]

Note that even though (50)-(52) are grammatical, the lack of adjunct does reflect a loss of information from the original sentence, beyond the type of loss that all of these sentences undergo in this reduction operation, i.e., the loss of comparison. Thus, the overall pattern, despite the complication mentioned here, does serve to distinguish most cases of partial vs. full comparisons.

A controversial case of whether a comparison is full or partial occurs when there is no overt second head and yet some element corresponding to the head's complement or an adjunct within its maximal projection is paralleled in the second associate by a non-identical element (cf. (55), (56), (58), (66), and (67) below). The following consists of a reduction paradigm, both with and without overt second heads, for the adjective *proud*, which may take a source argument, and a reduction paradigm for the noun *girls*, which may be modified by a source adjunct:

- (53) José is more proud of me than Juan (is).  
[1st term = José, head + compl. = proud of me]  
reduction:  
\*José (is) ~~more proud of me than~~ Juan (is). →  
full comparison

- (54) ?José is more proud of you than he is proud of me.  
 [1st term = of you, head + compl. = proud of you, common ground  
 repetition = he is]  
 reduction:  
~~José is more proud of you than he is proud of me.~~ →  
 partial comparison [original sentence is somewhat marginal]
- (55) José is more proud of you than of me.  
 [1st term = of you, head + compl. = proud of you]  
 reduction:  
~~\*José is more proud of you than of me.~~ →  
 full comparison
- (56) José is more proud of you than he is of me.  
 [1st term = of you, head + compl. = proud of you, common ground  
 repetition = he is]  
 reduction:  
~~\*José is more proud of you than he is of me.~~ →  
 full comparison
- (57) ??José is more proud of me than Pedro is proud of you.  
 [1st term = José...of me, head + compl. = proud of me]  
 reduction:  
~~José is more proud of you than~~ Pedro is proud of you. →  
 partial comparison [but original sentence is marginal]
- (58) José is more proud of me than Pedro is of you.  
 [1st term = José...of me, head + compl. = proud of me]  
 reduction:  
~~\*José is more proud of me than~~ Pedro is of you. →  
 full comparison
- (59) José is more proud of me than ashamed of me.  
 [1st term = proud, head + compl = proud of me]  
 reduction:  
~~José is more proud of me than~~ ashamed of me. →  
 partial comparison
- (60) José is more proud of me than he is ashamed of me.  
 [1st term = proud, head + compl = proud of me, common ground  
 repetition = he is]  
 reduction:  
~~José is more proud of me than he is~~ ashamed of me. →  
 partial comparison

- (61) José is more proud of me than ashamed of you.  
 [1st term = proud of me, head + compl. = proud of me]  
 reduction:  
~~José is more proud of me than~~ ashamed of you. →  
 partial comparison
- (62) José is more proud of me than he is ashamed of you.  
 [1st term = proud of me, head + compl. = proud of me, common  
 ground  
 repetition = he is]  
 reduction:  
~~José is more proud of me than he is~~ ashamed of you. →  
 partial comparison
- (63) José is more proud of me than Pedro is ashamed of me.  
 [1st term = José is proud, head + compl. = proud of me]  
 reduction:  
~~José is more proud of me than~~ Pedro is ashamed of me. →  
 partial comparison
- (64) José is more proud of me than Pedro is ashamed of you.  
 [1st term = José is proud of me, head + compl. = proud of me]  
 reduction:  
~~José is more proud of me than~~ Pedro is ashamed of you. →  
 partial comparison
- (65) ?John goes out with more girls from Japan than from California.  
 [1st term = from Japan, head + adjunct = girls from Japan]  
 reduction:  
~~\*John goes out with more girls from Japan than~~ from California. →  
 full comparison
- (66) John goes out with more girls from Japan than girls from California.  
 [1st term = from Japan, head + adjunct = girls from Japan]  
 reduction:  
~~John goes out with more girls from Japan than~~ girls from California. →  
 partial comparison
- (67) John goes out with more girls from Japan than he does girls from  
 California.  
 [1st term = from Japan, head + adjunct = girls from Japan, common  
 ground repetition = he does]  
 reduction:  
~~John goes out with more girls from Japan than he does~~ girls from  
 California. →  
 partial comparison

Note that repeating the head of a comparison, as in (54), (57), and (65), induces a comparison to behave like a partial comparison as far as the reduction test is concerned, whereas the same sentences with no overt repetition of the head behave like full comparisons (cf. (55) and (56), (58), and (66) and (67), respectively). Sáez reports examples like (65) as involving *más-que*<sub>J</sub>, which is what we would expect based on the correlation that we observed above between *más-que*<sub>J</sub> and full comparisons. Prytz, on the other hand, reports a similar example but considers the understood but null repeated head to be part of the second term:

- (68) Juan escribe más cartas aburrid-a-s que interesante-s.  
 Juan write.3sg ER.MUCH.f.pl letters boring-f-pl that interesting-pl  
 'Juan writes more boring letters than interesting ones.' [=Prytz's #14]  
 [Prytz: 1st term = cartas aburridas, 2nd term = cartas interesantes]

The reduction test indicates that full comparison is at work, at least in Spanish:

- (68') \*Juan escribe más cartas aburridas que interesantes.  
 [1st term = (?cartas) aburridas, head = cartas]

The reduction test gives a somewhat unclear result in English:

- (68'') Juan writes ~~more-boring letters than~~ interesting ones.  
 [1st term = boring (?letters), head = letters]

The reduced sentence in (68'') is grammatical (although there must be an antecedent available for the pro-form *ones* in the discourse context for (68'') to denote clearly). Thus, one might consider the English example to involve partial comparison. Of course, if our criterion of felicitousness were whether or not the remaining string forms a sentence capable of standing on its own without requiring any antecedents provided in the discourse context, then (68'') would prove to be a full comparison in English as well.

Since two different languages can behave differently with respect to a syntactic test for more or less the same sentence, it is possible that the reduction test only reveals superficial syntactic differences. Nevertheless, I will continue to em-

ploy the terms full and partial as labels for various comparisons throughout the dissertation, both since this distinction is a useful expository device and since there are some syntactic (e.g., extraposition behavior (§3.5)), and semantic (this section) differences .

### 3.1.8 Summary of fundamental nomenclature

- 1) A comparison of the type surveyed in this dissertation is divided into two halves: a FIRST ASSOCIATE and a SECOND ASSOCIATE, which are linked to one another by a COMPARATIVE PARTICLE.
- 2) The second associate is or contains a STANDARD OF COMPARISON.
- 3) A comparison involves at least one CONTRAST between the first associate and the second associate but may involve several. All of the elements in the first associate which, individually, form contrasts with corresponding elements in the second associate are called, collectively, the FIRST TERM OF COMPARISON. The corresponding elements in the second associate together form the SECOND TERM OF COMPARISON, which is the actual standard of comparison.
- 4) Comparisons of inequality are marked by a special morpheme, represented abstractly as ER, whereas comparisons of equality involve a special morpheme termed EG.
- 5) There is usually one lexical item more closely tied syntactically to ER (or EG) than any other in the comparative sentence. It is referred to as the HEAD OF THE COMPARISON. If it is mirrored by a compatible element in the second associate, in a partial comparison, this second element is referred to as the SECOND HEAD (cf. Price's term FOCUS OF COMPARISON).
- 6) A comparison is employed to show that some property, which I term the COMPARED PROPERTY, is held either equally or unequally by two entities, the first and second terms of the comparison. The compared property is often the denotation of the head of the comparison, perhaps always so if the definition of the head is adjusted properly.

### 3.2 Characteristics of the comparative morpheme ER

Here I present the distribution of the comparative morpheme ER and make some preliminary observations regarding its morphological, syntactic, and semantic nature.

#### 3.2.1 Distribution of ER

First, I review the distribution of the comparative marker ER in English, in order to orient readers in a language familiar to the largest readership, and then I move on to Spanish and San Lucas Quiaviní Zapotec.

##### 3.2.1.1 English

As we saw in §3.1, there are many types of heads with which the morpheme ER may interact in a comparison. In English, ER manifests itself in apparently one of two ways. First, it may surface in certain synthetic<sup>50</sup> comparatives as the suffix *-er*, hence the label ER, on the comparative form of almost any monosyllabic adjective<sup>51</sup> (70), some disyllabic adjectives (71), and some adverbs not formed

<sup>50</sup> The term SYNTHETIC INFLECTION refers to a type of inflection in which an inflectional morpheme is bound and is affixed to the lexical morpheme that it modifies. Such inflection may take place in either the lexicon or in the syntax, depending on one's theoretical assumptions. ANALYTIC INFLECTION, on the other hand, refers to a type of inflection in which an inflectional morpheme is free and is syntactically independent from the lexical morpheme that it modifies.

<sup>51</sup> One systematic exception is the case of participial adjectives: e.g., *more pleased* vs. *\*pleaseder*. This may be due to the partially verbal nature of participles.

Also, in cases of comparative ellipsis involving either partial comparisons, such as in (i), or so-called epistemic or metalinguistic comparison (McCawley (1988) and Napoli (1983)), as in (ii), even a monosyllabic adjective cannot be suffixed with *-er*:

- (i) Pedro is more sly than poor, so he always manages to feed himself and his family.
- (i') \*Pedro is slier than poor, so he always manages to feed himself and his family.

In (i), Pedro is both sly and poor, but he is more sly. Comparative subdeletion in general will be explained later in this chapter.

- (ii) Mary is more calm than shy.
- (ii') \*Mary is calmer than shy.

In (ii), even though Mary may seem shy, it is really more the case that Mary is just calm than it is the case that she is actually shy. In epistemic / metalinguistic comparisons such as this, the extent to which each of two entire propositions is true is at stake. The two propositions being compared in (ii) are (iii) and (iv):

- (iii) Mary is calm.
- (iv) Mary is shy.

in *-ly* (72).

Synthetic comparatives via suffixation of *-er*

- (70) a. Rodrigo is **nicer** than Mike.  
b. My little sister is **taller** than your little brother.
- (71) a. We are **happier** now than ever before.  
b. The roads in Paris are **narrower** than the ones in Los Angeles.
- (72) a. Jim's coworkers work **harder** than he does.  
b. Deer run **faster** than cows.

I also claim that ER may surface synthetically in the word *more* in amount comparisons (73) and verbal extent comparisons (74):<sup>52</sup>

- (73) a. Rodrigo bought **more** books than Felipe.  
[where *more* =ER.MUCH.pl]  
b. Rodrigo spent **more** money than I did.  
[where *more* =ER.MUCH]
- (74) a. UCLA students study **more** than usual right before finals.  
[where *more* =ER.MUCH]  
b. I call Bill **more** than I call anyone else I know.  
[where *more* =ER.MUCH]

Lastly, as we saw earlier (Huddleston (1967)), the morpheme ER also occurs in analytic comparatives in what I claim is a different version of the word *more*, which I will claim is just an alternative form of ER in the case of the following types of adjectival and manner adverbial comparisons.<sup>53</sup> It occurs before many disyllabic adjectives (some of which also allow-*er* suffixation as an alternative)<sup>54</sup> (75), before polysyllabic adjectives (76), and before most types of adverbs (77):

Analytic comparatives [*more* =ER]

- (75) a. José is **more** foolish than Héctor.  
b. My new boyfriend is **more** jealous than my last boyfriend.

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<sup>52</sup> I thank Dominique Sportiche for pointing out (p.c.) that one might consider the word *more* to be a synthetic comparative of expressions of amount or degree, such as *a lot*, *much*, *many*, and *very*. I do consider this to sometimes be the case but only in comparisons of amount or verbal extent. This issue involves looking very closely at what the compared property is in various cases, reconsidering the identity of the head, and making decisions about the structures involved.

<sup>53</sup> I discuss this issue in Chapter 4.

<sup>54</sup> E.g., friendlier or **more** friendly.

- (76) a. We were **more** sceptical than the other prospective buyers.  
       b. You seem **more** taciturn than usual.
- (77) a. Bill's roommate behaves **more** inconsiderately than mine does.  
       b. Abraham visits me **more** often than I visit him.

Note that there is an odd asymmetry here with respect to the relative word order between *more* and the element traditionally considered to be the head of the comparison: *more* occurs before nouns (comparison of amounts) and before adjectives and adverbs (comparison of degree) but after verb phrases (comparison of extent or frequency). An analysis of this asymmetry is presented in Chapter 4.

Spanish, which we turn to next, exhibits an analogous split behavior with regards to the positioning of *más*.

### 3.2.1.2 Spanish

With very few exceptions, Spanish adjectival and adverbial comparatives are analytic. The few synthetic adjectival and adverbial comparatives that there are in Spanish are historical remnants of Latin synthetic comparatives (and suppletives at that) as shown in Table 3.1. Note the string *-or*, a historical remnant of the Latin comparative suffix *-or*, akin to the English *-er*.

<u>positive degree</u>	<u>comparative degree</u>
bueno 'good' / bien 'well'	mejor 'better'
malo 'bad' / mal 'badly'	peor 'worse'
viejo 'old', grande 'great'	mayor 'older' / 'greater' / 'more significant'
joven 'young', pequeño 'small'	menor 'younger' / 'less significant'

In productive Spanish morphology, ER is manifested analytically in adjectival and adverbial comparatives, in the form of *más*, preceding the adjective (78) or adverbs (79) serving as the head of the comparison:

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<sup>55</sup> These adjectives are all given in their masculine singular form.

### Adjectives

- (78) a. El cielo está más gris que hace diez minutos.  
           the.m<sup>56</sup> sky be.3sg ER gray that<sup>57</sup> make.3sg ten minutes  
           ‘The sky is grayer than ten minutes ago’ [monosyllabic adj.]
- b. El español es más fácil que la geometría.  
           the.m Spanish be.3sg ER easy that the-f geometry  
           ‘Spanish is easier than geometry’ [disyllabic adj.]
- c. Mi<sup>58</sup> tío está más cansad-o que mi tía.  
           1sg.poss uncle be.3sg ER tired-m that 1sg.poss aunt  
           ‘My uncle is more tired than my aunt’ [participial adjective]
- d. Tu-s amigos son más apátic-o-s que  
           2sg.poss-pl friends be.3pl ER apathetic-m-pl that  
           l-o-s de Eduardo  
           the-m-pl of Eduardo  
           ‘Your friends are more apathetic than Eduardo’s’ [polysyllabic adj.]

<sup>56</sup> The gloss of a definite article in Spanish will only include number if the definite article is plural. Otherwise, it should be assumed that the definite article is singular.

<sup>57</sup> The word *que* has many functions in Spanish, the most common of which is as a complementizer, akin to English *that*. Therefore, I will gloss it as ‘that’ throughout, even when the translation of a sentence with *que* requires the word *than*.

<sup>58</sup> The morphology of Spanish possessive adjectives works in the following way. The possessor determines the lexical stem, and the possessee (the possessed object or person) determines number (always marked by the suffix *-s*) and in the case of the 1pl stem, gender agreement (marked by either the suffix *-o* or the suffix *-a* to indicate grammatical masculinity or femininity, respectively, of the possessee). The possessor-determined stems in Latin American Spanish are as follows (Castilian Spanish uses a grammatically second-person plural pronoun and related possessive forms, but these forms do not appear in this dissertation, so I will omit them in this chart):

1sg	2sg	3sg	1pl	3pl
mi	tu	su	nuestro-	su

Bear in mind that there are two grammatically third-person pronouns in Spanish which are semantically second-person: *Ud.* ‘you (singular, polite)’ and *Uds.* ‘you (plural, polite or informal in Latin American Spanish)’. None of the data in this dissertation pertains to the form *Ud.*, so all instances of the singular, informal second-person pronoun and related grammatical forms will simply be referred to as ‘2sg’, and all instances of *Uds.* and related forms will be referred to as ‘3pl’.

Having explained these details, I now present the notation I will use specifically for the glosses of possessive adjectives:

#### **The 1sg and 2sg stems**

(i) person and number of possessor, followed by the abbreviation ‘poss’, followed by ‘pl’ only if the possessee is plural.

#### **The 1pl stem**

(ii) person and number of possessor, followed by the abbreviation ‘poss’, followed by gender of possessee, followed by ‘pl’ only if the possessee is plural.

#### **The 3sg and 3pl shared stem**

(iii) person of possessor only, followed by the abbreviation ‘poss’, followed by ‘pl’ only if the possessee is plural.

### Adverbs

- (79) a. Este<sup>59</sup> profesor explica l-a gramática más  
           this.m professor.m explain.3sg the-f grammar ER  
                   detallada-mente que el otr-o.  
                   detailed-LY that the.m other-m  
                   'This professor explains the grammar in more detail than the other one'
- b. José trabaja más duro que Uds.  
       José work.3sg ER hard.n that 3pl.nom  
       'José works harder than you' [neuter adjective used adverbially]

I take instances of *más* in amount comparisons (80) and in verbal extent comparisons (81) to be instances of synthetic comparisons, the head of the comparison being the abstract element MUCH.<sup>60</sup>

### Nouns

- (80) a. Ernesto compró más libros que Luis.  
       Ernesto buy.pret.3sg<sup>61</sup> ER.MUCH.m.pl.<sup>62</sup> books that Luis  
       'Ernesto bought more books than Luis' [amount of count noun]

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<sup>59</sup> The number of a Spanish demonstrative adjective or pronoun will not be indicated in its gloss except in the case of plural number.

<sup>60</sup> In the case of verb followed by internal complements, i.e., direct objects and/or indirect objects, as opposed to subjects, más can intervene or appear after the entire verb phrase if the internal complement(s) is/are definite, such as proper nouns or nouns preceded by a definite determiner. Compare (i) vs. (ii) [The abbreviation *p.a.* stands for personal *a*, a grammatical particle used in Spanish before most animate direct objects, and the abbreviation *obl.* refers to the form of a pronoun which occurs after a preposition, which is identical to the nominative form for most pronouns]:

- (i) a. Ernesto quiere a Luis más que a mí.  
       Ernesto love.3sg p.a Luis ER.MUCH that p.a 1sg.obl  
       'Ernesto loves Luis more than he does me'  
     b. Ernesto quiere más a Luis que a mí.  
       Ernesto love.3sg ER.MUCH p.a Luis that p.a 1sg.obl  
       'Ernesto loves Luis more than he does me' [roughly = (i)a.]
- (ii) a. Ernesto mira películas más que novelas.  
       Ernesto watch.sg movies ER.MUCH that soap.operas  
       'Ernesto watches movies more than soap operas'  
       (más quantifies over events)  
     b. Ernesto mira más películas que novelas.  
       Ernesto watch.sg ER.MUCH.pl movies that soap.operas  
       'Ernesto watches more movies than novels' [ $\neq$  (ii)a.]  
       (más quantifies over # of movies)

There may very well be an interpretational difference between (i)a. and (i)b., but I will not explore this here.

<sup>61</sup> The abbreviation 'pret' stands for preterite tense.

<sup>62</sup> I explain this morphology in detail in Chapter 4.

- b. Ernesto gana más dinero que Luis.  
 Ernesto earn.3sg ER.MUCH.m money that Luis  
 ‘Ernesto earns more money than Luis’ [amount of mass noun]

Verbs

- (81) a. Ernesto estudia más que Luis.  
 Ernesto study.3sg ER.MUCH that Luis  
 ‘Ernesto studies more than Luis’ [frequency / extent]
- b. Ernesto se concentra más que Luis  
 Ernesto refl<sup>63</sup> concentrate.3sg ER.MUCH that Luis  
 durante un-a prueba.  
 during a-f test  
 ‘Ernesto concentrates more than Luis during a test’ [degree]

Spanish *más*, just like English *more*, displays an asymmetry with respect to positioning: it comes before nouns, adjectives, and adverbs, but after verbs.

Interestingly enough, San Lucas Quiaviní Zapotec does not exhibit this dichotomous behavior.

### 3.2.1.3 San Lucas Quiaviní Zapotec (SLQZ)

San Lucas Quiavinf Zapotec, henceforth SLQZ, has both synthetic and analytic comparatives, and they are in free variation.<sup>64</sup> The ER morpheme almost al-

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<sup>63</sup> The abbreviation ‘refl’ stands for a reflexive pronoun, not always literally translatable into English.

<sup>64</sup> I have only come across a few rare instances where either synthetic or analytic comparatives are allowed to the exclusion of the other. One example is when the orientation (positive or negative) associated with the morpheme ER needs to receive contrastive stress (i.e., MORE, not LESS), in which case the analytic form must be used.

ways surfaces as *-ru'*.<sup>65</sup> This suffix may surface attached to *maaz*,<sup>66</sup> a morpheme borrowed from Spanish *más* which in most SLQZ comparisons appears to have no interpretative contribution of its own.<sup>67</sup> It can equally well attach directly to any predicate, whether it be an adjective (82)-(84), an adverb (85), a verb (86), or a predicate nominal (87). In each example, (a) is the synthetic variant, and (b) is the analytic variant.

Adjectives

- (82) a. Connte'enn-ru' n-u' Jwaany cah Wsee.  
           content-ER neut-be<sup>68</sup> Juan than<sup>69</sup> José [with copula *nu'*]  
           'Juan is more content than José'  
       b. Maaz-ru' connte'enn n-u' Jwaany cah Wsee.  
           MAAZ-ER content neut-be Juan than José  
           'Juan is more content than José'

---

<sup>65</sup> As shown below, comparisons such as 'more than five' do not involve *-ru'*. Furthermore, the morpheme *-ru'* is not restricted to comparative constructions but may also be used with other meanings, such as 'still' (i), 'else' (ii), or 'longer' (as in 'not any longer') (iii) [although I gloss all of these instances as ER to be consistent]:

- (i) Tu r-a'ihsy-ru' re:e' ?  
       who hab-sleep-ER here  
       'Who still sleeps here ?'
- (ii) Xi-ru' b-da'uhw Rrodriiegw  
       what-ER perf-eat Rodrigo  
       'What else did Rodrigo eat ?'
- (iii) Tu cēi'ty-ru' r-a'ihsy re:e' ?  
       who neg-ER hab-sleep here  
       'Who no longer sleeps here ?'

<sup>66</sup> This morpheme often surfaces as *maa* instead. This variation is free when the morpheme is used with the suffix *-ru'*, but only the full form is allowed when used with the suffix *-ta'* (which Pamela Munro (p.c.) claims is the same emphatic element which sometimes means 'too'). The SLQZ word *mahs* 'even though', which is also derived from Spanish *más* (Munro, Lopez, et al (in preparation)), is an independent morpheme, in contrast with the word *maaz* in its various allo-morphs.

<sup>67</sup> Thus *maa(z)* is a dummy head in most cases. However, it apparently maintains some of the comparative force found in its source, the Spanish word *más*, in comparatives of the type 'more than [cardinal number]' since *ru'* (i.e., ER) does not surface in such sentences. I leave this open for future research.

<sup>68</sup> Recall from Chapter 2 that there is more than one copular verb in SLQZ. Each adjective is associated with a given copula, although some adjectives cannot cooccur with a copula in the neutral aspect.

<sup>69</sup> I gloss SLQZ *cah* as 'than' since its only apparent use is as a comparative particle.

- (83) a. Nsinni'cy-ru' n-a:a Jwaany cah Wsee.  
intelligent-ER neut-be Juan than José [with copula *na:a*]  
‘Juan is more intelligent than José’

- b. Maaz-ru' nsinni'cy n-a:a Jwaany cah Wsee.  
MAAZ-ER intelligent neut-be Juan than José  
‘Juan is more intelligent than José’

- (84) a. Nsinni'cy-ru' Jwaany cah Wsee.  
intelligent-ER Juan than José [without a copula]  
‘Juan is more intelligent than José’

- b. Maaz-ru' nsinni'cy Jwaany cah Wsee.  
MAAZ-ER intelligent Juan than José  
‘Juan is more intelligent than José’

#### Adverbs

- (85) a. Nsehe's-ru' r-zh:u:u'nny Rrodriiegw cah Liieb.  
fast-ER hab-run Rodrigo than Felipe  
‘Rodrigo runs faster than Felipe’

- b. Maaz-ru' nsehe's r-zh:u:u'nny Rrodriiegw cah Liieb.  
MAAZ-ER fast hab-run Rodrigo than Felipe  
‘Rodrigo runs faster than Felipe’

#### Verbs

- (86) a. W-ta'ihsy-ru' Rrodriiegw cah Liieb.  
perf-sleep-ER Rodrigo than Felipe  
‘Rodrigo slept more than Felipe’

- b. Maaz-ru' w-ta'ihsy Rrodriiegw cah Liieb.  
MAAZ-ER perf-sleep Rodrigo than Felipe  
‘Rodrigo slept more than Felipe’

#### Predicate Nominate

- (87) a. Mnii'iny-ru' Jwaany cah Wsee.  
child-ER Juan than José  
‘Juan is more of a child than José’

- b. Maaz-ru' mnii'iny Jwaany cah Wsee.  
MAAZ-ER child Juan than José  
‘Juan is more of a child than José’

However, the morpheme *-ru'* may not attach directly to a non-predicative nominal, that is, the string ER plus nominal does not surface in SLQZ:<sup>70</sup>

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<sup>70</sup> It follows from my claim that English *more* and Spanish *más* contain more than just ER, that neither English nor Spanish allows simply ER plus (non-predicative) nominal, either.

- (88) \*Liebr-ru' b-zi:i:i' Rrodriiegw cah Liieb.  
 book-ER perf-buy Rodrigo than Felipe  
 'Rodrigo bought more books than Felipe' [count noun]
- (89) \*Mu:uuly-ru' b-e:e:i'ny Rrodriiegw gaan cah Liieb.  
 money-ER perf-do Rodrigo gain<sup>71</sup> than Felipe  
 'Rodrigo earned more money than Felipe' [mass noun, ≠gas, liquid]
- (90) \*Biien-ru' gwe:e'eh Rrodriiegw cah Liieb.  
 wine-ER perf.drink Rodrigo than Felipe  
 'Rodrigo drank more wine than Felipe' [mass noun, =gas or liquid]

By the same token, the unit *maazru'* cannot directly precede a non-predicative nominal:

- (91) \*Maaz-ru' liebr b-zi:i:i' Rrodriiegw cah Liieb.  
 MAAZ-ER book perf-buy Rodrigo than Felipe  
 'Rodrigo bought more books than Felipe' [count noun]
- (92) \*Maaz-ru' mu:uuly b-e:e:i'ny Rrodriiegw gaan cah Liieb.  
 MAAZ-ER money perf-do Rodrigo gain than Felipe  
 'Rodrigo earned more money than Felipe' [mass noun, ≠gas, liquid]
- (93) \*Maaz-ru' biien gwe:e'eh Rrodriiegw cah Liieb.  
 MAAZ-ER wine perf.drink Rodrigo than Felipe  
 'Rodrigo drank more wine than Felipe' [mass noun, =gas or liquid]

Instead, either the following synthetic solution or analytic solution must be utilized. In the synthetic solution, the morpheme *-ru'* attaches to either *zye:einy* 'many' / 'much', for solids and abstract nouns (94)-(95), or *zi:i'lly* 'much', for liquids or gases (96), and this entire unit precedes the noun:

- (94) Zye:einy-ru' liebr b-zi:i:i' Rrodriiegw cah Liieb.  
 MUCH.sol/abs-ER book perf-buy Rodrigo than Felipe  
 'Rodrigo bought more books than Felipe' [count noun]

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<sup>71</sup> There is a very interesting mechanism for forming SLQZ verbs from Spanish infinitives or nouns (Munro, Lopez, et. al. (in preparation)). The Spanish infinitive or noun is used with slight phonological modifications. The borrowed Spanish lexical item is inserted after the subject, itself preceded by the SLQZ verb *ruhnny* 'do/make', used in the appropriate aspect.

Although the second element of all of these expressions formed with *ruhnny* is separated from the verb by the subject, these expressions should nevertheless be considered to be idiom chunks since the second element cannot be extracted, modified, pronominalized, etc., at least in the data collected thus far.

In (89), *gann* is a reduced form of the Spanish noun *ganar*, presumably having an earlier meaning 'gain', related to the Spanish verb *ganar* 'to earn, gain'.

- (95) Zye:einy-**ru'** mu:uuly b-e:e:i'ny Rrodriiegw gaan cah Liieb.  
 MUCH.sol/abs-ER money perf-do Rodrigo earning than Felipe  
 'Rodrigo earned more money than Felipe' [mass noun, ≠gas, liquid]

- (96) Zi:i'lly-**ru'** biien gwe:e'eh Rrodriiegw cah Liieb.  
 MUCH.liq/gas-ER wine perf.drink Rodrigo than Felipe  
 'Rodrigo drank more wine than Felipe' [mass noun, =gas or liquid]

In the analytic solution, the morpheme *ru'* attaches to *maaz*, followed by either *zye:einy* 'many' / 'much', in the case of solids and abstract nouns (97)-(98), or *zi:i'lly* 'much', in the case of liquids or gases (99), and after *zye:einy* or *zi:i'lly* comes the noun whose quantity or amount is in question:

- (97) Maaz-**ru'** zye:einy liebr b-zi:i:i' Rrodriiegw cah Liieb.  
 MAAZ-ER MUCH.sol/abs book perf-buy Rodrigo than Felipe  
 'Rodrigo bought more books than Felipe' [count noun]
- (98) Maaz-**ru'** zye:einy mu:uuly b-e:e:i'ny Rrodriiegw gaan cah Liieb.  
 MAAZ-ER MUCH.sol/abs money perf-do Rodrigo earn than Felipe  
 'Rodrigo earned more money than Felipe' [mass noun, ≠gas, liquid]
- (99) Maaz-**ru'** zi:i'lly biien gwe:e'eh Rrodriiegw cah Liieb.  
 MAAZ-ER MUCH.liq/gas wine perf.drink Rodrigo than Felipe  
 'Rodrigo drank more wine than Felipe' [mass noun, =gas or liquid]

### 3.2.2 The Nature of ER

Here I propose a general picture of the type of element ER is by suggesting how it relates to cardinal quantifiers, adverbial degree expressions, and predicates.

The element ER is an essential component of comparisons of inequality, and yet its morphosyntactic nature is not clearly understood. An analysis of its semantic properties, introduced here and elaborated in Chapter 4, helps to elucidate its other properties.

#### 3.2.2.1 ER vs. quantifiers

The morpheme ER is not a quantifier.<sup>72</sup> It does not behave morphosyntactically or semantically in the same way as elements assumed to be quantifiers do, such as existential quantifiers (100), universal quantifiers (101), and cardinal quantifiers (102):

- (100) Juan bought some books.
- (101) Juan bought every book.
- (102) Juan bought three books.

Unlike the quantifiers immediately above, ER must cooccur with a second associate (often superficially non-adjacent), introduced by a comparative particle, in order to have complete meaning (103)-(104).

- (103) a. L-a-s niñas cantaron más canciones que l-o-s niños.  
the-f-pl girls sing.pret.3pl ER.MUCH.f.pl songs that the-m-pl boys  
'The girls sang more songs than the boys'  
  
b. Zye:einy-ru' cansyoony b-i:i'ly ra zhya:a'p cah ra mnii'in yngiu:u'w.  
MUCH.sol/abs-ER song perf-sing pl girl than pl child male  
'The girls sang more songs than the boys'
- (104) a. L-a-s niñas cantaron más de diez canciones.  
the-f-pl girls sing.pret.3pl ER.MUCH.f.pl of<sup>73</sup> ten songs  
'The girls sang more than ten songs'

<sup>72</sup> Although note that Corver (1993) refers to *more* as a quantifier.

<sup>73</sup> The word *de* has many functions in Spanish, one of which is to introduce a numerical standard of comparison, but I will gloss it simply as 'of' in order to be consistent with its most general usage. An analysis of the use of *de* in comparatives is given in Chapter 5.

- b. *Maaz-da' tsë:ëä' cansyoony b-i:i'lly ra zhya:a'p.*  
MAAZ<sup>74</sup>-than<sup>75</sup> ten song perf-sang pl girl  
‘The girls sang more than ten songs’

If this embedded constituent is missing, the meaning of ER is vague or incomplete (105), unless the meaning usually conveyed by the embedded constituent is salient in the discourse context or is expressed in a paratactic construction (106) - (107).

- (105) a. *L-a-s niñas cantaron más canciones.*  
the-f-pl girls sing.pret.3pl ER.MUCH.f.pl songs  
‘The girls sang more songs’
- b. *Zye:einy-ru' cansyoony b-i:i'lly ra zhya:a'p*  
MUCH.sol/abs-ER song perf-sing pl girl  
‘The girls sang more songs’

[unclear without some appropriate information previously expressed in the discourse context, such as in (106) and (107)]

- (106) a. *L-a-s niñas cantaron algun-a-s canciones, y luego,  
the-f-pl girls sing.pret.3pl some-f-pl songs and then  
cantaron más canciones.  
sing.pret.3pl ER.MUCH.f.pl songs*  
‘The girls sang some songs, and then they sang more songs’
- b. *Chih w-luhahzh b-i:i'lly ra zhya:a'p du:u'zh cansyoony  
when perf-finish perf-sing pl girl NEG.MUCH<sup>76</sup> song  
chieru' b-i:i'lly-rih s-tu:u'zh-ih.  
then perf-sing-3pl.distal def<sup>77</sup>-NEG.MUCH-3pl.distal*  
‘When the girls finished singing some songs, (then) they sang more songs’

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<sup>74</sup> Comparatives such as this, in which there is no instance of *ru'*, suggest that the word *maaz* can in at least some instances bear the meaning of ER.

<sup>75</sup> The suffix *-da'* belongs to the class of comparative particles by the definition given earlier in this chapter. The allomorphs that I have observed for *da'* in the type of comparative construction at hand are: *deh*, *da*, *ta'*, and *da'*. Pamela Munro suggests (p.c.) that *maazta'* and its allomorphs are derived from Spanish *más de*.

<sup>76</sup> I justify this gloss in Chapter 4.

<sup>77</sup> The morpheme *s-*, which Munro, López et al. (in preparation) claim is in fact the definite aspect marker, can be prefixed to some quantifiers to indicate ‘more’ but in the sense of ‘additional’. It cannot, however, be prefixed to *zye:einy* ‘many’, for example, which allows the suffix *-ru'* for both meanings of ‘more’. In the sentence at hand, though, attaching *-ru'* to a quantifier like *du:u'zh* ‘(a) few’ [composed of NEG plus MUCH – cf. Chapter 4] would mean ‘less’/‘fewer’ rather than ‘a few more’.

- (107) a. L-o-s niños cantaron much-a-s canciones, pero  
          the-m-pl boys sing.pret.3pl very.MUCH-f-pl<sup>78</sup> songs but  
                  l-a-s niñas cantaron más canciones.  
                  the-f-pl girls sing.pret.3pl ER.MUCH.f.pl songs  
                  'The boys sang many songs, but the girls sang more songs'

- b. Zye:einy cansyoony b-i:lly ra mnii'ny ngiu:u'w pehr  
       MUCH.sol/abs song perf-sing pl child male but  
                  zye:einy-ru' cansyoony b-i:lly ra zhya:a'p.  
       MUCH.sol/abs-ER song perf-sing pl girl  
                  'The boys sang many songs, but the girls sang more songs'

As mentioned earlier, existential quantifiers, universal quantifiers, and cardinal quantifier, do not need any second associate to make their meaning complete. A cardinal quantifier, for example, clearly denotes a quantity on its own and does not need any such embedded constituent to complement its meaning (108) - (109).

- (108) a. L-a-s niñas cantaron diez canciones.  
          the-f-pl girls sing.pret.3pl ten songs  
                  'The girls sang ten songs'

- b. Tsë:ëa' cansyoony b-i:i'lly ra zhya:a'p.  
          ten songs perf-sing pl girl  
                  'The girls sang ten songs'

- (109) a. L-a-s niñas cantaron much-[ ]-a-s canciones.  
          the-f-pl girls sing.pret.3pl very-MUCH-f-pl songs  
                  'The girls sang many songs'

- b. Zye:einy cansyoony b-i:i'lly ra zhya:a'p  
       MUCH.sol/abs song perf-sing pl girl  
                  'The girls sang many songs'

Notice that the larger, superficially discontinuous constituent [ER...embedded constituent] does appear, as a unit, to have the same type of denotation as cardinal quantifiers in the case of amount comparisons. However, since I claim in Chapter 4 a unified analysis of amount and degree comparisons, I will discard from the outset the analysis for the constituent [ER...embedded constituent] in which it is a quantifier in order to consider an analysis in which this constituent acts as a degree expression instead. I turn to this conceptualization next.

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<sup>78</sup> In Chapter 4, I justify the gloss given here for the Spanish element *mucho*.

### 3.2.2.2 ER as a degree adverbial

Some claim that ER is a degree adverbial.<sup>79</sup> However, ER does not behave exactly as other Deg's do. Just like quantifiers may occur with a noun without the need of an additional constituent to complete their meaning, there are Deg's which may modify a property without the need for an additional constituent (a second associate) to complete their meaning:

- (110) I've never been this tired before.
- (111) How thirsty are you ?
- (112) You are so intelligent !
- (113) We are very happy to see you.

Unlike these Deg's, there are others, hypothetically including ER if ER should prove to be a Deg, which require the presence of a second associate to complete their meaning.

- (114) Juan is taller than José.
- (115) Juan is as tall as José.
- (116) Juan is too tall to enter the house through this door.
- (117) Juan is tall enough to beat anybody in basketball.
- (118) Juan is s o tall that everyone thinks he must be a basketball player.

Without the second associate, these sentences seem incomplete in the absence of an appropriate context:

- (114') ?Juan is taller.
- (115') ?\*Juan is as tall.
- (116') Juan is too tall.
- (117') Juan is tall enough.
- (118') ?\*Juan is so tall.

(114') is only grammatical if some standard of comparison has already been mentioned in the discourse or if the standard of comparison is understood to be some earlier point in time. That is, (114') would be a reasonable answer to a choice question such as (119) or a general question such as (120):

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<sup>79</sup> Rijkhoek (in progress) believes this, for example. This issue is discussed in more detail in Chapter 4. Instead of using the traditional term DEGREE ADVERBIAL, I will refer to apparently monomorphemic degree adverbials as Deg's and more complex degree adverbials as DEGREE EXPRESSIONS.

- (119) Q: Between Juan and José, who is taller ?  
(120) Q: Do you notice anything different about any of us since last time you saw us ?

(115') is only marginally grammatical, even if some standard of comparison has already been mentioned in the discourse.

(116') is grammatical but without context is understood in a general sense – Juan is taller than what is allowed or what is desired. The second associate in (116) designates a specific purpose which Juan is unable to fulfill due to his height.

Similarly, (117') is fine as it stands but without context merely expresses that Juan is adequately tall for general purposes. Only with a second associate as in (117) does the listener know a specific goal which Juan may fulfill due to his height.

Lastly, (118') sounds very odd without an exclamative intonation. With exclamative intonation, *so* is more of an intensifier, similar to *very*, rather than pointing to a consequence of Juan's height, as in (118).

Not only do the Deg's in (114)-(118) subcategorize for second associates more or less obligatorily, such second associates may not surface in the absence of the related Deg's:<sup>80</sup>

- (114'') \*Juan is tall than José.  
(115'') \*Juan is tall as José.  
(116'') \*Juan is tall to enter the house through this door.  
(117'') \*Juan is tall to beat anybody in basketball.  
(118'') \*Juan is tall that everyone thinks he must be a basketball player.

Hence, ER, *too*, *enough*, and resultative *so* are not independent degree adverbials in the same sense as *very*, *this*, *that*, and *how*. Nevertheless, it is reasonable to propose that each of these elements together with its second associate does behave as a degree expression. I discuss this in §3.2.2.3.

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<sup>80</sup> In some languages such as Hebrew, Japanese, and Turkish, the morpheme ER is either optionally or obligatorily covert, but I assume that in such instances it is nevertheless present since the equivalent to the other Deg's under discussion here are required to surface overtly in their respective degree constructions in order to license the presence of the second associate.

### 3.2.2.3 ER as part of a degree expression

Not only is there a syntactic relation of cooccurrence between the Deg's discussed in the previous section and the corresponding second associates, there is also a logical sense in which the superficially discontinuous<sup>81</sup> constituent consisting of a Deg and a second associate behave as a degree expression collectively.

Compare the degree expressions in (114)-(118) with the Deg's in (110)-(113), repeated here:

- (110) I've never been this tired before.
- (111) How thirsty are you ?
- (112) You are so intelligent !
- (113) We are very happy to see you.

I will thus take ER to be part of a larger constituent which, taken as a whole, denotes a semantic degree located to the right of some other degree on the relevant scale. This latter, lesser degree, if present in the syntactic structure,<sup>82</sup> would have to be represented by a syntactic element within the larger constituent including ER signifying the former, higher degree.

This is schematicized in the following examples. The degree to which the books that Juan bought "are many" is [ER than José], i.e., more than the degree to which the books that José bought "are many". The degree to which Juan is tall is also [ER than José] but is understood here as more than the degree to which José is tall. The semantic degree in question in (121) and (122), respectively, lies to the right of the semantic degree to which the books that José bought "are many" and the degree to which José is tall, respectively:

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<sup>81</sup> In the case of *enough*, there is only a discontinuity between the Deg and the second associate when the property at stake is the quantity of a noun type:

(i) Juan bought enough books to fill ten bookshelves.

In Chapter 4, I mention a rule of ENOUGH PERMUTATION that the investigators discussed there must all assume under one title or another. The variants of this rule either move *enough* to the right of an adjective which it modifies, or move the adjective to the left of *enough*. The latter variant is the only one acceptable under the theoretical assumptions of Chapter 1.

<sup>82</sup> Dominique Sportiche suggests (p.c.) that it is in fact not present in the structure.

- (121) Juan bought more books than José.  
Juan bought [ [ER than José] many ] books.<sup>83</sup>  
[ER than José = more than the books that José bought are many]

- (122) Juan is taller than José.  
Juan is [[ER than José] tall]  
[ER than José = more than the degree to which José is tall]

It may seem odd to say that the degree to which the books that Juan bought “are many” rather than just saying that the quantity of books that Juan bought is great or large or even just that Juan bought a great/large quantity of books. As a general idea of what motivates the phrasing that I have chosen, I note that such phrasing allows a parallel between amount comparisons and degree comparisons. Amount comparisons are taken to be comparisons involving the degree of quantity and amount in the abstract sense, that is, a degree of the quantifier element in expressions such as *how many*, *so many* and *too much*. In other words, the quantifier element MUCH behaves like an adjective for the purposes at hand.<sup>84</sup> Such a treatment makes it feasible to claim that all comparisons are comparisons of degree, in each case the degree of an adjectival denotation.

As was discussed above, there are also other elements similar to ER occurring within a large constituent which collectively behaves as a degree expression, such as *as*, *too*, *enough*, and resultative *so*. One might envision the relationship between these degree complexes to simple Deg’s like *this*, *that*, and anaphoric *so*, as analogous to the relationship between the complex consisting of a determiner and a relative clause, on the one hand (123)-(124), and a demonstrative such as *this* or *that* or a possessive such as *my* or *Chepo’s* that can determine an NP with no relative clause present (125)-(127):

- (123) Socorro likes the book that you bought.

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<sup>83</sup> A more explicit schema showing covert elements is as follows:

(i) Juan bought [[ER [than the degree d [to which José bought d-many books]]]-many] books.

<sup>84</sup> Lee (1997) also suggests that such a quantifier (i.e., quantifiers such as *many*) be treated as a type of adjective. Dominique Sportiche suggests (p.c.) that the predicative use of related words such as *numerous* also support this notion:

(i) Her friends are numerous.

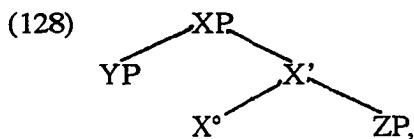
- (124) Luis Ángel told us the same thing as you.
- (125) Socorro likes this book.
- (126) Felicia found my book.
- (127) Leticia hid Chepo's book.

### 3.2.2.4 ER as function or a two-place predicate taking degree arguments

Whatever the syntactic identity of ER may be, it can semantically be considered a function, taking one degree or quantity<sup>85</sup> as its argument and returning another degree or quantity further to the right on a linear scale of degrees or quantities.

One can also conceive of ER as a two-place predicate carrying the same meaning as the symbol ‘greater than’, >, in mathematics.<sup>86</sup> That is, one could consider ER to be a relation between two degrees, analogous to spatial predicates between individuals of the type ‘is to the right of’.

Two-place predicates involve the following type of structure:



where YP is the external argument of the predicate in  $X^\circ$ , and ZP is its internal argu-

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<sup>85</sup> It is important to distinguish between the notions of DEGREE, QUANTIFIER, and QUANTITY, although the distinctions are quite subtle. Degrees are operators that take either a gradable adjective-like property or certain gradable quantifiers, such as the abstract notion of amount or quantity MUCH contained in the English words *much* or *many*, as arguments to yield, in the latter case, a non-gradable type of quantifier analogous to cardinal numbers (unless one takes cardinal numbers, too, to be followed by a covert element identical to the abstract *many* in *how many*). This non-gradable quantifier is a quantity. For example, an appropriate answer to the question in (i) is (ii):

- (i) *How many* [i.e., degree + gradable quantifier MUCH] chairs do you need ?
- (ii) I need four [i.e., quantity, non-gradable quantifier] chairs.

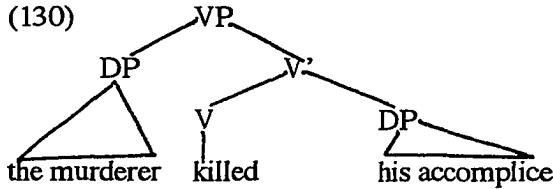
In Chapter 4, I claim that ER always relates one degree to another, with quantity and amount being one type of degree (degree of MUCH).

<sup>86</sup> I will later claim that comparisons of inferiority contain ER plus a morpheme that serves to reverse the polarity of the scale of comparison. The mathematical analogy would be to multiply everything by -1 so that the number line would be reversed. One manifestation of this inverting morpheme is the English word *few* (Rivara (1990)).

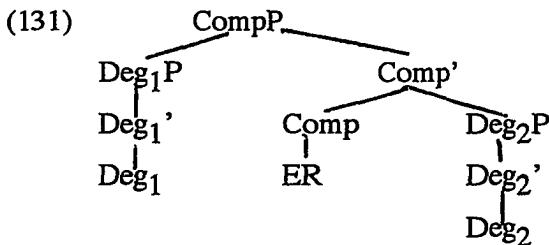
One could alternatively claim that ER has neither orientation inherently (i.e., it simply means ≠), and that there must therefore always be an additional morpheme present to indicate positive or negative orientation. This alternative is not supported, at least not transparently, in the morphology of the languages studied, although it cannot be easily discarded without further studies.

ment. For example, take the verb *kill*. Abstracting away from tense, the relevant part of the underlying structure of the proposition in (129) is (130):

- (129) The murderer killed his accomplice.



Hence, if ER is a two-place predicate on degrees, then we might expect the following structure:



This structure seems like a reasonable candidate for comparisons such as the following:<sup>87</sup>

- (132) The quantity of books that Juan bought surpasses the quantity of books that José bought.  
 (133) The degree to which Juan is tall surpasses the degree to which José is tall.

The constructions found in (132) and (133) are both compatible with the presence of what Gutiérrez-Rexach (1995) terms DEGREE RELATIVES. In such relatives, degrees functioning as arguments of ER are defined via a relativization strategy.<sup>88</sup> This account is consistent with Kayne's conception of relative clauses within his 1994 Antisymmetry framework. I explore the notion of degree relatives further in Chapter 5.

Sentences such as (134) and (135) would have (132) and (133), respective-

<sup>87</sup> Dominique Sportiche claims (p.c.) that the second degree, i.e., the degree which I claim is denoted by the material in the second associate, is actually left vague and is not truly represented syntactically.

<sup>88</sup> Cf. Carlson (1977) and Gutiérrez-Rexach (1995).

ly, as their source under the schema in (131):

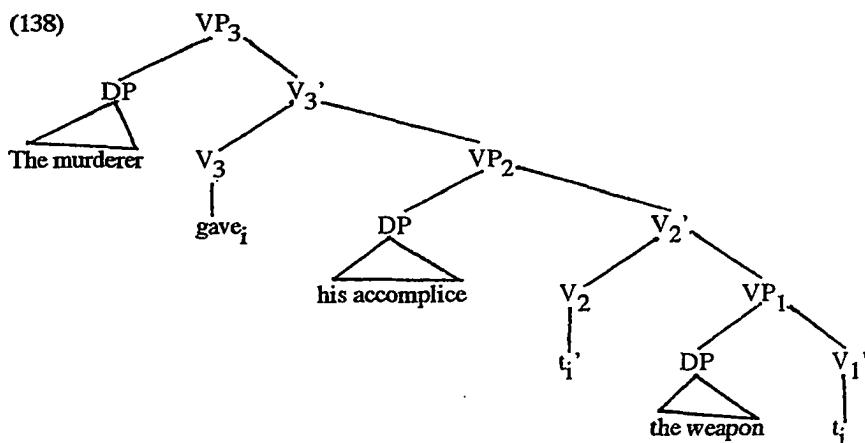
- (134) Juan bought more books than José (did).
- (135) Juan is taller than José (is).

Examples such as (132) and (133) are usually confined to mathematics textbooks or other technical contexts. We need to explain why such meanings are usually expressed as in (134) and (135), respectively. Notice, too, that the predicate *is greater than* transparently contains as a subpart the morpheme ER, unless the English word *greater* is an allomorph of ER. If we take *great* to be a predicate independently of ER, then we run into a problem of infinite regress. If one wanted to claim that (132) and (133) are the sources for sentences (134) and (135), one might conceivably take (132) and (133) to have (136) and (137) as their source, respectively:

- (136) The degree to which the quantity of books that Juan bought is great is greater than the degree to which the quantity of books that José bought is great.
- (137) The degree to which the degree to which Juan is tall is great is greater than the degree to which the degree to which José is tall is great.

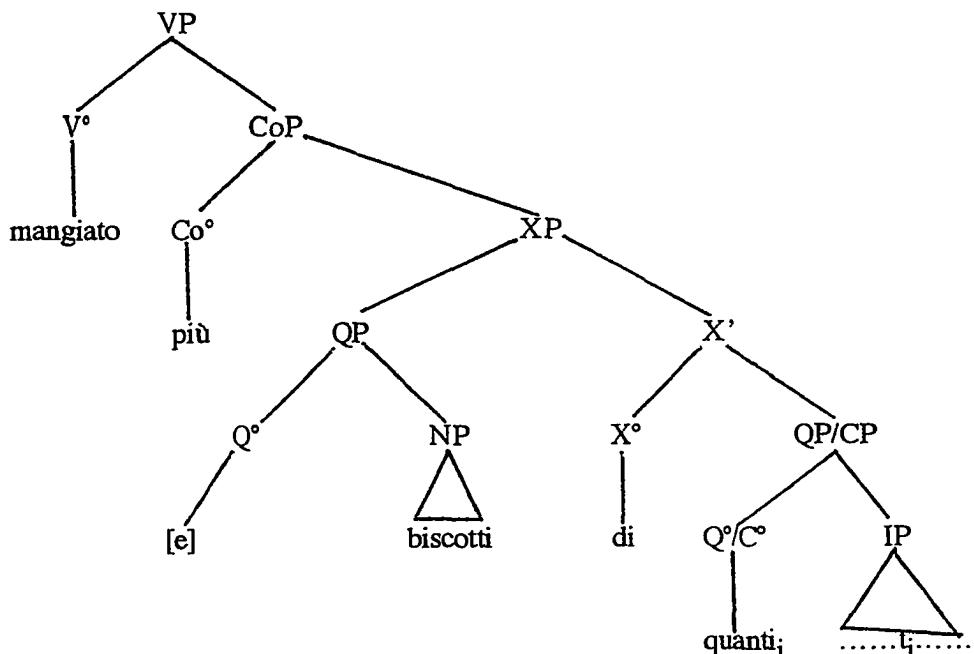
Thus, even if we accept a structure like (131) for ER predication, sentences such as (134) and (135) must be compatible with it without having an underlying structure as in (132) and (133), respectively.

Donati (1997) adopts a predicate analysis for ER but using a structure along the lines of Larson (1988). Whereas Larson proposes VP shells roughly as in (138) for double object constructions, as in (139), Donati proposes a structure with CoP (comparative phrase) shells as in (140) [=her #16] for the Italian sentence (141) [=her #13] containing *più*, which I take to be equivalent to ER:



(139) The murderer gave his accomplice the weapon.

(140) ...



(141) Maria ha mangiato più biscotti di quanti ne ha mangiati Maria.

In such a structure, *più* is a two-place predicate taking two quantities as arguments. Unlike the structure I propose above (131), there is no external argument

to the Co head ER. The preposition *di* is a dummy element creating the necessary asymmetry between multiple complements dictated by the Antisymmetry framework of Kayne (1994). For Donati, the quantifier in the second term of the comparison (which would be the second associate in my terms) undergoes head-movement to C in order to convert the CP into a QP for the purposes of meeting the selectional requirements of *più*.

Although Donati's proposal shows a great deal of promise, there are three problems. First, note that the verb external to CoP, namely *mangiato* 'eaten', selects a patient nominal. It is not clear how the verb *mangiato* could select *biscotti*, since *biscotti* is in the specifier of XP, not in X, which is occupied by *di*. Perhaps verbs can select for CoP's the way that they can select fro DP's under the functional head analysis (see Chapters 1 and 4), and Donati's proposal could very likely overcome this type of objection.

Note, too, that it is not too clear in Donati's proposal how to accommodate comparisons with explicit standards, such as (142):

- (142) John bought more than two books.

Perhaps Donati would propose that there is a covert [x many books] in the first argument position of X. This may ultimately prove to be correct, but it is odd that one cannot ever say (143), which should be equally possible under this view:

- (143) John bought more books than two.

Lastly, as pointed out to me by Dominique Sportiche (p.c.), Donati's framework does not assign analogous structures to the expressions *more than 2* and *2*, as in (142) and (144):

- (144) John bought two books.

Hence I will leave aside Donati's proposal despite its promise and solely focus on the syntactic notion that ER is either a Deg or part of a larger degree expression including the second associate of the comparison.

### 3.2.2.5 The nature of ER – summary

To sum up, we have seen that ER is not a quantifier. It could be taken to form a quantifier together with its second associate, but since I claim that amount comparisons are a subcase of degree comparisons, I discard such an analysis. I have suggested instead that ER plus the second associate behave as a degree expression, ER itself being a Deg.

Semantically, ER is a function mapping the degree in the second associate into a higher degree. We can alternatively say that ER is a two-place predicate taking degrees as arguments. I take amount comparisons to be a special case of degree comparisons; hence, there is no need to make special provisions here for referring to quantities rather than degrees in the case of amount comparisons.

### 3.3 Ellipsis in Comparisons

Here I classify comparatives according to what material is logically present but absent in the overt syntax. Then I propose a more general two-way division according to the presence or absence of an overt verb in the constituent serving as the second associate of the comparison, i.e., the standard for comparison. My later account for the various structures in Chapter 5 will only address the two-way distinction rather than each of the individual construction types presented here, but I classify them first individually in case such a classification may help a reader to organize comparative data in general either in reading this work or for future research.

#### 3.3.1 Types of ellipsis in comparisons

Comparatives of the type surveyed in this dissertation vary widely in terms of what material appears after the comparative particle. Here I present a typology of comparatives based on which material appears overtly and which does not. As mentioned above, this typology is meant to orient the reader to the types of constructions which occur but should not be taken to indicate the scope of this dissertation. Only a few of these constructions will be discussed in depth in the space of this work.

##### 3.3.1.1 Comparative Ellipsis (CE)

Consider the following sentence, given in English, SLQZ, and Spanish, respectively:

- (145) Rodrigo read more books than Felipe.
- (146) Zye:einy-ru' liebr b-i:i'lly Rrodrriegw cah Liieb.  
MUCH.sol/abs-ER book perf-read Rodrigo than Felipe  
'Rodrigo read more books than Felipe'
- (147) Rodrigo leyó más libros que Felipe.  
Rodrigo read.pret.3sg ER.MUCH.m.pl books than Felipe  
'Rodrigo read more books than Felipe.'

I define this type of comparison as COMPARATIVE ELLIPSIS. The notion of comparative ellipsis that I will use is slightly different from that of Napoli (1983), who defines comparative ellipsis as "...an optional rule that deletes material in the comparative clause that is outside the compared constituent, under identity in the matrix sentence in which the head of the comparative clause is embedded." She attributes this definition to Bresnan (1975). What she refers to as the compared constituent is actually what I call the second head, so what her definition of CE means in my terms is deleting anything (i.e., at least one element) in the second associate other than the second head.

I deviate from this definition in order to distinguish other constructions which would otherwise be subsumed under CE, such as VP-deletion, null complement anaphora (NCA), gapping, and pseudo-gapping.<sup>89</sup> She lays all of these aside from the discussion anyways, claiming that they have explanations independent of comparative sentences since they occur in non-comparative sentences, too. I take CE to apply to those cases fitting the quoted definition but in which all the material in the second associate other than a single contrast, which might simultaneously be the second head, is covert.

In Price's (1990) terms, some cases of what I am calling comparative ellipsis are full comparisons (145)-(147), whereas others qualify as partial comparisons:

- (148) Rodrigo bought more oranges than apples.
- (149) Rodrigo compró más naranjas que manzanas.  
Rodrigo buy.pret.3sg ER.MUCH.f.pl oranges that apples  
'Rodrigo bought more oranges than apples'
- (150) Zye:einy-ru' nraazh b-zi:i:i' Rrodriiegw cah mannsaan.  
MUCH.sol/abs-ER orange perf-buy Rodrigo than apple  
'Rodrigo bought more oranges than apples'

If there is more than one contrast in the second associate but no overt verb, then the term that I will use for this phenomenon is gapping, which I will claim is

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<sup>89</sup> There are also a few cases of comparatives involving right node raising, but I do not address right node raising in this dissertation.

actually related to CE. However, I distinguish between CE and gapping at the outset for purely descriptive purposes.

CE is one of the most common, least marked types of comparisons within languages exhibiting particle comparatives. The standard of comparison is implicit: in (145)-(147), we are comparing the amount of books that Rodrigo read with the amount of books that Felipe read, not to Felipe himself. Even in (148)-(150), in which we are comparing amount of oranges with amount of apples, we do not have an explicit amount of the latter to compare with.

Even though there is material implicitly present in the second associate, it is worthwhile to note that the only overt material in the second associate is the second term of comparison, *Felipe/Liieb* in (145)-(147) and *apples / manzanas / mannsaan* in (148)-(150). The verb *read / leyó / bi:i'lly*, which is the common ground in (145)-(147), and both the noun phrase *Rodrigo / Rrodriiegw* and the verb *bought / compró / bzi:i:i'*, which comprise the common ground in (148)-(150), are covert in their respective sentences. Similarly, the element which would traditionally considered to be the head of the comparison in (145)-(147) *books / books / liebr*, along with its understood quantifier are covert, whereas in (148)-(150) simply an understood quantifier for the noun phrase *apples / manzanas / mannsaan* is covert. Put into my terminology, the head of the comparisons in both (145)-(147) and (148)-(150) is the abstract quantifier MUCH that I mentioned earlier in this chapter. Both MUCH and the Deg operating over it are covert in (145)-(147) and (148)-(150). In (145)-(147) its complement nominal *books / books / liebr* is covert and is actually part of the common ground, whereas in (148)-(150), the complement nominal of MUCH is overt – it is the second term of the comparison. It appears that it is preferable for as much as possible of the second associate to be covert, due to either some principle of economy disfavoring the repetition of any recoverable material, or a need to deemphasize any constituent not serving as a contrast so as to maximize emphasis for any constituents which do in fact serve as contrasts, without violating,

of course, certain other conditions (some universal, some language-specific).

### 3.3.1.2 Comparative deletion (CD)

Comparative deletion is the term used to describe those comparisons in which the second associate contains an almost completely overt clause lacking only an overt second head and optionally its complement (such as a nominal complement to MUCH).<sup>90</sup> This type of comparison is possible in SLQZ, Spanish, and English,<sup>91</sup> although as stated above, there is a preference for as much of the second associate to be covert as possible. Thus, if the verb of the comparative clause is identical to the matrix verb, speakers tend to use CE instead of CD. In the example of CD that follows, notice that in SLQZ and Spanish, there is more than one word separating the first and second associates, whereas in English, there is only one (overt) word separating the two associates:<sup>92</sup>

- (151) Zyeeinny-ru' ca'rr b-di:i'by Liieb cah nih b-di:i'by Rrodrriegw.  
MUCH.sol/abs-ER car perf-wash Felipe than rel perf-wash Rodrigo  
'Felipe washed more cars than Rodrigo washed'

<sup>90</sup> As I mentioned earlier, I take the second head to be MUCH in the case of an amount comparison. I thank William Leonard for pointing out (p.c.) that in the Spanish example below ((152)), one might consider this quantifier to be overt – its presence is at least witnessed (although not necessarily manifested) by the agreement on *los*. Similarly, in the non-standard English sentences in (i) and (ii), one could conceivably take MUCH to be manifested in the form of the wh-expressions *what* and *how many*, respectively.

- (i) ?\*Felipe washed more cars than what Rodrigo washed.  
(ii) ?\*Felipe washed more cars than how many Rodrigo washed.

Some of these sentences then may not actually be lacking an overt second head, and hence may not fall under the traditional term comparative deletion. In any case, I merely present the traditional term comparative deletion as an expositional convenience. This will not affect my proposal of the structures involved in the sentences analyzed in Chapter 5.

<sup>91</sup> Note that CD is not allowed in French (cf. Pinkham (1982)). For example, the partitive pronominal clitic *en*, which stands for covert constituents of the type [de + plural / mass noun], must obligatorily appear in comparisons of noun property amounts (other than in partial comparisons, where the focus of comparison is overt).

- (i) Philippe a lavé plus de voitures que Roger n'-en a lavé.  
Phillipe has washed ER.MUCH of cars that Roger not-of.it has washed  
'Phillipe (has) washed more cars than Roger (has) washed'  
(*en* = *de voitures* 'of cars')

<sup>92</sup> Notwithstanding the rare dialectal variants proposed in fn (87) in which there are other words overtly present between the two clauses.

- (152) Felipe lavó más coches de l-[ ]-o-s  
           Felipe wash.pret.3sg ER.MUCH.m.pl cars of the-MUCH-m-pl  
           que lavó Rodrigo.  
           that wash.pret.3sg Rodrigo  
           ‘Felipe washed more cars than Rodrigo washed’

- (153) Felipe washed more cars than Rodrigo washed.

Note that according to Price’s terminology, comparative deletion is always a case of full comparison.

### 3.3.1.3 Comparative Subdeletion (CS)

In traditional terminology, comparative subdeletion involves a second associate which only lacks a quantifier in the case of amount comparisons, a degree in the case of adjectival and adverbial comparisons, and an extent adverbial in the case of verbal comparisons. The only covert element in the comparative clause is the degree that operates on the second head.<sup>93</sup> Thus, CS under a traditional point of view is a subcase of partial comparison – partial comparisons in which the second associate is overtly clausal, as in Price (1990), are always cases of CS. CS is somewhat marked, and speakers tend to avoid it even in favor of a longer, paratactic construction. CS nonetheless potentially provides us with a view into the structure involved in CD, since a given instance of CS can reasonably be conceived of as simply a less covert version of a corresponding instance of CD. Thus, it is semantically reasonable to propose pairing instances of CD with hypothetical paraphrases involving CS.

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<sup>93</sup> It has been suggested to me (Dominique Sportiche (p.c.)) that comparative gapping and comparative pseudogapping should be included as subcases of comparative subdeletion, and hence, that the definition of comparative subdeletion should allow not only for the quantifier to be covert, but also for the verb to be covert in some cases. For the sake of exposition, I will limit the use of the label CS to those cases of comparative subdeletion where neither gapping nor pseudogapping has occurred, i.e., CS only describes cases in which the second associate has an overt lexical verb.

Not all sentences identified here as CS actually involve the same type of structure in my theory – amount comparisons identified as CS, for example, appear, at least in English, to have not only a covert degree but also a covert second head, thus making English amount comparisons look more like another variant of CD. Nevertheless, I present the traditionally terminology for expositional purposes as a point of departure. It will not matter for my analysis.

Now I turn to the way in which CS occurs in English, Spanish, and SLQZ.

### 3.3.1.3.1 CS in English

In English, CS involves no change of word order – the second associate could function as a complete clause on its own if it were not part of the comparative sentence it is in:

- (154) Felipe sold more cars than Rodrigo bought pick-up trucks.

### 3.3.1.3.2 CS in Spanish

In Spanish, there are two constructions available for CS. First, the second head (or the complement of the covert second head MUCH in my terminology, in the case of amount comparisons) can be preposed to the beginning of the second associate. In this subtype of CS, the second head occupies what seems to be a focus position (although Price (1990) refers to this as a TOPICALIZED SENTENTIAL CONSTRUCTION). This is shown in (155):

- (155) Felipe lavó más coches  
Felipe wash.pret.3sg ER.MUCH.m.pl cars  
que camionetas lavó Rodrigo.  
that pick.up.trucks wash.pret.3sg Rodrigo  
'Felipe washed more cars than Rodrigo washed pick-up trucks'

I do not discuss this construction further but instead refer the reader to Sáez (1990) and Price (1990).

Another type of CS allowed by some speakers of Spanish<sup>94</sup> involves a parti-tive use of the preposition *de* 'of'.

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<sup>94</sup> Note, as a point of comparison, that this construction is perfectly allowed in French, a language which disallows CD:

(i) Philippe a lavé plus de voitures que Roger n'a lavé  
Philippe has washed ER.MUCH of cars that Roger not-has washed  
de camions.  
of trucks  
'Phillipe washed more cars than Roger washed trucks'

- (156) Felipe lavó más coches de lo que  
       Felipe wash.pret.3sg ER.MUCH.m.pl cars of the.n<sup>95</sup> that  
           Rodrigo lavó de camionetas.  
           Rodrigo wash.pret.3sg of pick.up.trucks.  
       ‘Felipe washed more cars than Rodrigo washed pick-up trucks’

I present an analysis of this construction in Chapter 5.

Lastly, there is a construction in Spanish parallel to the English construction above which Sáez (1993) treats as perfectly normal, although the remaining literature (e.g., Price (1990)), as well as native speakers consulted consider it to be entirely ungrammatical in Spanish. I mark it as ungrammatical to reflect the majority dialect and do not pursue an analysis of it but include it here for the sake of illustration and refer the interested reader to Sáez (1990) for an analysis:

- (157) \*Felipe vendió más coches que Rodrigo compró  
       Felipe sell.pret.3sg ER.MUCH.m.pl cars that Rodrigo buy.pret.3sg  
           camionetas.  
           pick-up.trucks  
       ‘Felipe sold more cars than Rodrigo bought pick-up trucks’

### 3.3.1.3.3 CS in SLQZ

My consultant’s first choice for a translation of an English CS sentence is a paratactic construction as in (158):

- (158) Zye:einy-ru’ ca’rr b-di:i’by Liieb. Du:u’zh-ru’ camione’t  
       MUCH.sol/abs-ER car perf-wash Felipe NEG.MUCH-ER pick.up.truck  
           b-di:i’by Rrodrriegw.  
           perf-wash Rodrigo  
       ‘Felipe washed more cars. Rodrigo washed fewer pick-up trucks’

However, there is also another available construction in which the word *zë’cy*,<sup>96</sup> meaning ‘thus’, appears in the second associate between the comparative particle *zë’cy* and a relative clause:<sup>97</sup>

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<sup>95</sup> The Spanish word *lo* is the neuter form of the definite article.

<sup>96</sup> The word *zë’cy* is also part of the word *zë’cydya*, meaning literally ‘such an amount’, with *-dya* being the actual carrier of the notion MUCH. Pamela Munro claims (p.c.) that *dya* does not mean MUCH exactly but does generally carry a notion of extent. I will gloss it as MUCH for the sake of simplicity and leave the exact identity of this element open for further research.

<sup>97</sup> I discuss the nature of relative clauses in comparative constructions in Chapter 5.

- (159) Zye:einy-ru' ca'rr b-di:i'by Liieb cah zë'cy nih  
 MUCH.sol/abs-ER car perf-wash Felipe than thus rel  
                           b-di:i'by Rrodriiegw camione't.  
                           perf-wash Rodrigo pick.up.truck  
 'Felipe washed more cars than Rodrigo washed pick-up trucks'

In this construction, *zë'cy* seems to be quantifying over the entire proposition *Rodrigo washed pick-up trucks* rather than locally quantifying over the noun *pick-up trucks* specifically. In other words, (159) seems to mean something like (159'):

- (159') {Felipe washed more cars than the way in which [meaning the extent to which] Rodrigo washed pick-up trucks}

A final structure in SLQZ which can translate English amount comparisons involving CS but which evidently does not exhibit comparative subdeletion, since the word *zë'cydya* 'such an amount' is an overt marker of the amount of trucks at hand, is shown in (160):

- (160) Zye:einy-ru' ca'rr b-di:i'by Liieb cah zë'cy-dya' camione't  
 MUCH.sol/abs-ER car perf-wash Felipe than thus-MUCH pick.up.truck  
                           nih b-di:i'by Rrodriiegw  
                           rel perf-wash Rodrigo  
 'Felipe washed more cars than Rodrigo washed trucks'

### 3.3.1.4 Null Complement Anaphora (NCA)

NCA occurs in both comparative and non-comparative sentences, the latter case being mainly restricted to English. In either case, a predicate such as a modal (epistemic or deontic), an auxiliary, a verb of volition, or a verb of communication / perception, which normally takes an overt verb phrase (English only) or clausal complement, appears superficially without one. The missing complement must be salient in the discourse context and is most often mentioned one sentence prior, for instance, the first member of two conjoined clauses (161) or a question in a question / answer pair (162).

- (161) John doesn't ever **do his homework**, but he really should (**do his homework**).

(162) Q. Why is John **doing his homework** ?

A. Because he has to (do his homework).

In comparative NCA (163), the covert complement is signalled by an overt copy in the main clause, and the second associate actually includes an overt verb, namely the NCA verb (in fact, only the complement of this NCA verb is covert):

- (163) a. Felipe **lavó** más **coches** de lo que Rodrigo  
Felipe wash.pret.3sg ER.MUCH.m.pl cars of the.n that Rodrigo  
le pidió (que lavara [ ] de coches)  
3sg.dat ask.pret.3sg that wash.imp.subj.3sg<sup>98</sup> [ ] of cars  
'Felipe washed more cars than Rodrigo asked him to (wash X-many cars)'

- b. Zye:einy-ru' ca'rr b-di:i'by Liieb cah nih r-zilla:a:a'z-u'  
MUCH.sol/abs-ER car perf-wash Felipe than rel hab-think-2sg  
(b-di:i'by-éng [ ] ra ca'rr).<sup>99</sup>  
perf-wash-3sg. [ ] pl car  
'Felipe washed more cars than you think (that he washed X-many cars)'

- c. Felipe **washed** more **cars** than Rodrigo asked him to ( wash [ ] cars).

Null complement anaphora is always a case of full comparison according to Price's (1990) terminology.

### 3.3.1.5 Gapping

Gapping is possible in Spanish and English but not in SLQZ. Like NCA, it occurs in both comparative and non-comparative sentences, although some speakers of English do not allow gapping at all in comparative sentences – they allow (165) but not (168) or (170), for instance. In gapping, a clause appears with some of its constituents intact but is distinctly missing an (overt) verb, as well as tense, although they must both of course be recoverable within the discourse context. In

<sup>98</sup> The abbreviations 'imp' and 'subj' in Spanish glosses refer to the imperfect tense and the subjunctive mood, respectively.

<sup>99</sup> There is also a variant of this example in which the element representing abstract amount discussed above – zé'cydya' – is also present:

- (i) Zye:einy-ru' ca'rr b-di:i'by Liieb cah zé'cy-dya' nih r-zilla:a:a'z-u'  
MUCH.sol/abs-ER car perf-wash Felipe than thus-MUCH rel hab-think-2sg  
(b-di:i'by-éng [ ] ra ca'rr).  
perf-wash-3sg [ ] pl car  
'Felipe washed more cars than you think (that he washed X-many cars).

non-comparative instances of gapping (165)-(166), the gapped verb is a constituent of the second conjunct of two conjoined clauses. The overt members of the second conjunct are those elements that contrast with parallel elements in the first member of the conjunct. There are many restrictions on what types of elements may remain overt in the second, gapped conjunct. Nouns occur most freely, whereas prepositional phrases, adjectives and pronouns are more restricted. There are many factors involved here, such as word order, definiteness effects and status as adjunct vs. argument, but a detailed explanation would take me too far afield. Therefore, I just illustrate here with a few examples:

SLOZ [gapping is disallowed]

- (164) \*B-da'uhw Liieb bx:aa:adv chieru' Rrodriiegw gueht.  
 perf-eat Felipe chapulin then Rodrigo tortilla  
 'Felipe ate chapulines, and Rodrigo (ate) tortillas'

English

- (165) Felipe ate chapulines, and Rodrigo, tortillas.  
 'Felipe ate chapulines, and Rodrigo (ate) tortillas'

Spanish

- (166) Felipe comió chapulines, y Rodrigo tortillas.  
 Felipe eat.pret.3sg chapulines and Rodrigo tortillas  
 'Felipe ate pizza, and Rodrigo (ate) tortillas'

In comparative gapping (167)-(170), the second associate is superficially subclausal, i.e., it appears to be some constituent smaller than a clause.<sup>100</sup> Note that if there were only one contrast in the second term of a comparsion, then we would simply have a case of comparative ellipsis.<sup>101</sup> Thus I take comparative gapping to simply be a special case of CE involving more than one contrast.

Comparative gapping may occur, in Spanish and English, in either full comparison or partial comparisons:

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<sup>100</sup> In GB terms, I use the term subclausal constituent to refer to any proper subpart of an IP.

<sup>101</sup> For example, the sentences in (167)-(170) without the doubly-underlined elements in the second associate would be cases of CE in my terminology.

Full comparisons

- (167) Felipe lavó más coches que Rodrigo camionetas.  
Felipe wash.pret.3sg ER.MUCH.m.pl cars that Rodrigo pick.up.trucks  
'Felipe washed more cars than Rodrigo pick-up trucks'
- (168) ?Felipe washed more cars than Rodrigo, pick-up trucks.  
'Felipe washed more cars than Rodrigo (washed) pick-up trucks'

Partial comparisons

- (169) Felipe pasó más tiempo en San Lucas que  
Felipe pass.pret.3sg ER.MUCH.m time in San Lucas that  
Rodrigo en Oaxaca.  
Rodrigo in Oaxaca.  
'Felipe spent more time in San Lucas than Rodrigo (spent) in Oaxaca'
- (170) Felipe spent more time in San Lucas than Rodrigo in Oaxaca.

Just as non-comparative gapping is disallowed in SLQZ, so is comparative gapping:

- (171) \*Zye:einy-ru' ca'rr b-di:i'by Liieb cah Rrodriiegw camione't.  
MUCH.sol/abs-ER car perf-wash Felipe than Rodrigo pick.up.truck  
'Felipe washed more cars than Rodrigo washed pick-up trucks'

Pamela Munro and William Leonard (p.c.) point out that comparative gapping is out even in English for some speakers. Although this requires an explanation, I note here that such sentences are fine in my judgment, and such data has been quoted in the literature. The following sentences are from Napoli (1983, p. 676) and Corver (1993, p. 777), respectively:

- (172) Mary loves Fellini more than John, Bertolucci.  
[Napoli's example #4c, full comparison]
- (173) John knows more Romance languages than Pete Germanic languages.  
[Corver's example #11a, partial comparison]

Some of the variation in acceptability of comparative gapping in English may stem from whether a comparison is full or partial and whether or not the two

sentence fragments appearing covertly might form a small clause constituent,<sup>102</sup> in which case CE rather than comparative gapping would be at work.

I discuss comparative gapping further in Chapter 5.

### 3.3.1.6 Pseudogapping

Pseudogapping, like gapping and NCA, occurs in both comparative and non-comparative sentences, but unlike gapping, it does not occur in Spanish, nor does it occur in SLQZ, which disallows both gapping and pseudogapping. In pseudogapping,<sup>103</sup> a verb is covert, but tense surfaces overtly, whether via an auxiliary verb or a modal. Of course, pseudogapping requires that the gapped verb (and any other gapped material) be recoverable, whether the construction is non-comparative (174) or comparative (175).

Although tense is not covert in pseudogapping,<sup>104</sup> any of the internal arguments of the verb that do not serve as foci of contrast must be covert in addition to the verb, since they are recoverable from a previous clause ((174b,c,d) and (175b,c,d)).

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<sup>102</sup> For example, the string *books to Bill* in (i) might be interpreted as a small clause, and hence a single constituent complement of V, rather than simply a sequence of a DP followed by a PP, both following a verb in a (disallowed) ternary structure:

(i) I gave more magazines to Sue than Books to Bill.

<sup>103</sup> Napoli (1983), for example, gives the following sentences as examples of pseudogapping, based on Levin (1978 and 1979):

(i) John would lie to Sue sooner than Bill would to Jane. [her example #4d]  
(ii) John speaks against many more friends than he does enemies. [her example #i in fn#4]

<sup>104</sup> If tense were covert in this type of sentence, the result might be grammatical, but this would be a case of gapping rather than pseudogapping.

- (174) a. Juan dates girls and I do [date]<sup>105</sup> guys.
- b. Frank stays out late in New York, but I wouldn't [stay out late] even in Iowa.
- c. Felipe sent a letter to Rodrigo, and José did [send a letter] to me.
- d. Felipe sent a letter to Rodrigo, but (he) never did [send a letter] to me.<sup>106</sup>
- (175) a. Juan dates more girls than I do [date] guys.
- b. Frank stays out later in New York, than I would [stay out late] in Iowa.
- c. Felipe sent more letters to Rodrigo than José did [send letters] to me.
- d. Felipe sent more letters to Rodrigo than \*(he) did [send letters] to me.

A subject, which is an external argument, behaves differently than the internal arguments of the verb. Even if the subject is identical in both clauses, and hence is not a focus of contrast, it must be overt not only in the clause with an overt verb but also in the clause missing a verb ((174d) and (175d)) (although cf. fn (106)). This follows from the fact that non-pro-drop languages like English always

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<sup>105</sup> In (174) and (175), the material in brackets is only intended to suggest the meaning of the gapped material. Interestingly enough, as pointed out by Pamela Munro, it is not the case in all of these examples that an equivalent non-gapped sentence with the same meaning may appear simply by producing overt copies of the bracketed material. Specifically, there is an incompatibility between the appearance of non-emphatic *do* and the material proposed in brackets. I suggest that both pseudogapping and do-support are occurring simultaneously in such cases.

Although I do not have an explanation for this problem, note that there is a more general restriction, by which do-support (comparative or not) may only cooccur with an overt lexical verb in interrogative or emphatic contexts:

- (i) María, why did you decide not to travel to Europe last summer?
- (ii) I DID go to Europe last summer !

As predicted, cooccurrence of *do* and a lexical verb is possible in sentences similar to (174a) (i.e., we can “ungap” pseudogapped sentences) but which involve an emphatic context, such as in (174d) (unless *never* is stressed instead of *did*) or in (iii) or (iv):

- (iii) I told them that I date guys, and I in fact DO date guys.
- (iv) ?I DON'T call my mom more often than I DO call her.

<sup>106</sup> I thank Pamela Munro for pointing out (p.c.) that the subject of the second conjunct is actually optional in this case. I will assume that the version without an overt subject involves conjoining verb phrases instead of entire clauses and that the external argument of the verb (i.e., the subject) may not be deleted in the case of clausal conjunction.

Munro also points out that the subject must be obligatorily present in comparative pseudogapping even if non-contrastive (cf. (175d)). This follows logically if we assume, as I do, that cases such as the version of (174d) without *he* are not pseudogapping but rather VP-conjunction, and that comparative pseudogapping necessarily involves two clauses, rather than merely verb phrases.

require an overt subject whenever there is overt tense, a condition which coincides, aside from the case of pseudogapping, with the presence of an overt lexical verb.

Hence, even expletive subjects cannot be omitted in cases of pseudogapping,<sup>107</sup> and any apparent counterexample such as the version of (176) without *it* should be considered VP-conjunction rather than pseudogapping (cf. fn (106))

- (176) It rained a lot yesterday, and \*(it) could [rain a lot] again today.  
[*It* can be absent in case of VP-conjunction but is obligatory in pseudogapping]

Since (177) is a case of comparative pseudogapping, it necessarily involves clausal conjunction, and hence, *it* cannot be omitted.

- (177) It rained more yesterday than \*(it) will [rain] today.

Note that comparative pseudogapping may involve either full or partial comparison, as in (175b)-(175d) and (175a), respectively.

Since comparative pseudogapping does not occur in either Spanish or SLQZ, I do not explore it any further in this dissertation.

### 3.3.1.7 VP-deletion

VP-DELETION is a term used (e.g., Napoli (1983)) to refer to a subcase of NCA in which the missing complement is a Verb Phrase.<sup>108</sup> Since NCA is unavailable in SLQZ and Spanish in those cases where the missing complement is a verb phrase (vs. a clause), VP-deletion is unavailable in SLQZ and Spanish. One specific case of VP-deletion that especially highlights its restriction to English is the phenomenon of do-support, as exemplified in (178). Note that in a case of VP-deletion where do-support occurs simultaneously, there is no corresponding grammatical equivalent in which both the verb *do* and the underlying lexical verb phrase are overt (178') (unless there is a contrast of the type DO vs. DON'T – cf. fn (105)).

- (178) Felipe dances more wildly than Rodrigo does [dance wildly].

<sup>107</sup> Recall that pseudogapping is not possible in the pro-drop languages under study here.

<sup>108</sup> The covert complement in NCA can be either a verb phrase or a clausal complement (the latter being either an IP or a CP in GB terms), depending on the particular NCA predicate.

(178') \*Felipe dances more wildly than Rodrigo does dance wildly.

VP-deletion is almost always a case of full comparison. One possible case in which it is not is the type of sentence in (179), a somewhat marginal partial comparison:

(179) ?More teachers arrived than students did.

Since VP-deletion is unavailable in Spanish or SLQZ, I will not discuss it any further in this dissertation.

### 3.3.1.8 Summary of ellipsis types

The following table sums up the discussion on ellipsis types in comparatives:

**Table 3.2 Ellipsis typology**

<u>type of ellipsis</u>	<u>example no.'s</u>	<u>covert elements in second associate<sup>109</sup>/languages in which a given type occurs</u>
comparative ellipsis (CE)	(145)-(150)	entire second associate except comparative particle and single focus (i.e., verb and inflectional material plus all adjuncts and arguments of the verb except one) SLQZ, Spanish, English
comparative deletion (CD)	(151)-(153)	second head <sup>110</sup> and degree operating over it SLQZ, Spanish, English
comparative subdeletion (CS)	(154)-(157)	degree operating over second head <sup>111</sup> SLQZ, Spanish, English

<sup>109</sup> I choose to remain neutral as to whether deletion occurs or null/covert categories are base-generated as such. However, I will assume that these elements are not absent structurally at any level (although they may lack internal structure).

<sup>110</sup> In amount comparisons, not only is what I argue to be the true head of such comparisons, MUCH, covert, but also its lexical noun complement. If its lexical noun complement is overt, then the sentence falls into the traditional category of comparative subdeletion.

<sup>111</sup> In amount comparisons, I take the actual second head to be the abstract quantifier MUCH, and hence, amount comparisons traditionally taken to be cases of CS are actually cases of CD in which the second head's lexical noun complement is overt.

null complement anaphora (NCA)	(163)	the most embedded clause or verb phrase
		SLQZ and Spanish (but not verb phrase), English
gapping	(167)-(170)	entire second associate except comparative particle and two (or marginally three) foci (i.e., verb and inflectional material plus all adjuncts and arguments of the verb except two or possibly three)
		Spanish, English
pseudogapping	(175), (177)	verb but not tense
		English
VP-deletion	(178)	VP but not inflection
		English

### 3.3.2 A more general division

We can make a more general division of comparatives based on the status of the constituent following the comparative particle: those cases where the constituent following the comparative particle contains an overt verb (often called CLAUSAL COMPARATIVES), and those cases where it does not (often called PHRASAL COMPARATIVES).

#### 3.3.2.1 Constituent with overt verb follows comparative particle

In cases where a non-auxiliary verb appears overtly (comparative deletion, comparative subdeletion, and many cases of null complement anaphora),<sup>112</sup> and even in cases where only an auxiliary verb appears overtly (other cases of NCA, VP-deletion, pseudogapping), the initial intuition is that there is structurally an en-

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<sup>112</sup> Even though a verb (auxiliary or not) always appears after the comparative particle in NCA, we must also explain the nature of its covert complement. Regarding the point at hand, though, we can at least group NCA with the other ellipsis types here since the presence of the NCA verb implies the existence of a clause after the particle just as much as the presence of non-NCA verbs in the other types.

tire clause after the comparative particle. The nature of this constituent will be examined more closely in Chapter 5 except in case of pseudogapping and VP-deletion, which as I indicated earlier do not occur in Spanish or SLQZ.

### 3.3.2.2 Comparative without an overt verb follows comparative particle

In CE and gapping, there is no overt verb after the comparative particle. Therefore, it is not clear whether the contrasts are actually found in (or originate in) a subordinate comparative clause, a conjoined phrase or clause, or merely a prepositional phrase. This may vary cross-linguistically and some languages seem to have more than one of these options available. I will address this question in detail in Chapter 5.

### 3.4 Variation in Comparative Particle

Recall that the second associate in a comparative construction of the type studied in this dissertation is linked to the first associate by its first element, a COMPARATIVE PARTICLE – a catch-all term used by linguists studying comparatives (e.g., Stassen (1985)) to describe what really appears to be a heterogenous set of items. Various comparative particles have been claimed to be complementizers, prepositions, coordinators, quantifiers, wh-elements, and determiners. Whatever the identity of comparative particles may be, it is not at all obvious (in fact I show that it is not the case) that they are all of the same syntactic nature.

In English, the single particle *than* is used in most comparative constructions.<sup>113</sup> Spanish, on the other hand, has a more varied repertoire of comparative particles, as does SLQZ, so I present the distribution patterns in these two languages below.

#### 3.4.1 Spanish

Spanish comparatives make recourse to *de*, *que*, and various larger units involving *de* and/or *que* in comparisons of inequality. I treat the various cases below. I do not, however, present data involving *como*, the particle used in comparisons of equality, since comparisons of equality are mainly beyond the scope of this work.

##### 3.4.1.1 *Que* only

The word *que* appears alone as a comparative particle (i.e., is not preceded by *de* plus other material) in several cases. The material following *que* does not

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<sup>113</sup> A major exception are comparatives of equality, which most commonly use *as*.

contain any overt finite verbs except in two special cases which I will not address.<sup>114</sup>

Aside from those two cases, the following are the key instances of this type of comparative.

### 3.4.1.1.1 *Que* followed by a second term of comparison containing non-verbal contrasts

This type of structure is found in instances of comparative ellipsis (if there is only contrast) and gapping (if there is more than one contrast) and may involve full comparison or partial comparison:

- (180) a. Julia canta mejor que yo.  
Julia sing.pres.3sg well.ER that 1sg.nom  
'Julia sings better than me'<sup>115</sup>  
[one contrast: Julia vs. me] [CE, full comparison]
- b. Julia compró más naranjas que manzanas.  
Julia buy.pret.3sg ER.MUCH.f.pl oranges that apples  
'Julia bought more oranges than apples'  
[one contrast: oranges vs. apples] [CE, partial comparison]

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<sup>114</sup> The first such case is a partial comparison in which the extent or frequency of one type of activity or condition that is true of a particular individual is compared to the extent of frequency of another type of activity or condition that is true of that individual (cf. below §3.4.1.1). In other words, this is a case in which the second head is the extent of a verb. For example:

(i) Patricia caminó más que durmió durante su-s vacaciones.

Patricia walk.pret.3sg ER.MUCH that sleep.pret.3sg during 3-pl vacation

'Patricia walked more [i.e., for a longer time or more often] than she slept during her vacation.'

The second such case is where the comparison is of the type: It is more the case that X than it is the case that Y (referred to as an EPISTEMIC READING (Napoli (1983)) or a METALINGUISTIC READING (McCawley (1988)):

(ii) Enrique solicitaba trabajo más que pedía limosna.

Enrique seek.imp.3sg work ER.MUCH that ask.forimp.3sg charity

'Enrique was looking for a job more than he was begging'

I have glossed *más* here as 'ER.MUCH' since it means to a greater extent:

{It was the case that Enrique was looking for a job to a greater extent than it was the case that he was begging.}

Other glosses such as rath.ER or true.ER could also be argued. It is not immediately clear which is the best gloss, and I leave this open for further research.

<sup>115</sup> Note that this would be *Julia sings better than I* in formal English.

- (181) a. Alfredo pasó más tiempo en Bélgica  
           Alfredo pass.pret.3sg ER.MUCH.m time in Belgium  
           que yo en el Caribe.  
           that 1sg.nom in the.m Caribbean  
           ‘Alfredo spent more time in Belgium than I did in the Caribbean’<sup>116</sup>  
           [gapping, full comparison]

[two contrasts: Alfredo vs. me, and (in) Belgium vs. (in) the Caribbean]

- b. Alfredo compró más manzanas  
           Alfredo buy.pret.3sg ER.MUCH.f.pl apples  
           que Ignacia naranjas.<sup>117</sup>  
           that Ignacia oranges  
           ‘Alfredo bought more apples than Ignacia, oranges’  
           [gapping, partial comparison]

[two contrasts: Alfredo vs. Ignacia, and apples vs. oranges]

### 3.4.1.1.2 *Que* followed by subset used as standard of comparison / reference set<sup>118</sup>

In this type of comparison, the amount of a single noun property is not what

<sup>116</sup> Note that the English translation of (58) would actually be quite marginal with either *me* or *I* as the second associate contrast if the auxiliary verb *did* were not present; that is, a structure with pseudogapping is preferred:

(i) \*?Alfredo spent more time in Belgium than I/me in the Caribbean.

Note, however, that gapping is more acceptable if nominal foci are used instead of pronominal foci.

(ii) ?Alfredo spent more time in Belgium than Enrique in the Caribbean.

In any case, I return to the *I/me* alternation in Chapter 5.

<sup>117</sup> Recall that this is a case of comparative gapping, which may not be acceptable to all speakers of Spanish. Those who do not accept this would need to resort to a construction with an overt verb, as discussed below.

<sup>118</sup> In some cases, a cardinal number is also present, but the cardinality is not the most salient element of the reference point in and of itself (the most relevant information is underlined):

(i) Violeta encontró más que dos monedas de oro - también  
           Violeta find.pret.3sg ER.MUCH that two coins of gold also  
           encontró vari-o-s objetos de arte.  
           find.pret.3sg various-m-pl objects of arte  
           ‘Violeta found more than two gold coins - she also found various pieces of art’

vs.

(ii) Violeta encontró más de cien monedas de oro.  
           Violeta find.pret.3sg ER.MUCH.f.pl of hundred coins of gold  
           ‘Violeta found more than a hundred gold coins’  
           [i.e., the number she found is greater than 100.]

In this last gloss, the morphemes MUCH, feminine gender, and plural number have combined with ER to yield *más*, but I assume that they originate to the left of *monedas*. Cf. §3.4.1.2.1.

is being compared. Instead, a presupposition about the contents of a set is shown to have overlooked some of the contents of the set. In other words, what are assumed to be all of the elements of the set are in fact only an improper subset of the entire set.

In (182), for example, the speaker is challenging a presupposition about the set of types of things which the individual named Felipe needs (some amount of). That is, the set of items that Felipe needs some amount of includes more elements than just water and bread – it also includes love and studies.

- (182) Felipe necesita más que agua y pan – también  
Felipe need.3sg ER.MUCH that water and bread also  
necesita amor y estudios.  
need.3sg love and studies  
'Felipe needs more than water and bread - he also needs love and studies'

The set referred to in this type of comparison may actually contain specific individuals instead of just types. In (183), for example, the set of individuals that Rodrigo saw includes more elements than just the speaker – it also includes the individual named Frederica.

- (183) Rodrigo vio más que a mí sol-o – también  
Rodrigo see.pret.3sg ER.MUCH that p.a 1sg.obl alone-m also  
vio a Frederica.  
see.pret.3sg p.a Frederica  
'Rodrigo saw more than just me - he also saw Frederica'

It is interesting to note that this subset-as-a-standard construction is somewhat marked cross-linguistically. For example, it is not allowed in either SLQZ or Italian. It is often paraphrased using correlative elements such as “not only...but also” or special adverbial expressions of the type “In addition to X, Y”:

- (183') Rodrigo vio no sólo a mí sino que también  
Rodrigo see.pret.3sg not only p.a 1sg.obl but.rather that also  
vio a Frederica.  
see.pret.3sg p.a Frederica  
'Rodrigo saw not only just me but he also saw Frederica'

- (183'') Además de (a) mí, Rodrigo también vio a Frederica.  
in.addition of p.a 1sg.obl Rodrigo also see.pret.3sg p.a Frederica  
'In addition to me, Rodrigo also saw Frederica'

Note also that there is one subclass of this construction which is ambiguous between a true subset reading and an implicit comparison-of-quality reading. In (184), for example, Rodrigo didn't (necessarily) find a plastic ring - he found something much better (there being an implicit qualitative adjective *good* under the comparison-of-quality reading)- a gold ring that had once belonged to the famous Mexican president Benito Juárez.

- (184) Rodrigo encontró más que un mer-o anillo de plástico –  
 Rodrigo find.pret.3sg ER.MUCH that a.m mere-m ring of plastic  
 encontró un anillo de oro que antes había  
 find.pret.3sg a.m ring of gold that before have.imp.3sg  
 pertenecido al Presidente Benito Juárez.  
 belong.pastpart to.the.m presidente Benito Juarez  
 ‘Rodrigo found more than a mere plastic ring - he found a gold ring that had previously belonged to President Benito Juárez’

Lastly, note that this type of comparison, unlike other types, does not allow substitution of *menos que* ‘less than’ or *tanto como* ‘as much as’ in place of *más que*. This has led some (eg., Prytz (1979)) to consider this type of comparison not to be a true comparison. SLQZ, as well as other languages such as Italian, disallow this construction, and I will not pursue any analysis of it.

#### 3.4.1.1.3 *Que* followed by fronted second head and verb

In this construction, seen in (185), the second head is fronted, followed immediately by the verb of the comparative clause and then any remaining constituents.

- (185) Elena es más alt-a que guap-o es Juan.  
 Elena be.3sg ER tall-f that handsome-m be.3sg Juan  
 ‘Elena is more tall than Juan is handsome’

If the second head is a verb itself, then the verb follows *que* immediately, and the remainder of the clause follows:

- (186) Elena corre más que camina Juan.  
 Elena run.3sg ER.MUCH that walk.3sg Juan  
 ‘Elena runs more than Juan walks’  
 [two contrasts: *Elena* vs. *Juan* and *corre* vs. *camina*]

Price (1990) notes that in order for a structure like (186) to be grammatical, something in addition to, or instead of, tense must form a contrast. For example, the second term in (186) contains two contrasts: *camina* ‘walks’ and *Juan*. If tense is the only contrast present, then this structure may not be used (cf. (187) vs. (188)):

- (187) Elena corre más que corre Susana.  
Elena run.3sg ER.MUCH that run.3sg Susana  
'Elena runs more than Susan'  
[only one contrast, but it is *Elena* vs. *su mamá* (not TENSE), sentence is grammatical]
- (188) \*Elena corre más que corría.  
Elena run.3sg ER.MUCH that run.imp.3sg  
'Elena runs more than she used to run'  
[only one contrast, it is TENSE, sentence is out]

I do not provide an analysis of this construction but instead refer the interested reader to Price (1990) and Sáez (1990) for discussion on this matter.

### 3.4.1.2 *De* with no (at least overt) subsequent clause

There are two subvarieties of this comparative strategy. In both types, *de* is immediately preceded by *más*.

#### 3.4.1.2.1 Reference amount is a simple cardinal number or measure phrase, i.e., the standard of comparison is explicit

Rather than comparing the amount of a noun type or the degree of an adjectival property associated with an individual (the comparee) to the amount associated with a second individual (a second term contrast connected with an implicit standard of comparison), a cardinal number or measure phrase is provided by itself as a standard for comparison. Thus, there is no second term in this type of comparison. In (189), for example, the amount of pictures associated with Ignacia, or more specifically, the number of pictures that she painted, is given simply as more than sixty rather than defined in a more complex manner as being more pictures than those associated with some other individual:

- (189) Ignacia pintó más de sesenta cuadros.  
 Ignacia paint.pret.3sg ER.MUCH.m.pl<sup>119</sup> of sixty pictures  
 'Ignacia painted more than sixty pictures'

It is in fact this construction on which I model my analysis of comparatives of the type in §3.4.1.5.

### 3.4.1.2.2 *De* followed by *lo / él / etc.* + nominalized adjective ordinarily taking a clausal complement<sup>120</sup>

These examples are given in pairs. The first member of each pair conforms to the formula given immediately above, and the second member, exhibiting NCA, is given in order to clarify the interpretation of the first member. The second member of each pair is, however, somewhat marked syntactically, since the adjective in question is used with an overt complement clause unnecessarily.

- (190) Estudiamos más de lo necesario.  
 study.pret.1pl ER.MUCH of the.n necessary.n  
 'We studied more than necessary'
- (190') ?Estudiamos más de lo que era necesario  
 study.pret.1pl ER.MUCH of the.n that be.imp.3sg necessary.n  
 que estudiáramos.  
 that study.imp.subj.1pl  
 'We studied more than it was necessary for us to study'
- (191) Compramos más sillas de l-[ ]-a-s necesari-a-s.  
 buy.pret.1pl ER.MUCH.f.pl chairs of the-MUCH-f-pl necessary-f-pl  
 'We bought more chairs than necessary'
- (191') ?Compramos más sillas de l-[ ]-a-s que era necesario que compráramos.  
 buy.pret.1pl ER.MUCH.f.pl chairs of the-MUCH-f-pl that be.imp.3sg necessary.n that buy.imp.subj.1pl  
 'We bought more chairs than it was necessary for us to buy'
- (192) L-o-s estudiantes sacaron más puntos  
 the-m-pl students take.out.pret.3pl ER.MUCH.m.pl points  
 de lo esperado.  
 of the.n expected.n  
 'The students got more points than expected'

<sup>119</sup> I take MUCH.m.pl to originate directly to the left of *cuadros*.

<sup>120</sup> These sentences are marginal for many speakers, and judgment also varies according to whether unagreeing *lo* or an agreeing form of *lo* (i.e., *el*, *la*, *los* or *las*) is used.

- (192') ?L-o-s estudiantes sacaron más puntos  
 the-m-pl students take.out.pret.3pl ER.MUCH.m.pl points  
 de lo que se esperaba que sacarían.  
 of the.n that refl expect.imp.3sg that take.out.cond.3pl  
 'The students got more points than it was expected that they would get'

I suspect that each regularly-numbered example is syntactically related to its paired prime example. I refer the interested reader to Sáez (1990) for an analysis of this construction.

### 3.4.1.3 *De* followed by form of *cuanto* (lit., 'how much') + clause<sup>121</sup>

Note that in both subcases, the clause following a form of *cuanto* may not be introduced by *que*.

#### 3.4.1.3.1 *Cuanto* with number / gender agreement

This subcase may only be used in comparisons of quantity, and *cuanto* agrees with the noun type whose quantity is being compared.

- (193) Óscar despidió a más empleados  
 Oscar see.off.pret.3sg p.a ER.MUCH.m.pl employees  
 de cuant-[ ]-o-s piensas.  
 of how-MUCH-m-pl think.2sg  
 'Oscar fired more employees than you think'
- (194) Tengo más canicas de cuant-[ ]-a-s quisiera.<sup>122</sup>  
 have.1sg ER.MUCH.f.pl marbles of how-MUCH-f-pl want.imp.subj.1sg  
 'I have more marbles than I would like'

#### 3.4.1.3.2 *Cuanto* without number/gender agreement

This subcase may be used in comparisons of quantity or degree, but *cuanto* is always found in its default masculine, singular form.

- (195) Nadé más kilómetros de cuanto pude.  
 swim.pret.1sg ER.MUCH.m.pl kilometers of how.MUCH be.able.pret.1sg  
 'I swam impossibly many kilometers'

Since this construction is deemed archaic by most Spanish speakers, I only

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<sup>121</sup> This type is disallowed by many speakers, especially when *cuanto* appears in the non-agreeing form. It is felt as archaic and probably limited to a fixed set of expressions.

<sup>122</sup> I thank Heriberto Avelino for this sentence and for (195) as well.

briefly discuss it in Chapter 5. I refer the interested reader to Sáez (1990) for a more detailed discussion of it.

### 3.4.1.4 *De* with subsequent *lo* or agreeing definite article + *que* + clause<sup>123</sup>

This type represents the usual strategy for forming a comparative when a conjugated verb is overtly present after the comparative particle, and it is the preferred alternate to the marginal type presented in §3.4.1.3.

However, this formulation may be avoided and replaced either by the type discussed in §3.4.1.1.1 or by the type in §3.4.1.1.3 if the second head is overt and fronted (presumably to focus position). As mentioned earlier, this second head may even be a verb, as long as tense is not the only contrast present (i.e., a contrast

<sup>123</sup> There is also a variety of comparatives with *que* + *lo* / agreeing definite article + *que*, in which *lo* (or an agreeing form of *lo*) means roughly *aquello* ‘that’ (or *aquel*, etc. ‘the one(s)’ in the case of the agreeing forms). A few speakers prefer this formulation over the one given in this section to express the same meaning. However, for many speakers, there is a difference in interpretation. The *de los que* formulation makes a claim about number only, whereas the *que los que* formulation makes a claim about the number of a specific, referential standard of comparison (although some speakers apparently have the exact opposite judgment). Compare the following:

- (i) Compré más libros de 1-[ ]-o-s que me regalaste.  
buy.pret.1sg ER.MUCH.m.pl books of the-MUCH-m-pl that 1sg.dat give.pret.2sg  
'I bought more books than you gave me'  
[Only the overall amount of books is relevant.]
- (ii) Tengo más libros que 1-o-s que me regalaste.  
have.1sg ER.MUCH.m.pl books that the-m-pl that 1sg.dat give.pret.2sg  
'I have more books than the ones you gave me'  
[A subset of specific books is relevant.]
- (iii) Este libro pesa más que 1-o-s que me regalaste.  
this.m.sg book weigh.3sg ER.MUCH that the-m-pl that 1sg.dat give.pret.2sg  
'This book weighs more than the ones that you gave me'  
[A specific set of books is at stake.]

This issue is taken up again in Chapter 5.

As pointed out by Prytz (1979, p. 273), comparisons of inequality with *del que* (etc.) and *que el que* (etc.) behave differently when transformed into comparisons of equality – the entire unit *del que* (etc.) gets replaced by *como*, whereas only the subunit *que* in *que el que* gets replaced by *como*:

- (iii) Compré tant-[ ]-o-s libros como me regalaste.  
buy.pret.1sg so-MUCH-m-pl books as 1sg.dat give.pret.2sg  
'I bought as many books as you gave me'
- (iv) Estos libros pesan tanto como 1-o-s que me regalaste.  
this.m.pl books weigh.3pl so.MUCH as the-m-pl that 1sg.dat give.pret.2sg  
'These books weigh as much as the ones that you gave me'

in agreement and/or lexical content must be present, in addition to, or instead of, a contrast in tense).

In fact, this formula is dispreferred whenever a simpler one with *que* alone is allowed (even though this means choosing covert forms, of recoverable material of course, instead of overt forms), a condition which seems to result from a reluctance to repeat material unnecessarily. Another possible reason for avoiding this construction is potential confusion with a partitive reading.<sup>124</sup>

Note that in some instances the neuter *lo* is used, while other times, an agreeing form (eg., *el*) is used. Judgments concerning which of the two types is possible in a given sentence vary from speaker to speaker, although I provide an analysis of each type in Chapter 5 for an idealized dialect of Spanish.

#### 3.4.1.4.1 With number/gender agreement

This strategy may only be used in comparisons of quantity, and the form of the definite article after *de* agrees in number and gender with the noun type whose amount is being compared.

- (196) Óscar despidió a más empleados de  
Oscar see.off.pret.3sg p.a ER.MUCH.m.pl employees of  
I-[ ]-o-s que piensas.  
the-MUCH-m-pl that think.2sg  
'Oscar fired more employees than you think'

- (197) Tengo más canicas de I-[ ]-a-s que  
have.1sg ER.MUCH.f.pl marbles of the-MUCH-f-pl that  
quisiera.  
want.imp.subj.1sg  
'I have more marbles than I would like'

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<sup>124</sup> Take the following sentence for example:

(i) Araceli terminó más proyectos de {I-[ ]-o-s / I-o-s} que  
Araceli finish.pret.3sg ER.MUCH.m.pl projects of {the-MUCH-m-pl / the-m-pl} that  
empezó.  
begin.pret.3sg

This can mean either of the following:

(ii) Araceli finished more projects than she started. [with MUCH in second associate]  
(iii) Araceli finished more of the projects that she started (i.e., she already finished some before, and she just finished more now) [without MUCH in second associate]

### 3.4.1.4.2 Without number/gender agreement

Here, the definite article is used in the abstract/neuter form. This strategy is allowed in both comparisons of quantity and comparisons of degree. It is very common in cases of NCA.

- (198) Nadé más kilómetros de lo que pude.  
swim.pret.1sg ER.MUCH.m.pl kilometers of the.n that be.able.pret.1sg  
'I swam impossibly many kilometers'

Since *lo* is also used in headless relatives as the abstract antecedent, comparative NCA may create ambiguity between true cases of the structure here in this section (199a), the structure in §3.4.1.1.2 (199b), or with a partitive reading (199c):

- (199) a. Compré más de lo que querías.  
buy.pret.1sg ER.MUCH of the.n that want.imp.2sg  
'I bought more than the amount of things that you wanted me to buy'  
[amount reading: §3.4.1.4.1]  
OR  
b. 'I bought more than that which that you wanted me to buy'  
[subset reading: §3.4.1.1.2]  
OR  
c. 'I bought more of what you wanted'  
[in addition to having already bought some of what you wanted]

### 3.4.2 San Lucas Quiaviní Zapotec (SLQZ)

#### 3.4.2.1 *Maazdeh / Maazda' / Maazta' / Maazda* (without *ru'*)<sup>125</sup>

These items all translate as ‘more than’ and are probably various manifestations of the same element in free variation with each other.<sup>126</sup> I refer to this element most often as *maazda'* since that is how it occurred most often in my initial investigations, although I use other variants if elicited as such. The element at hand is used in comparatives of quantity when the standard is explicit, i.e., when the num-

<sup>125</sup> In all other types of (quantitative) SLQZ comparatives of inequality, the element *ru'* surfaces, with *maa(z)* appearing only optionally. The fact that *maaz* appears here independently of *ru'* presents a challenge for my previous assertion that it is merely a dummy head in sentences where *ru'* appears simultaneously.

<sup>126</sup> They are not, however, the same lexical item as the SLQZ morpheme with the homophonous allomorphs *ta'* / *da'*, which is a Deg meaning ‘too (much)’ (cf. Chapter 2).

ber of a noun type associated with the comparee is compared to a cardinal number<sup>127</sup> rather than being compared to the amount associated with a second term contrast.

- (200) Maaz-da' tē'ihby gueht b-da'uhw-a'.  
MAAZ<sup>128</sup>-than one tortilla perf-eat-1sg  
'I ate more than one tortilla'
- (201) Maaz-da' tē'ihby ngiu:u'w w-nna:-a'.  
MAAZ-than one man perf-see-1sg  
'I saw more than one man'

### 3.4.2.2 *Cah* (+ *noo*) followed by noun phrase<sup>129,130</sup>

This formulation is perhaps the most common comparative construction in SLQZ. It involves CE and may either involve full comparison or partial comparison, the latter case being restricted to amount comparisons.

When CE involves a full comparison, the noun phrase following *cah* is the second associate contrast:

- (202) Maaz-ru' r-zh:u:u'nny Liieb cah (noo) Rrodriiegw.  
MAAZ-ER hab-run Felipe than (NOO) Rodrigo  
'Felipe runs more than Rodrigo'

---

<sup>127</sup> I have also come across one instance in SLQZ of the sequence *Maazda' cah* in which the following element is not a numeral, but rather, the word *sufisy'eennnd* 'enough'. I include this here for the sake of completeness, but I have no explanation for it. The whole sequence shown here means 'more than enough'.

- (76) Maaz-da' cah sufisy'eennnd comiied b-da'uhw-a'.  
MAAZ-than than enough food perf-eat-1sg  
'I ate more than enough food'

<sup>128</sup> It seems that here, *maaz* should include the denotations of *zye:einy*, i.e., MUCH.sol/abs, and ER, but I gloss it here simply as 'MAAZ' since I do not have enough information at this point to undertake an in-depth analysis of the various cases of this element, some of which occur in the same sentence as *zye:einy* and *-ru'*.

<sup>129</sup> The word *cah* is apparently in free variation with *queh*, both of which seem to have derived from the Spanish word *que*.

<sup>130</sup> *Noo* is apparently a borrowing based on Spanish *no*, which appears marginally in some comparatives in that language.

*Noo* appears freely after *cah* in SLQZ comparatives but not in those types of comparisons discussed in §3.4.2.1 and §3.4.2.5.

- (203) Maaz-ru' zye:einy ca'rr n-u' Lohs Aa'nngl cah  
MAAZ-ER MUCH.sol/abs car neut-be Los Angeles than  
(noo) Ldu:u'ah.  
(NoO) Oaxaca

'There are more cars in Los Angeles than in Oaxaca'

Partial comparisons employing comparative ellipsis<sup>131</sup> are limited to comparisons of quantity.<sup>132</sup> If a second head is an adjective or verbal property, a formulation using *cah nih* must be used instead (see §3.4.2.3).

- (204) Zye:einy-ru' me's b-zéhnny cah (noo) studya'aannd.  
MUCH.sol/abs-ER teachers perf-arrive than (NoO) student  
'More teachers arrived than students'

- (205) Zye:einy-ru' me's b-embi:-a' cah (noo) studya'aannd.  
MUCH.sol/abs-ER teachers perf-meet-1sg than (NoO) student  
'I met more teachers than students'

### 3.4.2.3 *Cah* (+ *noo*) followed by *nih* + clause

This construction is dispreferred in a comparison which could otherwise be expressed using CE, i.e. a comparison in which there is only one contrast and it is a noun phrase. However, it is obligatory if the contrast is verbal or in cases of NCA (i.e., when the lower clause corresponding to the matrix clause is the covert complement of a predicate such as a control verb, raising verb or modal). Thus, this construction involves CD, CS, or NCA.<sup>133</sup>

#### 3.4.2.3.1 *Cah* alone (+ *noo*) + *nih* + clause

This formulation is allowed in both comparisons of degree and quantity and

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<sup>131</sup> There is also an additional possibility for word order available for this type of structure than when the noun phrase following *cah* (+ *noo*) is the second associate contrast. For example, (79) has the following variant:

- (i) Zye:einy-ru' me's cah studya'aannd b-zéhnny.  
MUCH.sol/abs-ER teachers than student perf-arrive  
'More teachers than students arrived'

This has ramifications for the type of structure underlying such constructions (cf. Keenan (1987), Saez (1990)).

<sup>132</sup> Note that if the second head is a verb or an adjective, another formulation type is necessary – an overt subordinate clause containing the verb surfaces (Cf §3.4.2.3).

<sup>133</sup> Recall that gapping, pseudogapping, and VP-deletion are disallowed in SLQZ.

may involve either NCA (206) or CD (207):

NCA

- (206) Maaz-ru' nsehe's r-uhny Beed zé:é:i'ny cah (noo) nih  
MAAZ-ER fast hab-do Pedro work than (NOO) rel  
r-ralloh Lia Paamm.  
hab-think miss<sup>134</sup> Pam  
'Pedro works faster than Pam thinks (he does)'

CD

- (207) Zye:einy-ru' liebr b-zi:i:i' Beed cah (noo) nih  
MUCH.sol/abs-ER book perf-buy Pedro than (NOO) rel  
b-to:o' Lia Paamm.  
perf-sell miss Pam  
'Pedro bought more books than Pam sold'

### 3.4.2.3.2 *Cah + (noo) + zé'cydya' + nih + sentence*<sup>135</sup>

The word *zé'cydya'*, as mentioned earlier, means roughly 'such an amount'. It is therefore not a surprise that this type of structure is only possible with comparisons of amount. This construction involves either NCA (208) or CD (209).

NCA

- (208) Maaz-ru' nsehe's r-uhny Beed zé:é:i'ny cah (noo) zé'cy-dya'  
MAAZ-ER fast hab-do Pedro work than (NOO) thus-MUCH  
nih r-ralloh Lia Paamm.  
rel hab-think miss Pam  
'Pedro works faster than Pam thinks (he does)'

CD

- (209) Zye:einy-ru' lai'py r-zi:i:i' Liieb cah (noo) zé'cy-dya'  
MUCH.sol/abs-ER pencil hab-buy Felipe than (NOO) thus-MUCH  
nih r-uhnnychi:i:a' Rrodniegw.  
rel hab-makes Rodrigo  
'Felipe buys more pencils than Rodrigo makes'

### 3.4.2.3.3 *Cah + (noo) + zé'cydya' + noun phrase + nih + sentence*<sup>136</sup>

<sup>134</sup> *Lia* is a title word used before a woman's name in SLQZ.

<sup>135</sup> This construction appears somewhat marked, perhaps since the element *zé'cydya'* is optional for a sentence with this type of interpretation. Since it did surface in some of the sentences elicited, it is worth investigating how optional it really is.

<sup>136</sup> This construction is all but entirely out except in partial comparisons of amount, i.e., in those comparisons where the amount of one KIND is being compared with the amount of another KIND (i.e., X [verbed] more Y than A [verbed] B, where Y and B are KINDS)

This construction involves CS. As was the case of the same structure but without an overt noun phrase, the presence of the word *zë'cydya'* correlates with a restriction of these structures to quantity comparisons only.

Sometimes the noun phrase is not preceded by *ra* (210).<sup>137</sup> In this subcase, the noun whose quantity is being compared follows *zë'cydya'* directly.

- (210) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) zë'cy-dya' mannsaan  
 MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) thus-MUCH apple  
 nih b-da'uhw-a'.  
 rel perf-eat-1sg  
 'You ate more chapulines than I ate apples'

Sometimes the noun phrase is preceded by *ra*:

- (211) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) zë'cy-dya' ra  
 MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) thus-MUCH pl  
 mannsaan nih b-da'uhw-a'.  
 apple rel perf-eat-1sg  
 'You ate more chapulines than I ate apples'

In this subtype, the noun whose quantity is being compared and *zë'cydya'* are not string adjacent but rather are separated by *ra*. Note that (210) is perfectly fine without *ra*, so it cannot be entirely equivalent to plural markers in languages such as English and Spanish. In any case, *ra* deserves special attention of its own that is beyond the scope of this dissertation.

#### 3.4.2.3.4 *Cah + (noo) + noun phrase + nih + sentence*

This is another type of construction available for comparisons of quantity. Notice that the word *zë'cydya'* ‘amount’ does not surface.

As was the case for *zë'cydya'* amount comparisons, the element *ra* is not obligatory before the nominal second head:

- (212) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) mannsaan nih  
 MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) apple rel  
 b-da'uhw-a'.  
 perf-eat-1sg  
 'You ate more chapulines than I ate apples'

---

<sup>137</sup> As mentioned in Chapter 2, the element *ra* appears to be some type of plural marker. It is not clear how its presence or absence might be relevant to the constructions under discussion.

However, the element *ra* does sometimes surface in this type of construction:

- (213) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) ra mannsaan nih  
MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) pl apple rel  
b-da'uhw-a'.  
perf-eat-1sg  
'You ate more chapulines than I ate apples'

Again, it is not clear what the significance of its presence vs. its absence in comparative structures may be.

#### 3.4.2.4 *Lohoh* + non-pronominal noun phrase or SAM<sup>138, 139</sup>

This particular construction is primarily limited to those cases in which the second head is an adjectival property. I do not analyze the reason for this restriction, but I do analyze the structure involved in this construction in Chapter 5.

- (214) Zyuu:a'll-ru' Lia Oliieb loh Rrodriiegw.  
tall-ER miss Olivia face Rodrigo  
'Olivia is taller than Rodrigo'
- (215) Zyuu:a'll-ru' Lia Oliieb lu:-a'.  
tall-ER miss Olivia face-1sg  
'Olivia is taller than me'

#### 3.4.3 Summary of comparative particles and their distribution

The following table summarizes the inventory and distribution of comparative particles in English, Spanish, and SLQZ:

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<sup>138</sup> Recall once again that SAM is an abbreviation meaning 'subject agreement marker'. Despite its label, it may also be used to indicate possession or the object of a preposition, as is the case here.

<sup>139</sup> Note: after *loh*, neither [zë'cydy'a' ((ra) N)], [(ra) N] or *noo* may appear.

**Table 3.3 Comparative particles**

Type of comparison based on element following comparative particle	SLOZ	Spanish	English
no overt verb or tense, full comparison	cah / loho <sup>140</sup>	que	than
no overt verb or tense, <sup>141</sup> partial comparison	cah	que	than
noun phrase in subset comparison	N/A	que	than
numeral or measure phrase alone	ta <sup>142</sup>	de	than
NCA adjective alone	N/A	de lo, del, de la de los, de las	than
verb in comparative clause is embedded under NCA verb or is altogether different from main verb	cah nih cah zë'cydya' ((ra) noun... ...phrase) nih cah (ra) noun... ...phrase nih	de lo que, del que, etc.	than

<sup>140</sup> This is only allowed if the head of comparison is an adjective.

<sup>141</sup> This is a simplification. There is a construction with *que* as the comparative particle in which the second head of the comparison is preposed, even if it is a verb. cf. §3.4.1.1.3 for a descriptive of that construction.

<sup>142</sup> Recall also: *Maazda' cah sufisyenn* 'more than enough'.

### 3.5 Extraposition in Comparatives

Consider the schemata in (216) and (217), which are potential sources for sentences such as (27), with underlining and double underlining used to show adjacency of ER and the constituent introduced by the comparative particle, and bold-face used to indicate the head of the comparative.<sup>140</sup>

- (216) The girls sang [ER than [the number of songs that the boys sang  
MUCH.pl] songs.
- (217) The girls sang [[a degree which is greater than [the degree.MUCH.pl songs  
that the boys sang]] MUCH.pl] songs.
- (218) The girls sang more songs than the boys.

Whether (216) or (217) is closer to the actual underlying source for (218), note that (219), in which ER and overt part of the second associate are contiguous, is impossible:

- (219) \*The girls sang more than the boys songs.

Comparing (218) with (219), we see that full comparisons of the type found (218) exhibit obligatory Spellout discontinuity of ER and the second associate – in traditional terminology, this would involve rightward extraposition of the second associate in traditional terminology. The actual mechanism involved cannot be taken to be rightward movement of any kind within the framework assumed here but would instead presumably involve leftward movement of ER and stranding of the second associate. Note the stranded second associate is located all the way at the right periphery of the sentence.

Discontinuity between ER and the second associate also occurs in analytic adjectival and adverbial comparisons. Hence, (220) is grammatical, but (221) is not:

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<sup>140</sup> As mentioned earlier, I claim in Chapter 4 that the head in comparisons of amount is actually a covert (English/Spanish) or overt (SLQZ) morpheme of quantity, MUCH, the degree of which is operated on by ER. I assume that MUCH is already combined with *más* by Spellout, although this cannot be proven based purely on empirical grounds, since MUCH is covert.

- (220) Elena is more intelligent than you realize.  
 (221) \*Elena is more than you realize intelligent.

Such discontinuity is not observed in verbal extent comparisons (222) or synthetic adjectival (223) and adverbial comparisons:

- (222) Wilfredo swims more than me.  
 [where the makeup of *more* is ER.MUCH]  
 (223) Wilfredo is taller than me.

Spanish displays the same pattern as English with regard to which types of comparisons involve discontinuity between ER and its second associate. Amount comparisons (224)-(225) and analytic adjectival and adverbial comparisons (226)-(227) show this discontinuity,<sup>141</sup> whereas verbal extent extent comparisons, as in (228), as well as the few synthetic adjectival and adverbial comparisons there are, such as the one shown in (229), do not show this discontinuity:

amount comparison (discontinuity)

- (224) Francisco compró más discos que tú.  
 Francisco buy.pret.3sg ER.MUCH.m.pl records that 2sg.nom  
 'Francisco bought more records than you(sg.fam.)'  
 (225) \*Francisco compró más que tú discos.

analytic adjectival comparison (discontinuity)

- (226) Sandra es más alta que nosotras.  
 Sandra be.3sg ER tall-f that 1pl.f.nom  
 'Sandra is taller than us(f.)'  
 (227) \*Sandra es más que nosotras alta.

verbal extent comparison (no discontinuity)

- (228) Heriberto durmió más que Gisela.  
 Heriberto sleep.pret.3sg ER.MUCH<sup>142</sup> that Gisela  
 'Heriberto slept more than Gisela'

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<sup>141</sup> I represent both adjectival and adverbial comparisons with an example of adjectival comparisons for the sake of brevity. The adverbial comparisons share the relevant properties with the adjectival comparisons.

<sup>142</sup> The order in which I have written the morphemes in this gloss is arbitrary, since MUCH is covert and its position is not directly detectable.

#### synthetic adjectival comparison (no discontinuity)

- (229) Esta canción es mejor que la anterior.  
 this.f song be.3sg good.ER that the-f previous  
 'This song is better than the previous one'

The verb in an SLQZ sentence ordinarily fronts to clause initial position, thus giving VSO word order.<sup>143</sup> Furthermore, as will be discussed in §3.6, the compared head in an SLQZ comparative sentence, along with its nominal complement in the case of amount comparisons, is normally fronted to clause initial position, even further to the left than the verb in comparisons other than verbal extent comparisons.<sup>144</sup> These two movements create discontinuity between ER and the second associate in all SLQZ comparisons: amount comparisons (230)-(231), verbal extent comparisons (232), and adjectival comparisons (233)-(234):<sup>145</sup>

#### amount comparisons

- (230) Zye:einy-ru' liebr b-zi:i:i' Rrodriiegw cah Liieb.  
 MUCH.sol/abs-ER book perf-buy Rodrigo than Felipe  
 'Rodrigo bought more books than Felipe'

- (231) Zi:i'lly-ru' biien gwe:e'eh Rrodriiegw cah Liieb.  
 MUCH.liq/gas-ER wine perf.drink Rodrigo than Felipe  
 'Rodrigo drank more wine than Felipe'

#### verbal extent comparisons

- (232) W-ta'ihsy-ru' Rrodriiegw cah Liieb.  
 perf-sleep-ER Rodrigo than Felipe  
 'Rodrigo slept more than Felipe'

#### adjectival comparisons

- (233) Connte'enn-ru' n-u' Jwaany cah Wsee.  
 content-ER neut-be Juan than José [with copula]  
 'Juan is more content than José'
- (234) Nsinni'cy-ru' Jwaany cah Wsee.  
 intelligent-ER Juan than José [without a copula]  
 'Juan is more intelligent than José'

<sup>143</sup> Non-verbal predicative material, such as a predicate adjective, are positioned to the left of the copular verb in copular sentences.

<sup>144</sup> I discuss verbal extent comparisons below.

<sup>145</sup> Only synthetic comparisons are considered here. Analytic comparisons in SLQZ also show discontinuity between ER and its second associate.

Let us consider a hypothetical prior stage in the formation of these SLQZ sentences, before either of the two frontings has occurred:<sup>146</sup>

amount comparisons

- (235) <Rodriiegw b-zi:i:’ zye:einy-ru’ liebr cah Liieb.>  
Rodrigo perf-buy MUCH.sol/abs-ER book than Felipe  
'Rodrigo bought more books than Felipe'
- (236) <Rodriiegw gwe:e’eh zi:i’lly-ru’ bijen cah Liieb.>  
Rodrigo perf.drink MUCH.liq/gas-ER wine than Felipe  
'Rodrigo drank more wine than Felipe'

verbal extent comparisons

- (237) <Rodriiegw w-ta’ihsy-ru’ cah Liieb.>  
Rodrigo perf-sleep-ER than Felipe  
'Rodrigo slept more than Felipe'

adjectival comparisons

- (238) <Jwaany n-u’ connte’enn-ru’ cah Wsee.>  
Juan neut-be content-ER than José  
'Juan is more content than José'
- (239) <Jwaany nsinni’cy-ru’ cah Wsee.>  
Juan intelligent-ER than José  
'Juan is more intelligent than José'

We see that the discontinuity pattern in SLQZ is slightly different than the one seen in English and Spanish – in verbal extent comparisons, there is no discontinuity between ER and the second associate, whereas there is in the corresponding sentences in Spanish and English.

I signal that it is important to understand why the discontinuity pattern varies within a given language and between languages with regards to type of comparison. I do not provide an answer here, but the solution must lie in a careful elaboration of the structural relationship between ER, the head, and the second associate.

The discontinuity that we observe in some comparative sentences also varies

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<sup>146</sup> I use angled brackets <> to indicate that these sentences are only hypothetical pre-Spellout stages of actual grammatical sentences.

with respect to the stranding site (or the extraposition site, in traditional terms) – if one limits oneself to data from English and Spanish, it appears that the second associate in partial comparison must be stranded at the end of the sentence just as was the case in the full comparisons that we saw above:

- (240) Juan comió más galletas que tortillas.  
 Juan eat.pret.3sg ER.MUCH.f.pl cookies than tortillas  
 ‘Juan ate more cookies than tortillas’

- (241) Juan ate more cookies than tortillas.

However, this is an artifact of object-final word order. Partial comparisons in Spanish and English in which the head is a subject (242)-(243),<sup>147</sup> or any partial comparison in Zapotec with a nominal second head (244)-(245),<sup>148</sup> show that extraposition of the constituent introduced by the comparative particle need only reach rightward of the second head, even the option for it to appear at the extreme right periphery of the sentence is also available. I call the former option LOCAL STRANDING and the latter option LONG-DISTANCE STRANDING:

Spanish / English partial comparisons, head is subject

- (242) a. Más profesores que estudiantes vinieron a la fiesta.  
 ER.MUCH.m.pl professors that students come.pret.3pl to the party  
 ‘More professors than students came to the party’  
 [local stranding]

- b. Más profesores vinieron a la fiesta que estudiantes.  
 ER.MUCH.m.pl professors come.pret.3pl to the party that students  
 ‘More professors came to the party than students’  
 [long-distance stranding]

- (243) a. Más profesores que estudiantes me saludaron.  
 ER.MUCH.m.pl professors that students 1sg.acc greet.pret.3pl  
 ‘More professors than students greeted me’  
 [local stranding]

---

<sup>147</sup> If the subject is arguably a derived subject, such as in unaccusative constructions, there are other word orders which are more natural. However, examples with deep subjects make the point on their own.

<sup>148</sup> This holds even when the compared constituent is a direct object, due to a phenomenon presented in 3.6 below.

- b. Más profesores me saludaron que estudiantes.  
 ER.MUCH.m.pl professors 1sg.acc greet.pret.3pl that students  
 'More professors greeted me than students'  
 [long-distance stranding]

SLQZ partial comparisons

Head is direct object

- (244) a. Zye:einy-ru' mes cah studya'aannd b-embi:-a'.  
 MUCH.sol/abs-ER teachers than student perf-meet-1sg  
 'I met more teachers than students'  
 [local stranding]
- b. Zye:einy-ru' mes b-embi:-a' cah studya'aannd.  
 MUCH.sol/abs-ER teachers perf-meet-1sg than student  
 'I met more teachers than students'  
 [long-distance stranding]

Head is subject

- (245) a. Zye:einy-ru' me's cah studya'aannd b-i:e'd lihaz-a'.  
 MUCH.sol/abs-ER teachers than student perf-come house-1sg  
 'More teachers than students came to my house'  
 [local stranding]
- b. Zye:einy-ru' me's b-i:e'd lihaz-a' cah studya'aannd.  
 MUCH.sol/abs-ER teachers perf-come house-1sg than student  
 'More teachers came to my house than students'  
 [long-distance stranding]

We are thus left with the task of explaining why stranding is obligatorily long-distance when it occurs in full comparisons in SLQZ, Spanish and English, but local or long-distance when it occurs in partial comparisons. Whatever proposal is made should also take into account Kayne's (1994) Antisymmetry framework, according to which rightward movement is disallowed entirely.

### 3.6 Fronting of ER and the Head in SLQZ

In English and Spanish, the head of the comparison usually occurs in its non-marked sentential position along with ER preceding or following it (cf. §3.2.1 for the appropriate word order between ER and the head). Consider the Spanish

sentences in (246), for example.

- (246) a. Juan comió [ ]<sup>149</sup> pizza.  
Juan eat.pret.3sg [x.MUCH.f] pizza  
'Juan ate pizza'
- b. Juan comió mucha pizza.  
Juan eat.pret.3sg very.MUCH.f pizza  
'Juan ate a lot of pizza'
- c. Juan comió más pizza que yo.  
Juan eat.pret.3sg ER.MUCH.f pizza than 1sg.nom  
'Juan ate more pizza than me'

I assume that the direct object *pizza* in (246a) is preceded by the abstract morphemes x.MUCH.f, where x is some pragmatically defined degree such as 'relatively very'. In each case, the morpheme MUCH associated with the direct object is post-verbal regardless of whether it is preceded by a covert Deg (246a), an overt non-comparative Deg (246b),<sup>150</sup> or ER (246c).

In SLQZ, however, the situation is different. In a comparison, the head of a comparison usually occurs in sentence-initial position, along with ER (247), although it is also marginally allowed to leave the head and ER in situ (248):

- (247) Zye:einy-ru' liebr b-zi:i:i' Liieb cah Rrodriiegw.  
MUCH.sol/abs-ER book perf-buy Felipe than Rodrigo  
'Felipe bought more books than Rodrigo.'

- (248) ?B-zi:i:i' Liieb zye:einy-ru' liebr cah Rrodriiegw.  
perf-buy Felipe MUCH.sol/abs-ER book than Rodrigo  
'Felipe bought more books than Rodrigo'

In non-comparative sentences, a predicative element such as a verb, an adjective, or a predicate nominative are fronted to clause-initial position, so it is difficult to compare word order in comparative and non-comparative sentences involving such predicates. However, if we compare comparative sentences in which the head is MUCH, as in (247), with non-comparative sentences in which there is an

<sup>149</sup> This set of morphemes is covert.

<sup>150</sup> I show in Chapter 4 that *mucho* and its related forms contain a morpheme 'very' plus MUCH and agreement morphemes (gender and number).

indefinite nominal expression, as in (248), we see that there is a difference:

- (248) a. B-zi:i:i' Liieb ra liebr. [indefinite nominal not fronted]  
perf-buy Felipe pl book  
'Felipe bought books'
- b. \*Ra liebr b-zi:i:i' Liieb. [indefinite nominal fronted]  
pl book perf-buy Felipe  
'Felipe bought books'

In (248), the indefinite nominal cannot occupy sentence-initial position but must instead occupy its in situ direct object position.

Note that nominals preceded by overt quantifiers can be and usually are fronted to clause-initial position (249), although they may remain in situ (250):

- (249) X:o:on liebr b-zi:i:i' Liieb.  
eight book perf-buy Felipe [quantified noun phrase fronted]  
'Felipe bought 8 books'
- (250) B-zi:i:i' Liieb x:o:on liebr.  
perf-buy Felipe eight book [quantified noun phrase not fronted]  
'Felipe bought 8 books'

In fact, (248) apparently does not contain MUCH since the quantified nominal in (251), containing MUCH, can be fronted:

- (251) Zye:iny liebr b-zi:i:i' Liieb.  
MUCH.sol/abs book perf-buy Felipe  
'Felipe bought 8 books'

Lastly, note that a focussed indefinite may be fronted:

- (252) Ra LIEBR b-zi:i:i' Liieb.  
pl book.foc perf-buy Felipe  
'Felipe bought BOOKS'

Rizzi (1995) proposes an articulated CP in which various properties are checked by LF (some by Spellout, otherwise after Spellout) in the outermost projections within a clause. I conclude that in addition to features such as those carried by interrogative elements [+Wh], quantifiers [+Q], and focussed elements [+F], the morpheme ER carries some feature which in SLQZ must be checked by Spellout but is checked after Spellout in English and Spanish. That is why the compared

head, to which ER is suffixed in SLQZ, is fronted in the overt syntax in SLQZ comparative sentences, whereas it is not in Spanish and English.

## Chapter 4 The Morpheme ER and the Compared Property

### 4.0 Review of Data

In Chapter 3, we saw that the morpheme **ER** appears in an apparently heterogeneous set of contexts. For example, it may be associated with: (i) MUCH (and its complement nominal) in a comparison of quantity (1), (ii) an adjective or adverb in a comparison of degree (2)-(3), (iii) a verb in a comparison of degree (4) or (iv) a verb in a comparison of extent or frequency (5).

#### Comparison of quantity

- (1) a. **Zye:einy-ru' liebr b-zi:i:i'** Rrodrriegw cah Liieb.  
MUCH.sol/abs-ER book perf-buy Rodrigo than Felipe  
'Rodrigo bought more books than Felipe'

- b. **Rodrigo compró más libros que Felipe.**  
Rodrigo buy.pret.3sg ER.MUCH.m.pl books that Felipe  
'Rodrigo bought more books than Felipe'

#### Comparisons of degree

##### Adjectival comparison:

- (2) a. **Nsinni'cy-ru' na:a Jwaany cah Wsee.**  
intelligent-ER neut.be Juan than José  
'Juan is more intelligent than José'

- b. **Juan es más inteligente que José.**  
Juan be.3sg ER intelligent that José  
'Pam is more intelligent than José'

##### Adverbial comparison:

- (3) a. **Nsehe's-ru' r-zh:u:u'nny Rrodrriegw cah Liieb.**  
fast-ER hab-run Rodrigo than Felipe  
'Rodrigo runs faster than Felipe'

- b. **Rodrigo corre más rápido que Felipe.**  
Rodrigo run.3sg ER fast.n that Felipe  
'Rodrigo runs more quickly than Felipe'

**Verbal comparison:**

- (4) a. R-ca:a'z-[ ]-ru' Liieb na:a' cah Rodriiegw.  
hab-love-MUCH-ER<sup>1</sup> Felipe 1sg than Rodrigo  
'Felipe loves me more than Rodrigo'  
[ambiguous: Rodrigo = subj. or obj.]
- b. Felipe me quiere más a mí que Rodrigo.  
Felipe 1sg.acc love.3sg ER.MUCH p.a. 1sg.obl.that Rodrigo  
'Felipe loves me more than Rodrigo (does)'  
[not ambiguous: Rodrigo = sub.]

**Comparison of extent / frequency**

- (5) a. R-zh:u:u'nny-[ ]-ru' Rodriiegw cah Liieb.  
hab-run-MUCH<sup>2</sup>-ER Rodrigo than Felipe  
'Rodrigo runs more than Felipe'
- b. Rodrigo corre más que Felipe.  
Rodrigo run.3sg ER.MUCH that Felipe  
'Rodrigo runs more than Felipe'

It is desirable to account for the varying properties of the morpheme ER in an explanatory manner rather than just cataloging its superficial functions and morphosyntax. This chapter has two principal goals: (i) to give a more uniform semantic characterization of ER plus the related second associate as a degree expression, and (ii) to analyze the morphosyntax of ER in the context of degree expres-

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<sup>1</sup> There is no overt syntactic instance of MUCH present here – there is no direct syntactic proof of its presence since SLQZ extent MUCH is always covert (in both comparative and non-comparative sentences). That is, SLQZ uses a construction (i) parallel to the construction in Spanish involving post-verbal *mucho* (ii):

- (i) R-ca:a'z-[ ]-daa:a'n Liieb na:a'.  
hab-love-MUCH-very Felipe 1sg  
'Felipe loves me very much'
- (ii) Felipe me quiere mucho-[ ].  
Felipe 1sg.acc love.3sg very-MUCH  
'Felipe loves me very much'

In each case, only the morpheme meaning 'very' -- *-daa:a'n* in SLQZ and *mucho* in Spanish – is overt. I justify this analysis of *mucho* below and in §4.2.2.3.

I assume that there actually is a syntactic instance of MUCH here (or some other extent or frequency adverbial understood from the context) and in the type of sentence in (5). Cf. §4.1.3 for further discussion of the verbal extent adverbial MUCH.

<sup>2</sup> Since this sentence can also mean 'Rodrigo runs more quickly than Felipe' or 'Rodrigo runs further than Felipe', the structure could actually contain a covert adverbial *quickly* or *far* rather than MUCH. This is determined by the discourse context.

sions in general, justifying (i).

#### 4.1 The Function Performed by ER

In Chapter 3, I introduced two interrelated notions. One is a semantic notion – the compared property. This is the common property that each of two entities, the terms of the comparison, hold but to potentially different degrees.

The other notion is a syntactic one – the head of the comparison. I defined this element loosely as the element most intimately tied to ER. In traditional terminology, this element is usually taken to be a lexical item.

In this section, I propose a unique semantic domain for ER: degree comparisons. This unification is possible via a close look at the identity of the compared property across comparisons of various head-types.

Then, in the second part of the chapter, I will review various proposals as to the actual structures involved in degree modification in general – Bresnan (1973), Jackendoff (1977), Corver (1997), and Rijkhoek (in progress) – accepting none entirely but selecting elements of each for the final proposal.

##### 4.1.1 Degree comparisons: adjectives and adverbs

Without yet providing a justification for doing so, I nevertheless take the case of ER used with compared adjectives and adverbs to be the general case.

Recall from Chapter 3 that I claim ER to be the head of a constituent which as a whole denotes a semantic degree.

Thus, in sentences such as (2) and (3), repeated here for convenience, ER is used to compare the degree to which a given property holds of various individuals or events, respectively:

- (2) a. Nsinni'cy-ru' na:a Jwaany cah Wsee.  
intelligent-ER neut.be Juan than José  
'Juan is more intelligent than José'

- b. Juan es más **inteligente** que José.  
 Juan be.3sg ER intelligent that José  
 'Pam is more intelligent than José'
- (3) a. Nsehe's-ru' r-zh:u:u'nny Rrodriiegw cah Liieb.  
 fast-ER hab-run Rodrigo than Felipe  
 'Rodrigo runs faster than Felipe'
- b. Rodrigo corre más **rápido** que Felipe.  
 Rodrigo run.3sg ER fast.n than Felipe  
 'Rodrigo runs more quickly than Felipe'

In (2), the degree to which Juan is intelligent is compared to the degree to which José is intelligent. In (3), the degree to which Rodrigo runs quickly is compared to the degree to which Felipe runs quickly, or alternatively, we can say that the degree to which Rodrigo's running (an event) is quick is being compared to the degree to which Felipe's running is quick.

#### 4.1.2 Amount comparisons and nouns: a reanalysis of the traditional notion

When we make a comparison such as in (1), repeated below, we are comparing amounts of a certain type of object, which Pinkham (1982) refers to as a KIND:

- (1) a. Zye:einy-ru' liebr b-zi:i:i' Rrodriiegw cah Liieb.  
 MUCH.sol/abs-ER<sup>3</sup> book perf-buy Rodrigo than Felipe  
 'Rodrigo bought more books than Felipe'
- b. Rodrigo compró más libros que Felipe.  
 Rodrigo buy.pret.3sg ER.MUCH.m.pl books that Felipe  
 'Rodrigo bought more books than Felipe'

Mathematically, we are comparing the cardinalities of two sets, in this case:

(i) the set of books that Rodrigo bought, and (ii) the set of books that Felipe bought. We are certainly not, however, comparing degrees of "bookness", i.e.,

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<sup>3</sup> Recall from Chapter 3 that I take MUCH to be an abstract element which usually surfaces together with noun class agreement (essentially, count vs. noun) as *much* or *many* in English and *zye:einy* and *zi:i'lly* in SLQZ. As we will see below, however, in Spanish it only surfaces as part of a degree expression that it has incorporated to such as *mucho* (which I take to be an allomorph of *muy* 'very' – Cf. §4.2.2.3), *demasiado*, *cuanto*, etc.

*books* is not used predicatively in this context.

One option is to simply accept that comparisons either involve degree, as in the case of compared adjectives and adverbs, or quantity, as in the case of amount comparisons.<sup>4</sup>

However, amount comparisons can be reinterpreted as comparisons of degree, as long as we claim that ER plus its second associate together express the degree to which a quantity is large, or more abstractly, that the degree denoted by ER and the corresponding second associate merely marks the extension of a quantity along the positively-oriented scale of numerical values. Recasting the above description of (1) in these terms, we can say that what is being compared is the degree to which [the books that Rodrigo bought are many] with the degree to which [the books that Felipe bought are many].

I pause here to emphasize, basing myself on Rivara (1990), that the abstract element MUCH, manifested along with number agreement as *many* or *much* in English, for example, is used in comparisons only to indicate that the property in question is the numerical scale and that that the orientation is positive, not to imply that the cardinality of either set of items is large in absolute terms. Therefore, the use of the word *many* in my paraphrase of (1) is not the same as the use of *many* in (6), where there is an understood degree associated with MUCH with an interpretation similar to ‘relatively very’.<sup>5</sup> Rather, the element MUCH in (1) functions like the English word *many* in (7), which simply designates the numerical scale as the relevant gradable property, with positive orientation:

- (6) Juan bought **many** books.  
[roughly = Juan bought relatively very many books.]

---

<sup>4</sup> This is not even a hypothetical option given my glosses. I chose to give consistent glosses throughout, despite their lack of theoretical neutrality. Nevertheless, the argument in the text is reasonable under an a priori reasonable alternate gloss without the presence of the abstract morpheme MUCH.

<sup>5</sup> Cf. Galant (1998) for a more in-depth discussion of English *many* and Spanish *mucho* vis-à-vis the abstract element MUCH, which I referred to there as MANY instead.

- (7) [many =MUCH.pl]
- How **many** books did Juan buy ?
  - I want you to buy this **many** books [showing someone number on receipt].
  - Juan bought this **many** books last time.
  - Juan bought as **many** books as me.
  - Juan bought very **many** books.
  - Juan bought too **many** books.
  - Juan bought more (=ER.**many**) books than Miguel.

The SLQZ word *zye:einy* behaves like English *many* in certain cases – it appears in cases analogous to (6) and (7e)-(7g):

- (8)      **Zye:einy** liebr b-zi:i:i' Jwaany.  
 MUCH.sol/abs book perf-buy Juan  
 ‘Juan bought many books’
- (9)    a.    **Zye:einy-daa:a'n** liebr b-zi:i:i' Jwaany.  
 MUCH.sol/abs-very book perf-buy Juan  
 ‘Juan bought very many books’
- b.    **Zye:einy-ta'** liebr b-zi:i:i' Jwaany.<sup>6</sup>  
 MUCH.sol/abs-too book perf-buy Juan  
 ‘Juan bought too many books’
- c.    **Zye:einy-ru'** liebr b-zi:i:i' Jwaany cah Wsee.  
 MUCH.sol/abs-ER book perf-buy Juan than José  
 ‘Juan bought more books than José’

However, *zye:einy* may not be used in cases (7a)-(7d):

- (10) a.      **Ba:all** liebr b-zi:i:i' Jwaany ?  
 how.MUCH.pl<sup>7</sup> book perf-buy Juan  
 ‘How many books did Juan buy ?’

---

<sup>6</sup> The suffix *-ta'* is not always the element used to translate English *too* (nor does it always mean ‘*too*’). For example, sometimes, the element *-daa:a'n* ‘*very*’ is used to translate English *too* instead. The point is that *zye:einy* is analogous to English *many* in that it means ‘relatively very MUCH’ when used alone, but merely represents a positive amount when used in conjunction with a Deg.

<sup>7</sup> There is a way of asking ‘how many’ using *zye:einy* (i), but this is not a true request for information but rather a (potentially incredulous) reaction to a previous assertion that there are relatively many of some kind of object, i.e., ‘How very many are there ?’

- (i) Catally zye:einy liebr b-zi:i:i' Jwaany ?  
 how.very MUCH.sol/abs book perf-buy Juan  
 ‘How very many books did Juan (actually) buy ?’

<sup>8</sup> I gloss *ba:all* with ‘*how.MUCH.pl*’ instead of ‘*how.MUCH.sol/abs*’ since it cannot be used with solid non-count nouns or abstract nouns.

- b. Të'ihby-zagreen<sup>9</sup>-tya' (\*zye:einy) liebr r-ca:a'z-a' si:i:-u'.  
one-this-MUCH MUCH.sol/abs book hab-want-1sg irr.buy-2sg  
'I want you to buy this many books'
- c. (Të'ihby)-zë'cy-dya' (\*zye:einy) liebr b-zi:i:i' Jwaany chë'cy.  
one-thus-MUCH MUCH.sol/abs book perf-buy Juan then  
'Juan bought this amount of books last time'
- d. (Të'ihby)-zë'cy-dya' liebr nih b-zi-a',  
one-thus-MUCH book rel perf-buy-1sg,  
(të'ihby)-zë'cy-dya' liebr b-zi:i:i' Jwaany  
one-thus-MUCH book perf-buy Juan  
'Juan bought as many books as I bought'

I will assume that *dya'* / *tya'* are variants of MUCH, also contained in *zye:einy* and *zi:i'lly*.<sup>10</sup>

As for Spanish, I propose that *muchos* and *muchas* are not the equivalent of English *many* but rather, the equivalent of English *very many*, and in the same way, *mucho* and *muchacha* are the equivalent of English *very much* (not *much*). I justify this based on the following:

- (i) The word *muy*, which means 'very', can surface as *mucho* when in isolation (e.g., in a truncated answer to a question):
 

Q: ¿ Estás (muy/\*mucho) cansada ?  
be.2sg very tired  
'Are you very tired ?'

A: Sí, mucho / \*muy.  
yes very  
'Yes, very'
- (ii) The word *mucho* appears with gender and number agreement only when preceding and quantifying a noun phrase. I assume that gender and number agreement signal the presence of MUCH.
- (iii) The words *muy* / *mucho* cannot be associated with a Deg, other than with itself (vs. *much* / *many* in English and *zye:einy*, *zi:i'lly*, and

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<sup>9</sup> Munro, Lopez, et al. (in preparation) translate *të'ihbyzagreentya'* as 'this much' or 'this many', apparently treating *të'ihbyzagreen* as one morpheme 'this'. Nevertheless, since the initial string *të'i'hby* was optional in the data that I elicited and otherwise has its own meaning 'one', I treat it as a separate morpheme.

<sup>10</sup> Pamela Munro claims (p.c.) that *dya'* / *tya'* are expressions of extent. Thus, perhaps they contain MUCH plus some other material. I will take them to simply be manifestation of MUCH for this dissertation, acknowledging nonetheless that more precision may be needed.

*dya' / tya'* in SLQZ, which I claim do not contain a Deg). The word *mucho* only turns up in cases like (6), never in cases like (7).<sup>11</sup> That is, *mucho* does not generally appear in Spanish sentences equivalent to English sentences in which *many* or *much* is preceded by a Deg. This is because *mucho* already contains the Deg *muy* / *mucho*.

In (11), *muchos* appears without any preceding Deg:

- (11) Juan compró much-[ ]-o-s<sup>12</sup> libros.  
Juan buy.pret.3sg very-MUCH-m-pl books  
'Juan bought (very) many books'  
No Deg may precede *muchos*:
- (12) \*Juan compró muy much-[ ]-o-s libros.  
Juan buy.pret.3sg very very-MUCH-m-pl books  
'Juan bought very many books'
- (13) \*Juan compró demasiado much-[ ]-o-s libros.  
Juan buy.pret.3sg too very-MUCH-m-pl books  
'Juan bought too many books'

Instead, in order to express the notion of Deg plus MUCH, a Deg appears with number and gender agreement (14a)-(14f),<sup>13</sup> or a partitive construction with *de* is used (15a)-(15d):

- (14) a. *¿ Cuánt-*[ ]-o-s libros compró Juan ?  
how-MUCH-m-pl books buy.pret.3sg Juan  
'How many books did Juan buy ?'
- b. Juan compró tant-[ ]-o-s libros l-a vez pasada.  
Juan buy.pret.3sg so-MUCH-m-pl books the-f time past-f  
'Juan bought as many books last time' [anaphoric reading]
- c. Juan compró tant-[ ]-o-s libros como yo.  
Juan buy.pret.3sg so-MUCH-m-pl books like 1sg.nom  
'Juan bought as many books as me'

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<sup>11</sup> The overt morphology in the sentence in (14f) does not transparently rule out the presence of the element *mucho*, but I claim the morphological composition given in the gloss, which excludes the morpheme *muy* / *mucho* 'very'.

<sup>12</sup> I assume that there is a covert instance of MUCH present in this sentence and any other type of sentence in which a Deg with agreement precedes a noun in Spanish – this covert MUCH is not clearly associated with any overt morpheme, so use square brackets to show its presence, and I gloss instances of Deg plus MUCH plus agreement as in (i):

(i) Deg-MUCH-gender-number [I omit number if it is singular]

<sup>13</sup> The Deg *muy/mucho* follows this pattern, too. Cf. (11).

- d. Juan compró demasiad-[ ]-o-s libros.  
 Juan buy.pret.3sg too-MUCH-m-pl books  
 'Juan bought too many books'
  - e. Juan compró bastante-s libros.  
 Juan buy.pret.3sg enough.MUCH.m-pl books.
  - f. Juan compró más<sup>14</sup> libros que Miguel.  
 Juan buy.pret.3sg ER.MUCH.m.pl books that Mike  
 'Juan bought more books than Mike'
- (15) a. Quiero que compres es-a cantidad de libros  
 want.1sg that buy.subj.2sg that-f quantity of books  
 'I want you to buy that many books' [deictic reading]
- b. Quiero que compres así de libros.  
 want.1sg that buy.subj.2sg thus of books  
 'I want you to buy this many books' [deictic reading]
- c. Juan compró así de libros l-a vez pasad-a.  
 Juan buy.pret.3sg thus of books the-f time past-f  
 'Juan bought that many books last time' [anaphoric reading]
- d. Juan compró es-a cantidad de libros l-a vez pasad-a.  
 Juan buy.pret.3sg that-f quantity of books the-f time past-f  
 'Juan bought that many books last time' [anaphoric reading]

Thus, it is reasonable to conclude that *mucho* plus agreement in number and gender is in fact the Spanish equivalent to *very many*.

Thus English *many* and *much*, when preceded by an overt Deg expression or when contained in the word *more*, have the following counterparts: *zye:einy*, *zi:i'lly*, and *-tya' / -dya'* in SLQZ and a covert morpheme MUCH whose presence is signalled by number and gender agreement in SLQZ. In Spanish, the default interpretation of *relatively very many* cannot be manifested as mere number and gender agreement, since these are bound morphemes. Therefore, *mucho* 'very' must be overtly realized along with gender and number agreement in sentences in which a default *relatively very many* interpretation is desired.

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<sup>14</sup> In case of *más*, I do not attempt to show any correlation between its component morphemes and their phonological manifestations since suppletion is at work here.

#### 4.1.3 Verbal comparisons

##### 4.1.3.1 A reinterpretation of the semantics

In those comparisons in which the head would traditionally be identified as a verb, the comparison being made may involve the degree to which various individuals hold the property described by the verb or the extent to which they perform the action described by the verb. For example, in (4), repeated here, what is being compared is the degree to which the individuals Felipe and Rodrigo each love the speaker.<sup>15</sup>

- (4) a. **R-ca:a'z-[ ]-ru'** Liieb na:a' cah Rrodriiegw.  
hab-love-MUCH-ER Felipe 1sg than Rodrigo  
'Felipe loves me more than Rodrigo'  
[ambiguous: Rodrigo = subj. or obj.]
- b. Felipe me **quiere más a mí que Rodrigo.**  
Felipe 1sg.acc love.3sg ER.MUCH p.a. 1sg.obl.that Rodrigo  
'Felipe loves me more than Rodrigo (does)'  
[not ambiguous: R = subj.]

In (5), however, the property being compared could not somehow be the degree to which each athlete runs, since that would not make any sense, but rather, the extent (i.e., the distance or the duration) to which, or frequency with which, they each run:

- (5) a. **R-zh:u:u'nny-[ ]-ru'** Rrodriiegw cah Liieb.  
hab-run-?-ER Rodrigo than Felipe  
'Rodrigo runs more than Felipe'
- b. Rodrigo **corre más que Felipe.**  
Rodrigo run.3sg ER.? that Felipe  
'Rodrigo runs more than Felipe'

The following paraphrases illustrate each of these possible interpretations, respectively:

- (16) a. Rodrigo corre más **lejos que Felipe.**  
Rodrigo run.3sg ER far that Felipe  
'Rodrigo runs farther than Felipe'

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<sup>15</sup> (4a) also has an alternative reading, in which Felipe loves Rodrigo instead. This reading is not relevant to the point at hand.

- b. **Zye'eht-ru'** r-zh:u:u'nny Rrodriiegw cah Liieb.  
                  far-ER hab-run Rodrigo than Felipe  
                  ‘Rodrigo runs farther than Felipe’
- (17) a. Rodrigo corre más millas que Felipe.  
                  Rodrigo run.3sg ER.MUCH.f.pl miles that Felipe  
                  ‘Rodrigo runs more miles than Felipe’
- b. **Zye:einy-ru'** mii r-zh:u:u'nny Rrodriiegw cah Liieb.  
                  MUCH.sol/abs-ER miles hab-run Rodrigo than Felipe  
                  ‘Rodrigo runs more miles than Felipe’
- (18) a. Rodrigo corre (por) más tiempo /  
                  Rodrigo run.3sg (for) ER.MUCH.m time /  
                  más horas que Felipe.  
                  ER.MUCH.f hours that Felipe  
                  ‘Rodrigo runs (for) more time / more hours than Felipe’
- b. **Zye:einy-ru'** oor / **Xehih-ru'** r-zh:u:u'nny Rrodriiegw  
                  MUCH.sol/abs-ER hour / long.while-ER hab-run Rodrigo  
                  cah Liieb.  
                  than Felipe  
                  ‘Rodrigo runs (for) more time / longer than Felipe’
- (19) a. **Seguiied-ru'** r-zh:u:u'nny Rrodriiegw cah Liieb.  
                  often-ER hab-run Rodrigo than Felipe  
                  ‘Rodrigo runs more often than Felipe’
- b. Rodrigo corre {más **seguido** / con más  
                  Rodrigo run.3sg ER often / with ER.MUCH.f  
                  frecuencia / más **frecuente-mente**} que Felipe.  
                  frequency / ER frequent-ly that Felipe  
                  ‘Rodrigo runs more often / more frequently than Felipe’

In cases such as (5), the actual head of the comparison is not the verb but instead, some covert element, such as abstract extent MUCH, an adverb or indefinite direct object KIND (such as miles, hours, etc.) representing extent or frequency following the verb. This covert element is indicated by  $\emptyset$  in the following schema representing (5):

- (20) a. Rodrigo corre más [ $\emptyset$ ] que Felipe.  
                  Rodrigo run.3sg ER [ ] that Felipe  
                  ‘Rodrigo runs more than Felipe’
- b. R-zh:u:u'nny- $\emptyset$ -ru' Rrodriiegw cah Liieb.  
                  hab-run-[ ]-ER Rodrigo than Felipe  
                  ‘Rodrigo runs more than Felipe’

Up until this point, I have assumed that the default identity of  $\emptyset$  is MUCH (Cf. gloss of (5)), although it may be that in any given case, it may be understood based on the discourse context as ‘often’, ‘far’, etc. Some specific examples follow.

In (21), for example,  $\emptyset$  might represent number of hours or frequency (in the case of naps):

- (21) a. Felipe duerme más  $\emptyset$  que tú.  
Felipe sleep.3sg ER [ ] that 2sg.nom  
'Felipe sleeps more [hours/often] than you'  
  
b. R-a'ihsy- $\emptyset$ -ru' Felipe cah li:u'w.  
hab-sleep-[ ]-ER Felipe than 2sg  
'Felipe sleeps more [hours/often] than you'

In the following example,  $\emptyset$  might represent number of letters or articles, or frequency of writing.

- (22) a. Felipe escribe más  $\emptyset$  que tú.  
Felipe write.3sg ER [ ] that 2sg.nom  
'Felipe writes more [letters/often] than you'  
  
b. R-cwa:a:a'- $\emptyset$ -ru' Felipe cah li:u'w.  
hab-write-[ ]-ER Felipe than 2sg  
'Felipe writes more [letters/often] than you'

Even the sentence in (4) can be paraphrased in such a way that what is being compared is the degree to which a predicate other than the verb, such as intensity or depth, holds of propositions:

- (4') Felipe loves me more deeply than Rodrigo.

#### 4.1.3.2 Verbal extent comparisons - conclusion

Many verbs are not gradable in and of themselves. In most cases, a sentence involving what appears to be a directly graded verb actually involves the grading of some other, often covert, predicate. This latter predicate is generally a predicate of state (sometimes predicated on an event).

#### 4.1.4 Summary of findings

The following schema summarizes the findings of §4.1:

##### Schema for degree comparison according to categorial type

###### N, N ≠ pred.

more + N is to be interpreted as amount of N is ER.MUCH / larg.ER / furth.ER to the right on numerical scale / there are ER.MUCH N's

###### V, V ≠ stative

V + more is to be interpreted as degree: event described by V is more [adjective] where [adjective] = e.g., intense or deep  
extent: amount of covert N object of V is ER.MUCH / larg.ER/ furth.ER to the right / ER.MUCH N's are involved  
OR  
event is more [adjective]  
where [adjective] = frequent, long-lasting  
OR  
event takes place over great.ER distance

stative verb + more

more + (of a) + predicate nominal [PN]

more + adjective

adjective-er are to be interpreted as: degree: state V, PN, Adj. is the case to a greater degree (at relevant point in time)

more + manner adverb is to be interpreted as:

manner adverb-er degree: event is [adjective] to a greater degree,  
[adjective] derived from [adverb]

In addition to the above cases, the two following cases merit mention here, although I have not discussed them in the preceding text:

VP + more      is to be interpreted as degree: event described by VP is more [adjective]  
where [adjective] = e.g., intense or deep  
extent: event described by VP is more [adjective]  
where [adjective] = frequent, long-lasting, or even takes place over great ER distance

when *more* has clausal scope, interpretation is:      epistemic extent: it is more true that X than it is (true) that Y where X and Y are propositions

This type of uniform characterization of the semantic domain of ER, in which it ultimately compares the degree to which a property / state is the case for two different entities, is desirable, although it is not the only possible coherent semantic characterization of ER. It is, however, the one I will adopt. In the next section, I will reconcile my claim about the semantic nature of ER (i.e., that comparison is always of degree) with the facts about its syntactic distribution and morphological behavior in both amount comparisons (which are according to my analysis actually a type of degree comparison) and adjectival degree comparisons.

## 4.2 Reconciling the Function and Behavior of ER

Here I outline what previous studies have claimed about the syntax of ER and related Deg's and degree expressions, based mainly on the facts of English. Then I measure how each fares in the light of relevant data, both data already published as well as new data, such as in Spanish and SLQZ. Finally, I propose my own degree framework based on the merits of these proposals.

Although I present critiques of these previous works, I am in fact quite indebted to the immense groundwork they have laid both in grouping relevant data in a useful fashion and in calling attention to many of the crucial issues that must be dealt with in any adequate analysis of the data.

### 4.2.1 Previous work

In this section, I will present four previous proposals regarding the syntax of ER in relation to the syntax of degree expressions in general, both in the adjectival system as well as in the nominal system.

The first two of these proposals are from the 1970's. Bresnan's (1973) widely-encompassing work on complementation in general includes a detailed treatment of degree expressions and comparatives. Jackendoff's (1977) work on X'-structure contains, among other things, a critique of Bresnan involving a bifurcation between the adjectival and nominal system with respect to degree modification.

The third and fourth works are much more recent. Corver (1997) recasts Bresnan's and Jackendoff's proposals in terms compatible with both the functional head analysis and Chomsky's (1993) Minimalist program. He readopts Bresnan's position that degree modification between the nominal and adjectival system is parallel, explaining away apparent differences in terms of minimalist motivations. Rijkhoek (in progress) agrees with Corver for the most part but differs with Corver regarding the morphological structure of certain Deg's including ER and degree expressions.

#### 4.2.1.1 Bresnan (1973)<sup>16</sup>

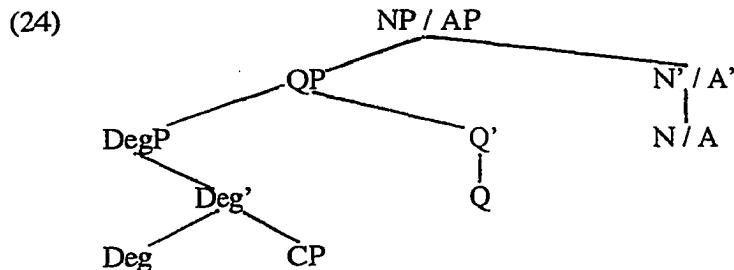
Bresnan proposes a single degree schema for both nominal and adjectival constructions. As part of her proposal, she claims that “partitives or quantifiers occur on adjectives and adverbs as well as nouns” (p.276). Basing herself on this claim, Bresnan concludes that “underlying every comparative is a partitive or quantifier-like element *much*, *many*, *little*, or *few*” (p.276). Bresnan admits (p.276) that “it may seem odd to propose that” the adjectival and nominal systems function in such a similar fashion, and yet she is motivated, among other things, by parallel behavior such as in the following phrases (pp. 280, her examples #24a-c):

(23)	<u>adjectival system</u>	<u>nominal system</u>
	a bit long	a bit of rope
	an inch long	an inch of rope
	long enough	enough rope

I provide below Bresnan’s general degree schema but with the following modifications:<sup>17</sup>

**Table 4.2 Correlation between Bresnan’s (1973) terms and mine**

<u>Bresnan’s term</u>	<u>My term</u>
Det	DegP
S'	CP
NP’, NP, N’, N	only NP, N’, N
AP’, AP, A’, A	only AP, A’, A



According to Bresnan (p.277), the elements which may occupy the position she calls Det but which I call Deg include *as*, *too*, *that*, *so*, and ER, whereas the Q

<sup>16</sup> All citations to Bresnan refer to her 1973 article in *Linguistic Inquiry* unless otherwise noted.

<sup>17</sup> Note that Bresnan takes elements like ER, too, etc. to be Det’s rather than Deg’s.

position may be occupied by *much*, *many*, *little*, *few*, or *enough*, with the proviso (p.286) that *enough* must select an empty Deg (Det in her terms).<sup>18</sup> Although she does not say so, it must also be assumed that *many* and *few* are not viable choices for Q in adjectival comparisons nor in nominal comparisons involving mass nouns. This selectional restriction is presumably due to the fact that only count nouns bear the necessary features to select for *many* and *few*. The CP projection shown as complement of Deg houses the second associate of the comparison, introduced in English by either *than* or *as*, and Bresnan assumes that this CP is extraposed. I will ignore the presence of the second associate for the moment, delaying a discussion of its syntax until Chapter 5.

The degree modified nominals seem to conform fairly well to Bresnan's system, although the cases where either Q = *enough* or Deg = ER are not as simple as the others. I put these two cases aside for the moment but will take them up once more in a joint discussion of both nominal and adjectival degree expressions. For now, I present the following examples of phrases which fit Bresnan's model readily:

- (25) [NP [QP [DegP that ] many ] books]]]
- (26) [NP [QP [DegP as ] much ] water ]]]
- (27) [NP [QP [DegP so ] few ] books]]]
- (28) [NP [QP [DegP too ] little ] patience ]]]

In each of these structures, a Deg heads DegP, located in SpecQP, which in turn occupies specNP.

The adjectival system is somewhat problematic at first glance. Limiting the discussion initially to those cases parallel to the nominal cases discussed immediately above, we see that most adjectives are never preceded by an overt copy of *much* or *little*:<sup>19</sup>

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<sup>18</sup> Note that Bresnan is only concerned with the Det status of these elements and does not address the fact that the second associate denotes a degree in concert with the Det's concerned here.

<sup>19</sup> I discuss below some adjectives which may be preceded by *much* or *little*. No adjectives may be modified by *many* or *few*, since only the presence of plural number (found only on plural nouns) can give rise to these forms.

- (29) \*They think she is too much happy. [Bresnan's #3b]
- (30) \*Mary is so much intelligent. [Bresnan's #8]
- (31) \*They think she is too little happy.
- (32) \*Mary is so little intelligent.

Although Bresnan does not mention this, most adjectives may not be preceded by *much* or *little* if Deg is null, either:

- (33) \*They think she is much happy.
- (34) \*Mary is little intelligent.

Bresnan presents two alternatives at this point regarding the morphological makeup of *more* (pp.278):

Alternative I: “*more* does not derive from *er much*, *er many*; or it derives from these forms everywhere except before adjectives and adverbs.”

Alternative 2: “*more* does derive from *er much*, *er many* everywhere in deep structure, but there is a rule deleting *much* obligatorily when it modifies adjectives and adverbs.”

Bresnan chooses to support the second alternative, and in order to account for the absence of *much* in front of adjectives (and adverbs), she proposes the following rule:

#### (35) Rule of Much Deletion

[Bresnan's #10]

*much* →  $\emptyset$  [...  $A_{AP}$ ], where  $A(P)$  = Adjective or Adverb (Phrase)

In fact, Bresnan does point out three cases where *much* does occur in front of adjectives or adjectival slots: (i) when *much* is used to indicate extent of separation in degrees, i.e. how much more / how much less something is the case, in what I call a differential comparative construction, (ii) in front of the exceptional adjectives *alike* and *different*, and (iii) within a compared measure phrase. All of these are exemplified and discussed below.

Differential comparative constructions are exemplified in (36):

#### Differential comparative constructions

- |      |                             |                          |
|------|-----------------------------|--------------------------|
| (36) | a. as much more intelligent | [Bresnan's #15]          |
|      | b. ten times more clearly   | [based on Bresnan's #17] |
|      | c. five inches taller       | [based on Bresnan's #19] |

In this type of comparison, there is an overt element which indicates, either precisely or only vaguely, the difference in degree that the two terms of the comparison hold the relevant property.

It has been claimed elsewhere, e.g., Corver (1997),<sup>20</sup> that such an instance of *much* is actually different than the type of *much* which Bresnan claims to be present in Q. If there is an instance of *much* in Q in Bresnan's scheme, it modifies an adjective or noun, whereas the *much* of the examples in (36) must modify ER or ER plus an adjective or noun. Therefore, such examples do not in and of themselves support the claim that non-compared adjectives are preceded by a deleted *much*.

As for the exceptional adjectives *alike* and *different*, Bresnan claims that the rule of Much Deletion is optional for them:

Exceptional adjectives (Bresnan, fn#4)

- (37) a. A tangerine isn't as (much) different from an orange as I'd thought.  
b. You and I are as (much) alike as a horse and a cow.

Note, however, that even Bresnan comments that these adjectives are inherently comparative, and hence, could subcategorize for a QP in a manner analogous to differential comparative constructions, without others adjectives being able to do so. The following data show that such inherent adjectives behave syntactically more like compared adjectives than simple adjectives [Bresnan's examples, fn#4, last two examples mine]:

(38)	<u>comparative</u>	<u>non-comparative</u>
not any different	not any taller	*not any tall
so much different	so much taller	*so much tall
not anything alike		
so much alike		

Thus, it is reasonable to conclude that *different* and *alike* can behave either as simple adjectives or as compared adjectives. In the former case, they cannot be

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<sup>20</sup> I discuss his claim in §4.2.1.3

modified by *much* or *not any*, whereas in the latter case, they can.<sup>21</sup> Note that in cases where *different* and *alike* behave as inherently compared adjectives, it is the degree of difference or similarity which is marked by *much* or *not any(thing)*. This case is analogous to differential comparatives constructions, except that here, the comparisons are qualitative rather than quantitative. That is, it is a matter of overall difference of identity or equality of identity, rather than a matter of possessing a given property to a different or equal degree.

Not surprisingly, *different* and *alike* also admit modification by *little*, something which most other adjectives disallow:<sup>22</sup>

[Bresnan, fn#3]

- (39) This year's model is little different from last year's.  
You and I are as little alike as a horse and a cow.

These instances of *different* and *alike*, respectively, represent the inherently comparative variant of each.

Lastly, I turn to Bresnan's examples involving compared measure phrases:

Compared measure phrases [=Bresnan's #22-#23]

- (40) a. John is more than 6 feet tall. [no Much Deletion]  
b. John is taller than 6 feet. [Much Deletion, Rules for Simple Comparisons]
- (41) a. These plants may grow as much as 6 feet high.  
[no Much Deletion]  
b. These plants may grow as high as 6 feet.  
[Much Deletion]

In the (a) examples, *much* is not left-string-adjacent to an adjective, so it is not deleted. The (b) examples, on the other hand, undergo loss of *much* – in (40b), *much* is lost via Rules for Simple Comparisons (removal of *more* before synthetically-compared adjectives such as *tall* – see discussion below) and in (41b), *much*

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<sup>21</sup> The only difference is that *alike* can only be modified by *not anything* rather than by *not any*. I do not have an explanation for this slight difference.

<sup>22</sup> Corver (1997) points out that there are non-comparative adjectives which do allow *little* and *much* modification but that may argued to be semi-verbal in nature:

- (i) He is little afraid of what you might do.  
(ii) She feels very much relaxed today.

is lost via Much Deletion.

I think that Bresnan does convincingly show through (40) and (41) that *high* may be modified by a QP. Moreover, if one takes *more* to always come from either *many* + ER or *much* + ER, then Bresnan has also demonstrated that *tall* may be modified by a QP. Even so, I do not believe this holds for all adjectives. In particular, this only holds for adjectives which allow modification by a measure phrase in general, e.g., *high*, *tall*, *long*, *wide*, *old*, *thick*, *early*, *late* and *broad*. Compare their behavior with other adjectives which are also semantically compatible with a numerical measurement but which do not allow the cooccurrence of adjective plus measure phrase:

Ability to admit measure phrase

- (42) a. This log is five inches thick.  
b. \*This log is 100 lbs. heavy.  
b' This log weighs 100 lbs.  
b." This log is heavy.
- (43) a. My sister is 26 years old.  
b. \*My sister drives 100 mph fast.  
b.' My sister drives 100 mph.  
b." My sister drives fast.

In (42b), the adjective *heavy* cannot be preceded by a measure phrase even though the very similar adjective *thick* in (42a) can. Instead, a verbal paraphrase must be used, as in (42b'), or a more general statement with the bare adjective may be used, as in (42b''), with loss of meaning. Similarly, although *old* allows modification by a measure phrase (43a), *fast* does not (43b) and only alternative constructions are allowed (43b') and (43b'').

We saw a variation of word order in (40)-(41) taken from Bresnan. Once again, *thick* allows this variation in word order (44), but *heavy* does not (45), just as *old* does (46) whereas *fast* does not (47):

Ability to exhibit variation shown in (40)-(41)

- (44) a. Some logs are as much as five inches thick.  
b. Some logs are as thick as five inches.

- (45) a. \*Some logs are as much as 100 lbs. heavy.  
b. Some logs are as heavy as 100 lbs.
- (46) a. My sister is more than 26 years old.  
b. My sister is older than 26 (\*years).<sup>23</sup>
- (47) a. \*My sister drives more than 100 mph fast.  
b. My sister drives faster than 100 mph.

In fact, even an adjective from the above list may not allow a measure phrase in the non-comparative case in every usage, even if the comparative form does. Thus, *high* cannot be preceded by a measure phrase when physical height or altitude is not at stake (48a) and (49a), not even if the measure phrase contains either ER (48) or EG (49b), whereas the comparative forms *higher* (48c) and *as high* (9c) can be followed by a measure phrase:

- (48) a. \*My sister's IQ is 150 ((IQ) points) high.  
b. \*My sister's IQ is more than 150 ((IQ) points) high.  
b.' My sister's IQ is higher than 150 (\*IQ) (?points).
- (49) a. \*Some days, my diastolic blood pressure reading is 150 (points) high.  
b. \*Some days, my diastolic blood pressure reading is as much as 150 (points) high.  
b.' ?Some days, my diastolic blood pressure reading is as high as 150.

We will see in §4.2.1.2 that Jackendoff chooses to mark adjectives such as *different* and *alike*, on the one hand, and *high*, *long*, etc., on the other, in the lexicon as members of one of two classes of exceptional adjectives, respectively, in that the first of these two classes of adjectives admits *much* and *little* modification, and the second allows measure phrase modification. This removes the need to claim that all adjectives can be modified by a QP.

Assume for the moment, though, that Bresnan is correct in claiming that all

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<sup>23</sup> The difficulty in using *years* in this second variant may be related to a pragmatic factor – the fact that most people give their ages in years. If the discourse universe were limited to a group of infants, then usage of the unit *months*, as opposed to *years*, is actually quite good in a sentence analogous to the one above in which *years* is not allowed.

- (i) a. Some of the babies in this ward are more than 7 months old.  
b. ?Some of the babies in this ward are older than 7 months.

adjectives are or can be modified by QP's, and that her Much Deletion rule adequately controls the presence or absence of *much*. Note that although this would account successfully for the data in (40)-(41), there are two difficulties that such a proposal encounters. First of all, it is ad hoc: it successfully corrects the ungrammatical strings containing *much*, but there is no other motivation provided for such a rule. Secondly, this rule does nothing to explain why *little* may not appear in front of an adjective. As Jackendoff (1977) points out, a deletion rule analogous to (35) will not work, since the meaning of *little* would not be recoverable from the bare adjective remaining after a hypothetical rule of Little Deletion.

One could hypothesize that the inability of *little* to appear before adjectives is an English-specific problem – languages such as Spanish and French do allow an element similar to *little* before adjectives, namely *poco* and *peu*, respectively:

- (42) Juan es poco inteligente.  
Juan be.3sg NEG.very intelligent  
'Juan is not very intelligent'
- (43) Jean est peu intelligent.  
Jean be.3sg NEG.very intelligent  
'Jean is not very intelligent'

However, consider the glosses I have provided here for *poco* and *peu*. – they do not include the element *much*. I take *poco* to consist of some negative element NEG plus *muy* / *mucho* 'very' and *peu* to consist of NEG plus *très* 'very'. The difference between English on the one hand and Spanish and French, on the other, can be reconciled by simply claiming that Spanish and French conflate the two morphemes expressed in English *not very* into a single word. As for the English words *little* and *few*, I take them to consist of not only NEG and *very* but also MUCH and number agreement, the key issue being the presence of MUCH. Since non-exceptional adjectives do not have a Q slot, they cannot be preceded by MUCH, which is contained in *little*. Therefore, non-exceptional adjectives cannot be preceded by *little*. Exceptional adjectives such as *different*, on the other hand,

do subcategorize for a Q slot and hence can be preceded by *little*.

As for both adjectival and nominal comparisons of inequality, Bresnan assumes that ER is a Det, generated in a position which I call Deg, and either *much* or *little*, when the head of the comparison is an adjective or a mass noun, or *many* or *few*, when the head of the comparison is a count noun, is generated in Q. However, as Bresnan points out, we do not get the expected surface strings:

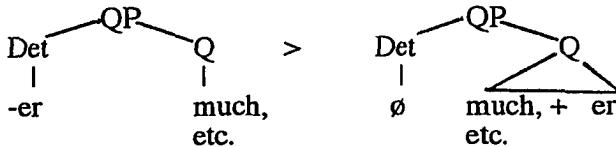
- (44) \*-er much bread, \*-er little bread, \*-er many people
- (45) \*-er much tired, \*-er little tired, \*-er much tall

This is true even after Much Deletion has occurred, in the case of adjectival comparisons:

- (46) \*-er tired, (\*-er little tired,) \*-er tall

Bresnan proposes a rule which I will call ER Encliticization, by which the Deg ER is suffixed onto Q (i.e., *much*, *many*, *little*, *few*):

- (47) Rule of ER Encliticization [Bresnan's #20]



Subsequently, the resulting complex word is subject to Suppletion / Spelling Rules (48) in order to transform the ungrammatical forms in (49a) and (49b) into the grammatical forms in (50a) and (50b), respectively:

- (48)<sup>24</sup> *much* + ER → more  
*many* + ER → more  
*little* + ER → less

- (49)
  - a.     \**mucher* bread, \**littler* bread, \**manyer* people                      →
  - b.     \**mucher* tired, \**littler* tired, \**mucher* tall                      →

---

<sup>24</sup>These rules are adapted from Bresnan's #7. The version that she gives is formulated in terms of the strings present before encliticization has taken place, but I will assume that enclisis of ER always takes place and then rules of Suppletion / Spelling Rules take effect on the resulting strings.

- (50) a. more bread, less bread, more people  
 b. more tired, less tired, (\*more tall)<sup>25</sup>

Note that Bresnan's rule of ER Encliticization precedes her rule of Much Deletion and hence bleeds it.

A problem arises in the case of those adjectives (most of the monosyllables and some of the disyllables) which are said to have a synthetic comparative (cf. Chapter 3). For example, with the rules stated thus far, we would expect (51) as the spell-out form of the last example in (50), but instead, we get (52):

- (51) \*more tall  
 (52) taller

Bresnan alludes to Rules for Simple Comparatives in a morphological derivation of forms such as *taller* (part of Bresnan's #21),<sup>26</sup> although she never spells out such rules in words. Essentially, what these rules do is: (i) copy ER onto an adjective following *much* + ER, and then (ii), delete *much* + ER. The rule successfully handles the data, although the mechanism is not clear, nor is there any motivation other than simply to account for the data.

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<sup>25</sup> See discussion immediately below for Bresnan's treatment of such cases.

<sup>26</sup> Bresnan points out (1979, endnote #5) that the Rules for Simple Comparatives only occur within an AP, such as in the following type of sentences (1979, p.314, no numbers given to any of these examples):

Case A

- (i) John is angrier than he is sad.
- (ii) The door is longer than the table is wide.

If however, the comparison is an epistemic comparison, as in (iii), then Bresnan's Rules for Simple Comparatives are not allowed (cf. (iv)):

Case B

- (iii) John is more angry than sad (=John is angry, more than sad)
- (iv) \*John is angrier than sad.

That Case A involves a different type of comparison than Case B is supported by the fact that they display other differences in behavior as well.

As Bresnan points out, for example, in the true adjectival degree comparison (in her terms, when the degree is within AP), i.e., in Case A, the two adjectives used must be compatible (i.e., an individual must be capable of holding both properties to some degree simultaneously), as can be seen in the ungrammatical sentence in (v), whereas if the degree is within VP instead i.e., in Case B, the adjectives need not be compatible (vi):

- (v) \*I would say that John is taller than he is short.
- (vi) I would say that John is more tall than short.

Even though there is an extra complication involved with synthetically-formed adjectival comparisons, Bresnan's proposed degree schema combined with ER Encliticization and suppletion rules is nonetheless able to correctly rule out the following ungrammatical forms:

- (53) \*as more, \*too more, \*that more, \*so more, \*as less, \*too less,  
\*that less, \*so less

The second word in each of these phrases contains ER as a subelement, which is base-generated in the same position needed by the degree element occurring as the first word in each form, namely Deg.

### Enough

A discussion of Bresnan's account of the properties of *enough* is relevant here, too, since she claims that similar behavior between *enough* and *more* further justifies her choice of Alternative 2 above.

Bresnan proposes (p.286) that *enough* is a Q selecting an obligatorily null Det (Deg in my terms). This selectional requirement is necessary to rule out the otherwise anticipated forms in (54):<sup>27</sup>

- (54) \*as enough, \*too enough, \*that enough, \*so enough, \*enougher

The claim that *enough* is generated in Q also correctly rules out the forms in (55), since the first word in each example is also claimed to be generated in Q.<sup>28</sup> However, this claim also incorrectly rules out the forms in (56), which should be ruled out for the same reason as (55). In fact, Bresnan does not provide any means for allowing the data in (56).

- (55) \*much enough, \*many enough, \*enough much, \*enough many,  
\*enough few, \*enough little

---

<sup>27</sup> One might use semantic grounds to justify the selectional properties of *enough* and in that way rule out the forms in (54). Note that none of the forms given here have any coherent interpretation.

<sup>28</sup> Bresnan suggests in fn#12, that forms such as \**much enough* and \**many enough* may be ruled out by selectional requirements, although her schema placing *enough* as a Q already seems to rule out these ungrammatical forms solely due to the competition of *much / many* and *enough* for the same slot.

- (56) few enough, little enough<sup>29</sup>

The word *enough* actually necessitates another rule, in Bresnan's proposal as well as in any of the other three that I will be presenting.<sup>30</sup> The exact formulation of this rule varies, but the necessity of such a rule in one shape or another is clear.

Consider the following data:

- (57) a. Tomás bought enough soup for all of us.  
b. Tomás bought soup enough for all of us.  
[poetic or right-dislocation]

- (58) a. Tomás bought enough books for all of us to read.  
b. Tomás bought books enough for all of us to read.  
[poetic or right-dislocation]

- (59) a. \*Tomás is enough strong to leave the hospital.  
b. Tomás is strong enough to leave the hospital.  
[fine in normal style]

The word *enough* must obligatorily follow an adjective that it modifies, even though Bresnan's account holds that it is base-generated to the left of the adjective that it modifies. To generate the correct surface strings, Bresnan proposes a rule of Enough Permutation as in (60):

- (60) enough X → X enough

According to Bresnan, this rule is optional with nouns (cf. (57)), but obligatory with any other "constituent it modifies if that constituent has no intervening determiner" (p.285). What Bresnan means by "an intervening determiner" is any element sitting in Deg or a determiner, such as *a*, *an*, *the*, *these*, etc., in front of a noun.<sup>31</sup>

This rule correctly accounts for (59a) vs. (59b), but there is still no explana-

<sup>29</sup> The expressions *few enough* and *little enough* involve the modification of the quantifiers *few* and *little*, respectively, by *enough*, and not vice-versa. This is feasible given the rule of Enough Permutation given below, whatever its correct formulation may be, as long as we generate *enough* as a Deg (Det in Bresnan's terms) instead of as a Q.

<sup>30</sup> Rijkhoek (in progress) does not mention this rule, but I assume that her account of the distribution of degree expressions needs a rule of this type to explain the placement of *enough*.

<sup>31</sup> The interested reader is invited to refer to Bresnan (1973) for data in which a determiner intervenes between *enough* and a noun and hence blocks Enough Permutation.

tion for the grammaticality of (56) since for Bresnan, *few* and *little* are Q's just like *enough*. This objection notwithstanding, Bresnan's rule of Enough Permutation does provide a way of maintaining that *enough* is generated as a Q, both before nouns and adjectives. She argues that since one Q, namely, *enough*, may be generated pre-adjectivally, then *much* should be able to be generated pre-adjectivally, too.

Another parallel between *enough* and *much* involves a phenomenon which Bresnan calls AP Shift. Consider the following:

- (61)    a.    Juan is too boring a teacher [for me to take his class].  
             b.    \*Juan is a too boring teacher [for me to take his class].
- (62)    a.    Juan is so boring a teacher [that I fall asleep in his class every time].  
             b.    \*Juan is a so boring teacher [that I fall asleep in his class  
                    every time].
- (63)    a.    ?Juan is more boring a teacher than I am.  
             b.    Juan is a more boring teacher than I am.
- (64)    a.    ?Juan is boring enough a teacher [for me to fall asleep in his class].  
             b.    Juan is a boring enough teacher [for me to fall asleep in his class].

Bresnan assumes that an adnominal AP (such as *too boring* in the string *too boring a teacher*) is base-generated as a left-sister to the nominal that it modifies (e.g., *a teacher*) – roughly, what I take to be a DP. Bresnan does not consider cases where AP is not modified by any overt degree, so I will leave that case aside.

There are two cases, then, to deal with.

First, there are those AP's which are modified by a QP containing an overt Deg, such as in (61) and (62). In such cases, AP shift does not occur. This can be seen by the grammatical (a) examples, in which the quantified AP precedes the determiner / noun complex, and the ungrammatical (b) examples, in which the quantified AP follows the determiner but precedes the noun.

Secondly, there are those AP's which are modified by a QP which does not contain a overt Deg. Bresnan takes this to be the case in both (63) and (64), since the manifestation of *more* instead of *much* signifies for her the removal of ER from

Deg, having left behind an empty Deg, and since *enough* selects for a (base-generated) null Deg in the first place. In such cases, AP Shift usually takes place.<sup>32</sup>

AP Shift consists of two steps (although there can be more in cases of recursive degree or adjectival modification). First, a QP with a null Deg is base-generated in what I assume is specAP, although Bresnan does not label this site specAP. Then, AP moves into some position between the determiner and the noun. Once again, Bresnan does not specify the landing site.

Although some of the mechanism involved here is not entirely clear, the fact that *enough* and *more* (as well as *less*) seem to behave as a unified class is taken as support for the claim that *enough*, *much*, and *little* are the same type of element.

#### The QP / AP system and recursiveness

Up until now, the discussion has been limited to degree modification of adjectives and nominals. Bresnan notes that it is also possible (i) for adjectives to modify other adjectives in adverb guise, (ii) for QP's to modify other QP's, and (iii) for adjectives to modify quantifiers. Furthermore, these relationships are all recursive. Examples of each along with comments and structures proposed by Bresnan follow.

##### (i) adjectives modifying other adjectives in adverb guise

Basing herself on Emonds (1970), Bresnan (p.291) claims that “most adverbs are just adjectives that happen to be immediately dominated by AP or VP.” Nevertheless, there are some “intensive adverbs” which, even upon having the adverbial suffix *-ly* removed, either cannot be used predicatively at all (65), or have a different meaning than the *-ly* counterpart (66):

[Based on non-numbered examples in Bresnan, p.292]

- (65) a. Norma is utterly brilliant.  
a.' \*Norma is utter.

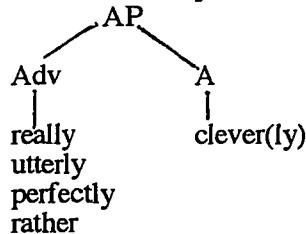
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<sup>32</sup> Bresnan also provides interesting data in which, even though ER has encliticized onto *much*, freeing up the Deg slot, elements such as *no* or *any* have been generated in the Deg slot, thus preventing AP Shift anyways.

- (66) a. Alicia is really angry.  
       = Alicia is **very / truly** angry.  
    a.' Alicia is **real**.  
       = Alicia is **not imaginary**. / Alicia is a **genuine person**.<sup>33</sup>

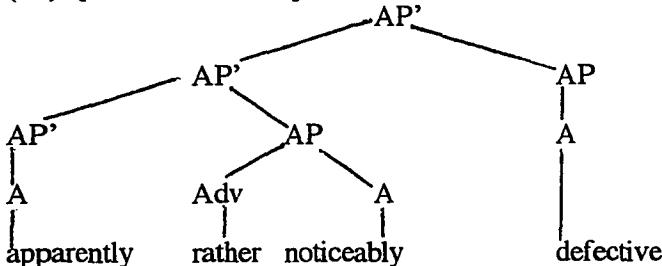
Bresnan essentially treats this special category of Adv as standing in the same relationship to an adjective or “regular” adverb as a determiner does to an NP and as a degree does to a QP:

- (67) [=Bresnan's #141]



Other than these special “intensive adverbs”, an adjective and any adverbs modifying it undergo “left-nesting” (p.292), as exemplified here:

- (68) [=Bresnan's #143]



#### (ii) quantifiers modifying other quantifiers

This category includes as a subgroup the type of construction I refer to earlier as differential comparative constructions. Recall that these are comparisons in which the amount or degree of difference, or degree of similarity, in the degree to which two entities hold a given property or two compatible properties manifests itself syntactically. Non-differential comparisons, on the other hand, merely indicate

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<sup>33</sup> That is, Alicia doesn't have a phony personality.

either that there is or that there is not a difference in degree to which two entities hold a given property or two compatible properties. Examples of differential comparative constructions are given here:

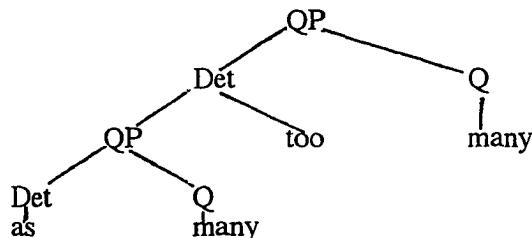
- (69) a. Pepito built two more chairs than Ricardo.  
[difference is numerical amount]
- b. Fernando is five years younger than Alicia.  
[difference is measure phrase]
- c. Javier is driving much faster than he should.  
[difference is vague extent expressed by *much*]
- d. Resignación is as much younger than Tomás as Casandra is.  
[difference is expressed as comparison of equality]
- e. There is too much more evidence against Estela than in her favor  
for the jury to acquit her.  
[difference is expressed as degree of excess]
- f. Juan José is almost as wicked as Lucrecia.  
[degree of similarity is expressed vaguely by *almost*]

Another type of construction within the category of QP's modifying QP's conveys the degree to which something is in excess. Consider the following examples:

- (70) a. Linda was much too forgiving of Arturo.  
[degree of excess is expressed vaguely by *much*]
- b. You've eaten much too much today.  
[extent or quantity of excess is expressed vaguely by *much*]
- c. Arturo has lied as many too many times as Javier.  
[amount of excess is expressed by comparison of equality]
- d. It is already five days too late to pay the rent.  
[amount of excess is given by the measure phrase *five days*]
- e. You've had many too many too many drinks.  
[based on Bresnan's #128]  
[amount of excess in number of drinks is expressed  
by expression of excess, the amount of which itself is in turn  
expressed by *many*]

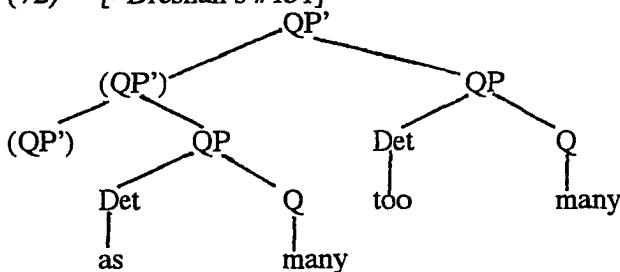
Bresnan rejects the notion that recursion of quantifiers should take place through the Det projection, as in (71) [=Bresnan's #129] (as proposed by e.g., Selkirk (1970) and Bowers (1968)):

(71)



Note that this structure, which Bresnan rejects, predicts that [as many too] is a constituent. Bresnan claims that the constituency should actually be [ [as many] [too many]], which requires that recursiveness go through QP instead of Det:

(72) [=Bresnan's #131]



Bresnan justifies her choice based on a process which she calls QP Shift (p.248). QP Shift moves the higher quantifier and any degree modifier within QP around a following NP as in the following examples:<sup>34</sup>

- (73) a. I have as many too many marbles as you. → [Bresnan's #132]  
 b. I have as many marbles too many as you.

- (74) a. I have 6 too many marbles. → [Bresnan's #133]  
 b. I have 6 marbles too many.

Bresnan notes the following restrictions on QP Shift, the first of which I have rephrased in order to emphasize what I see as the crucial characteristic of the

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<sup>34</sup> She does not mention whether or not QP Shift should allow QP's to move to the right of an AP. I take up this issue below.

restriction:

- (i) QP Shift may not move a QP around a definite NP:
- (75) a. I have 6 more of them. →  
b. \*I have 6 of them more.  
[Bresnan's #136]
- (76) a. I have half a dozen too many of these marbles. →  
b. \*I have half a dozen of these marbles too many.  
[Bresnan's #137]
- (ii) only count Q's can undergo QP Shift<sup>35</sup>
- (77) a. much too much bread →  
b. \*much bread too much  
[Bresnan's #138]
- (78) a. many too many marbles →  
b. many marbles too many  
[Bresnan's #139]

(iii) adjectives modifying quantifiers

The example that Bresnan gives of this category involves a comparison (79) (p.251, no example number), although this is not necessary (80):

- (79) rather noticeably more  
(80) quite obviously too many

What is necessary, although Bresnan does not mention this, is that there be a Deg to modify, such as ER and *too* in (79) and (80), respectively, since it is Deg that the adjective modifies, not really a Q. Such adjectives in adverb guise cannot modify a bare Q:

- (81) \*rather noticeably many / much  
(82) \*quite obviously many / much

In any case, Bresnan proposes the following phrase structure rules for the expansion of AP' and QP', to capture the ability of both AP's and QP's to modify either AP's or QP's, and to do so recursively [=Bresnan's #146]:

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<sup>35</sup>Jackendoff (1977) points out that this isn't true. For example, (i) varies with (ii):

(i) 5 loaves too much bread.  
(ii) 5 loaves of bread too much.

If these are derived by QP Shift, then QP Shift allows non-count QP's to be shifted, as long as the preceding measure phrase is a count noun.

- (83)      a.  $\left\{ \begin{matrix} AP' \\ QP' \end{matrix} \right\} \rightarrow \left( \left\{ \begin{matrix} AP' \\ QP' \end{matrix} \right\} \right) \left\{ \begin{matrix} AP \\ QP \end{matrix} \right\}$
- b.  $AP \rightarrow (\text{Adv}) A$   
               c.  $QP \rightarrow (\text{Det}) Q$

#### 4.2.1.2 Jackendoff (1977)

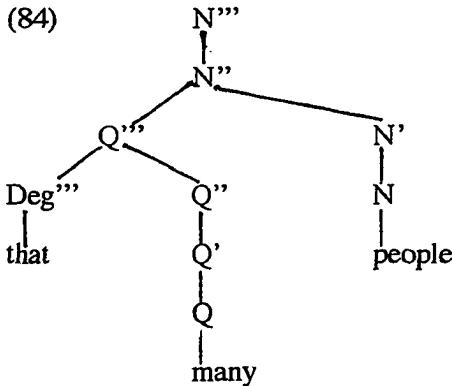
Jackendoff notes that some adjective phrases can subcategorize for measure phrases, as Bresnan noticed. Similarly, he acknowledges that *different* and *alike* may be preceded by an overt element such as *much*, *little*, and *far* (this last one in the case of *different* only). Since these are essentially the only adjectives which may cooccur with a preceding *much*, *little*, or *far*, and since only certain adjective phrases may subcategorized for measure phrases, Jackendoff proposes that both of these properties be marked in the lexicon as idiosyncratic properties of certain lexical items, and that the general phrase structure rule for adjectival degree modification should not include a QP projection. This avoids the need for Bresnan's Much Deletion rule, and the idiosyncrasies involved with the adjectives mentioned above need to be marked somewhere in the grammar anyways, so there is no extra cost in ascribing these idiosyncrasies to the lexicon. Similarly, whereas Bresnan had no solution for ruling out \**little* + Adj. for most cases of adjectives, Jackendoff's decision to leave this to lexical subcategorization correctly predicts the facts at no additional cost, since the same adjectives that can appear with *much* are the ones which can appear with *little*.

A consequence of Jackendoff's strategy is that *more* and *less* cannot be Q's. Recall that Bresnan proposed that although *more* and *less* are not Q's themselves, they contain *many / much* and *little*, respectively, which are Q's. Jackendoff takes *more* and *less* to be of category Deg, along with *how*, *this*, *that*, *so*, *too*, *as*. He justifies the nature of this category partially based on the parallelism between some proposed members of this category and the category Art (standing for article), eg.,

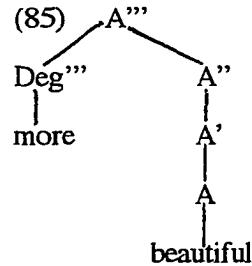
*this* in *this tall* and *this man*.

The structure that Jackendoff claims (his #6.24a) for a quantified nominal is roughly as in (84), whereas the structure he gives (his #6.29a) for a degree-modified adjective is as in (85):

(84)



(85)



An immediate problem that Jackendoff faces in nominal amount comparisons that was never an issue for Bresnan is how to rule out forms such as those in (86), since unlike Bresnan, he takes *more* not to be formed from *many* or *much*, or any other element in *Q*, but rather, base-generated independently. Hence, it should be allowed to cooccur with any element base-generated in *Q*:

- (86) \*more many, \*more much, \*more little, \*more few, \*more far

However, Jackendoff's solution of Idiosyncratic Spelling Rules (p.147) is not any more costly than Bresnan's solution for ruling out forms such as \*mucher, \*manyer, and \*littler:<sup>36</sup>

(87) more + many →

more

more + much →

more

more + little →

less

more + few →

fewer [my note: also, less]

more + far →

farther

Jackendoff's system implies, as I mention above, that *more* is not the com-

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<sup>36</sup> Dominique Sportiche points out (p.c.) that Jackendoff's solution is not any less costly than Bresnan's solution, either. Thus, the point at hand does not favor either solution overall, although it allows for the feasibility of Jackendoff's.

parative of *many* or *much* but rather, a Deg alone with no Q ingredient. In a similar fashion, *less* is a degree rather than being the comparative form of the Q *little*. This causes another dilemma since now we have no way of ruling out the following ungrammatical forms:

- (88) \*less much, \*less many, \*less little, \*less few, \*less far [+ adj.]

Jackendoff does not give a solution for this problem but rather leaves in place an “unprincipled filter” (p.149). He suggests that (the first four of) these ungrammatical forms would be expected to have the following meanings:

- (89) \*less much = more little > less  
\*less many = more few > fewer  
\*less little = more much > more  
\*less few = more many > more

Whereas Bresnan proposes Rules for Simple Comparatives to arrive at synthetically-formed adjectival comparisons such as *taller*, Jackendoff apparently treats such examples in a manner analogous to the spelling rules for arriving at *more* from *more* plus *many* and other similar examples. He does not establish, however, whether there would need to be an idiosyncratic spelling rule for every single adjective that takes the suffix *-er* instead of being preceded by the word *more*, or whether one single rule would work.

### enough

Recall that Bresnan takes *enough* to be a Q, subcategorizing for a null Det. This allowed her to avoid forms like the following:

- (90) \*too enough, \*as enough, \*this enough, \*so enough, \*enougher

Jackendoff takes *enough* to be a Deg instead. This explains its ability to cooccur with other forms which Bresnan takes to be Q's, shown in (91)-(93). As for the word order, keep in mind Bresnan's Enough Permutation, some form of which any theory I am aware of needs:

- (91) far enough down the road  
(92) little enough pudding  
(93) few enough men

Recall that Bresnan could not generate these forms. Nevertheless, she was able to rule out forms such as the following, which Jackendoff cannot:

- (94) \*many enough men, \*much enough pudding

Jackendoff is forced to propose his own rule of deletion, by which *many* or *much* gets deleted after *enough*:

- (95) Many–Much Deletion [his #6.34]  
*enough* – {*many* / *much*} → 1 -  $\emptyset$   
OBLIGATORY

Jackendoff points out that this is more restricted than Bresnan's generalized Much Deletion. Whereas Bresnan's rule of Much Deletion applies across most adjectives, Jackendoff's rule of Much / Many Deletion is tied to a specific lexical item, namely *enough*.

In both Jackendoff's and Bresnan's proposals, *more* and *enough* function in parallel manner. For Bresnan, they both either are or contain Q's –*enough* is a Q, whereas *more* contains the Q *many* / *much*. For Jackendoff, though, both *more* and *enough* are Deg's. Since *more* and *enough* can select for complements, Jackendoff asserts that his account has the advantage of avoiding the claim that Bresnan must make, that there are in fact some Q's capable of governing a complement, a claim which is usually considered to be false. It is ordinarily assumed that only Det's or Deg's can govern a complement.

Another motivation for claiming *enough* to be a Deg is that it seems to act like a Det in the nominal system, and in Jackendoff's schema, Deg and Det are analogous positions. Jackendoff claims that *enough* can be a Deg or a Det. This allows us to consider the Enough Permutation rule proposed by Bresnan (which Jackendoff calls Enough Shift) obligatory:

- (96) [=Jackendoff's #6.32]  
Enough-Shift (revised):  
*enough* -  $X^\circ$  →  $\emptyset$  - 2 + 1  
OBLIGATORY

When *enough* is a Deg (97), we do not see the results of the shift, since there is a silent Q (deleted by Many/Much Deletion) that *enough* shifts around vacuously. When *enough* is a Det (98), however, *enough* shifts around the noun and we get forms such as *pudding enough*.

enough is Deg

- (97) [NP [QP [DegP enough] many] shoes] →  
       [NP [QP [DegP enough] ø] shoes] → [Spelling Rules]  
       [NP [QP [DegP t<sub>i</sub>] ø enough<sub>i</sub>] shoes] [Enough Shift]

enough is Det

- (98) [NP [DP enough] shoes] →  
       [NP [DP t<sub>i</sub>] shoes enough<sub>i</sub>] [Enough Shift]

Recursion in degree phrases

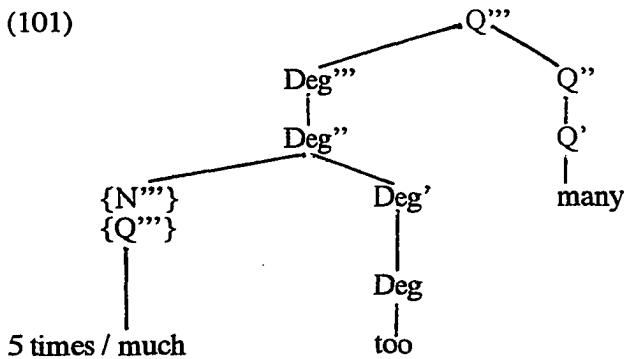
Jackendoff also disagrees with Bresnan as to the constituency of degree phrase recursion. He agrees with Bowers (1968) and Selkirk (1970) that degree recursion goes through Deg rather than through Q, since he wishes to provide a unified analysis of degree recursion in the nominal and adjectival systems, and he claims that only nouns, and not adjectives, allow modification by QP.

Thus, according to Jackendoff, the constituency of (99) is (100), schematized in tree-form in (101) [=Jackendoff's #6.42]

- (99) a. five times too many  
       b. much too many

- (100) a. [[[five times] too] many]  
       b. [[[much] too] many]

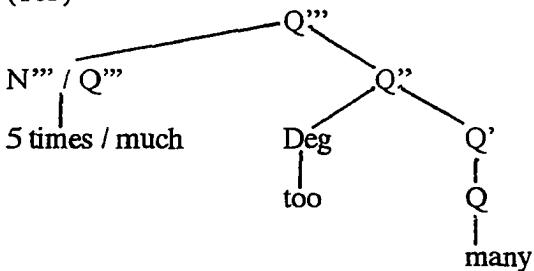
(101)



Recall that Bresnan would claim the constituency in (102) for such expressions, shown in tree form in (103) [Jackendoff's #6.45]:

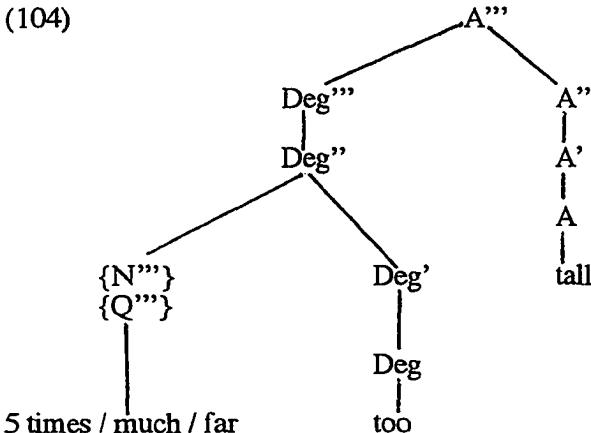
- (102) a. [[five times] too many]  
b. [[much] too many]

(103)



As for the constituency in adjectival degree recursion, Jackendoff provides the following tree (his #6.46), predicting the constituency in (105), which is analogous to what he proposes for degree recursion in the nominal system (99):

(104)



- (105) [[[5 times / much / far] too] tall]

Bresnan would predict the following constituency instead:

- (106) [[5 times / much / far] [too tall]]

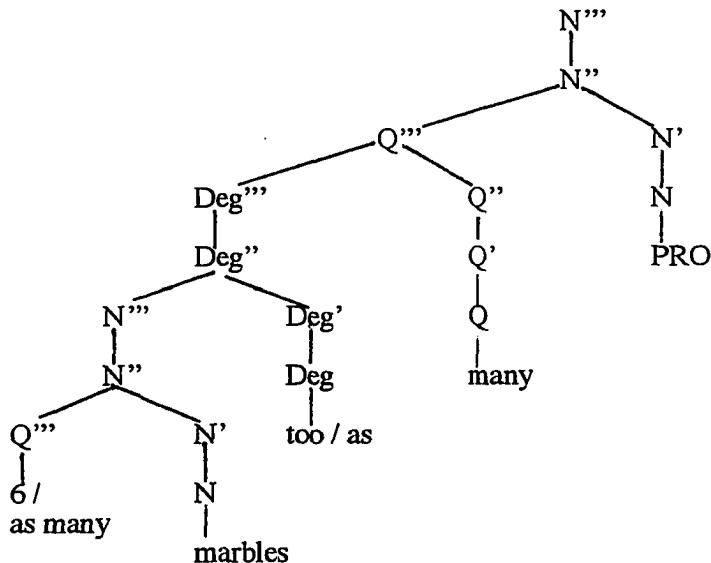
In order for Jackendoff to maintain the constituency he claims for degree recursion, he must invalidate evidence that Bresnan provides in favor of the con-

stituency that she proposes, namely her rule of QP Shift. Recall the data that Bresnan presents initially to demonstrative QP Shift [also = Jackendoff's #6.47]:

- (107) a. I have as many too many marbles as you. →  
 b. I have as many marbles too many as you.  
 c. I have six too many marbles. →  
 d. I have six marbles too many.

Jackendoff claims that there is not rule of QP Shift as proposed by Bresnan. Instead, (107b) and (107d) are base-generated with PRO in the position occupied by *marbles* in the (a) and (c) examples, respectively. The following tree [Jackendoff's #6.48] exemplifies the use of PRO in degree recursion:

(108)



Jackendoff suggests that the measure phrase *6 marbles* or *as many marbles* is base-generated in a manner analogous to *6 marbles* in the sentence "This tray is 6 marbles wide."

He notes that PRO need not be present in a structure such as (108). Instead, a noun countable by the type of measure phrase given but not identical with the noun in the measure phrase may nevertheless appear:

- (108) a. This book took five reams too many pages. [Jackendoff's #6.49]  
 b. This cake took five pounds too much sugar.

This does not always work. Consider the following example given by Sáez (1993) in (109a), translated from Spanish into English, with the intended meaning shown in (109b):

- (109) a. \*I read 5 novels too many books.  
b. As far as books are concerned, I read 5 novels too many.

This may simply require a more careful formulation of what qualifies as a measure phrase. Since the sentences in (108) are grammatical, we want to allow the extended degree projection of a noun to be modified by a measure phrase containing an underlying identical noun, as schematized in (110), even though one of the two instances of the identical noun must be null at S-str – (111) shows that it is not grammatical for both instances to surface. Perhaps this condition is due to some principle of economy.

- (110) a. This book took five too many pages.  
b. This book took five pages too many.
- (111) \*This book took five pages too many pages.

On the other hand, only a small class of nouns may occur within the measure phrase when that noun is not identical with the noun modified by the measure phrase. This class of nouns includes container nouns such as *ream*, *box*, *bottle*, *package*, and *carton*, as well as units of physically measurable properties, such as *pounds*, *grams*, *cubic centimeters*, etc. It is odd that not just any noun may occur in this case. In fact, this casts some doubt on Jackendoff's use of PRO instead of a rule of QP Shift, but it is not clear that there is sufficient evidence against his proposal regarding PRO to discard it.<sup>37</sup>

Bresnan also claims that QP Shift accounts for the impossibility of generating the following (b) sentences from the (a) sentences, assuming that *of-insertion* bleeds QP Shift:

<sup>37</sup> Sáez (1994) actually presents some very fine arguments against Jackendoff's proposed structure for similar examples in Spanish, but there are also problems with the structure he proposes in general for differential degree construction. For example, he cannot explain why Spanish does not have the equivalent to the English sentence: *I bought three books too many*.

[Jackendoff's #6.50]

- (112) a. I have 6 more of them. →  
b. \*I have 6 of them more.  
c. I have half a dozen too many of these marbles. →  
d. \*I have half a dozen of these marbles too many.

Jackendoff proposes that what really causes ungrammaticality in the (b) examples is a general prohibition on definite nouns in the position of second noun in partitive constructions when used as the measurement of difference in a differential degree construction. Thus, the (b) sentences in (113) [=Jackendoff's #6.51] are allowable, even though the second noun in the partitive is preceded by *of*, and even "non-shifted" QP's are ruled out in (114) [=Jackendoff's #6.52] if the second noun is a definite noun:

- (113) a. I have hundreds more marbles.  
b. I have hundreds of marbles more.  
c. I have 5 lbs. too much sugar.  
d. I have 5 lbs. of sugar too much.
- (114) a. \*5 of them too far  
b. \*half a dozen of those miles too long

A final objection to Jackendoff's schema, in favor of Bresnan's QP Shift, is that only count nouns may appear prior to a "shifted QP", as shown by the impossibility of a mass noun before a "shifted QP" in (115b) [Jackendoff's #6.53], and such a restriction can be built into a rule of QP Shift:

- (115) a. much too much bread  
b. \*much bread too much

Jackendoff claims, though, that one might just as well claim that his structure is correct and that there is simply a prohibition against non-count measure phrases.

Both Jackendoff and Bresnan present compelling syntactic arguments in favor of one or the other possible constituencies for degree recursion. Thus, there is not enough evidence to decide in favor of one analysis of degree recursion over the other.

#### 4.2.1.3 Corver (1997)

Corver takes the proposals made by Bresnan (1973) and Jackendoff (1977) as his point of departure. He reframes each within more current X-bar assumptions and makes a fundamental classificatory distinction between a SPLIT DEGREE SYSTEM such as Bresnan's vs. a UNIFORM DEGREE SYSTEM such as Jackendoff's.

Bresnan treats some degree elements as determiners, such as *as*, *too*, *that*, *how*, *so*, and ER. Recall that in Bresnan's degree system, not only degree expressions, but QP's, too, may also enter into both adjectival and nominal degree structures. These QP's contain degree-related elements that are more quantifier-like than determiner-like, such as *much*, *little*, and *enough*. Since there are two different kinds of degree elements in this system, Corver refers to Bresnan's proposal as a Split Degree System Hypothesis.

Jackendoff, on the other hand, claims that there is no QP in adjectival degree structures. Hence, there is only type of degree-related element in the adjectival system. His proposal lumps *as*, *too*, *how*, *that*, *enough*, and *so* together with *more* and *less*, which for him are primitives rather than derived forms. Elements such as *many*, *much*, and *little* only appear within the nominal degree system, in which they are merely Q's. Jackendoff's proposal, according to Corver, is a Uniform Degree System Hypothesis.

Although Corver agrees with Jackendoff that Bresnan cannot explain the ungrammaticality of the string *\*little + adjective*, he agrees with Bresnan that "there is an underlying QP within adjectival structures" (p.123). Furthermore, he believes in a split degree system, although not the same one that Bresnan proposes. In Corver's system, the quantifier-like degree words are *more*, *less*, *enough*, and "a dummy quantifier *much*." As Corver notes, he does follow Jackendoff on one point – he does not take *more* and *less* to be morphologically complex. Rather, they are base-generated in Q. The following table summarizes the various claims

under discussion:

**Table 4.3 Comparing the determiner system of Bresnan, Jackendoff and Corver**

	<u>Determiner-like degree elements</u>	<u>Quantifier-like degree elements</u>
Bresnan	as, too, that, so, how, and ER	many, much, few, little, enough
Jackendoff	as, too, that, so, how, more, less, enough	N/A in adjectival system
Corver	as, too, that, so, how	more, less, enough, <i>Dummy much</i>

Note that Corver refers to “a dummy quantifier *much*.” He makes the innovative claim that there are actually two instances of *much*, in the same way that there are two instances of the verb *do*. Just as there is both a lexical verb *do* which behaves like any other main verb and a dummy verb *do* which serves to provide Do Support in matrix questions (unless the subject is questioned) and negations, there is a lexical quantifier *much* with semantic import and a dummy *much*. Dummy *much* “occurs in an adjectival structure only as a last resort” (p. 123), just like dummy *do* occurs in an inflectional structure only as a last resort. I address his claims about how each of the two types of *much* is used below.

Corver refers to structures in which determinerlike elements are generated in the specifier position of lexical projections, which is the type of structure traditionally assumed, as conforming to the LEXICAL HEAD HYPOTHESIS. Both Bresnan and Jackendoff use structures which adhere to this hypothesis.

Corver, however, eschews the lexical head hypothesis in favor of the FUNCTIONAL HEAD HYPOTHESIS, as proposed by Abney (1987) and Corver himself (1991, 1994). From this perspective, determinerlike elements, and functional elements in general, take lexical phrasal (XP) complements.

Corver justifies adopting the Functional Head Hypothesis based on two types of evidence: (i) the interaction of ER Suffixation onto adjectives in synthetic comparatives and c-command requirements, (ii) constituency as determined by left-branch extractability.

### (i) ER Suffixation

If we follow the Lexical Head Hypothesis, then the extended adjectival system of a synthetically compared adjective would be more or less as in (116) [=Corver's #14]:

- (116) [AP [FP -er] [A' [A tall]]]<sup>38</sup>

Unlike either Bresnan or Jackendoff, Corver explicitly claims, basing himself on Edmonds (1976), that the suffix *-er* in synthetic adjectival comparisons is an allomorph of the word *more* of analytic adjectival comparisons. In the remainder of his discussion of the structure in (116), he follows Jackendoff more closely than he does Bresnan. He assumes that synthetic adjectival comparisons involve morphological combination of the suffix *-er* and the compared adjective. Recall that Bresnan proposes Rules for Simple Comparatives, by which the suffix *-er* which has cliticized onto the quantifier *much* is copied, not moved, onto the compared adjective, and then subsequently, *much* + ER is deleted.

Corver assumes that in order for *tall* and the suffix *-er* to combine, one must join the other via movement. If the structure in (116) were correct, then there would be two possible movements capable of accomplishing the needed suffixation. Either the head *-er* could be lowered and right-adjoined to the head *tall*, or the head *tall* could be raised and left-adjoined to the head *-er*. The first scenario goes against the common assumption (eg., Kayne (1994)) that no overt movement should ever be a lowering rule. Both scenarios would result in a structure in which a moved element does not c-command its trace, a result which would "violate the general ban against movement to a non c-commanding position" (Corver, p.124).

However, if a structure conforming with the Functional Head Analysis is considered (117) [=Corver's #14], we see that the lexical head *tall* can incorporate

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<sup>38</sup> FP is an abstract notion utilized here by Corver to remain neutral between whether or not the extended adjectival degree system includes a QP projection. Thus, FP could represent either a DegP in the specifier of QP, itself in the specifier of AP, or merely a DegP in the specifier of AP.

to the suffix *-er* via head-to-head movement, without violating either of the two principles just mentioned:

- (117) [FP [F -er] [AP A° XP]]<sup>39</sup>

constituency and left-branch extraction

Corver also points to data involving restrictions on left-branch extraction.

Assuming that left-branch extraction is only allowed when the moved string is a phrasal constituent, he attributes those cases in which left-branch extraction is not allowed to involve either sub-phrasal elements, i.e., heads, or non-constituent strings.

Examples of failed left-branch extractions involving moving a head to a position meant for phrases only, namely specCP, are as follows [=Corver's #16a and c]:

- (118) a. \*How<sub>i</sub> is Peter [t<sub>i</sub> sane] ?  
b. \*How<sub>i</sub> do you think he is [t<sub>i</sub> dependent on his sister] ?<sup>40</sup>

Corver assumes that Ross's (1967) prohibition against left-branch extraction is not generally valid. Thus, the ungrammaticality of the extractions in (118) can only be explained if one adopts the Functional Head Analysis and accepts, along the lines of Edmonds (1976) and Chomsky (1986), that substitution operations must respect structure preservation requirements. That is, heads may only move to head positions, and phrasal constituents may only move to phrasal positions. Under the Lexical Head Hypothesis, by contrast, the extracted degrees in (118) should be XP's and hence, should be extractable.

The fact that left-branch extraction is in fact permitted in the case of XP's can be seen from the following data [=Corver's #17]:

- (119) a. [How badly]<sub>i</sub> was he [t<sub>i</sub> short of funds] ?

---

<sup>39</sup> Corver does not state anywhere in this immediate discussion what XP stands for, although it can probably be inferred based on other structures given by him that XP is a hypothetical complement of the adjectival head A°, should it have one.

<sup>40</sup> Corver cautions the reader to ignore the irrelevant reading in which *how* is a manner adverbial adjunct describing the way in which the matrix subject is dependent on his sister.

- b. [How closely]<sub>i</sub> are we [ $t_i$  related to the monkey] ?
- c. [How heavily]<sub>i</sub> do you think he is [ $t_i$  dependent on his sister] ?

According to the Functional Head Hypothesis, the extractions in (119) involve XP's. Thus, it is predicted that they can move to specCP, and the prediction is borne out. The distinction between (118) and (119) with respect to left-branch extraction follows from a functional head analysis but is left unexplained under a lexical head analysis.

Note that this result allows the use of left-branch extractability as a test for constituency in more complicated cases such as the following [=adapted from Corver's #18]:

- (120) a. (?) [How many IQ-points]<sub>i</sub> is John [ $t_i$  less smart (than Bill)] ?
- b. \*[How many IQ-points less]<sub>i</sub> is John [ $t_i$  smart (than Bill)] ?
- c. [How many IQ-points less smart (than Bill)]<sub>i</sub> is John  $t_i$  ?

Corver points out that although the (a) example is not very elegant, it is clearly much better than the (b) example, and the (c) example is the best of the three. In the (a) and (c) examples, the extracted string is taken to be a constituent, according to the above reasoning. That is, the extended adjectival projection should conform to the Functional Head Hypothesis, as in (121) [=Corver's #19b], rather than to the Lexical Head Hypothesis, as in (122) [=Corver's #19a]:

- (121) [FP [how many IQ-points] [F' less [AP smart ]]]
- (122) [AP [FP how many IQ-points [F' less ]]] [A' smart ]]

In Corver's terms, the split degree system proposed by Bresnan and the uniform degree system proposed by Jackendoff, in the case of adjectival degree modification, would be as follows under the Functional Head Hypothesis [Corver's #12 and #13]:

- |                                 |                         |
|---------------------------------|-------------------------|
| (123) [DegP Deg [QP Q [AP A ]]] | [split degree system]   |
| (124) [DegP Deg [AP A ]]        | [uniform degree system] |

Corver adopts (123), mainly in order to accommodate data involving SO

PRONOMINALIZATION. This is a large body of data in which *much* does appear overtly in front of *so*, which Corver takes to be a pro-A(dj)P in the relevant cases, even though *much* is not usually allowed to surface before an adjective. This is actually the only strong evidence that Corver presents in favor of postulating a QP projection in the extended adjectival projection. All the other evidence that Corver gives could be reframed in a uniform degree system as shown in (124).

#### So Pronominalization data

Corver presents an interesting contrast between the degree elements *as*, *too*, *so*, *that*, *how*, on the one hand, and *more*, *less*, and *enough*, on the other. This contrast involves a phenomenon which Corver calls So Pronominalization, in which an AP (or even the QP or DegP of the extended adjectival projection) is replaced by the pro-form *so*. Whereas the first set of elements require an intervening dummy *much* when occurring with a pro-AP *so* (125) [=Corver's #23 and #24, combined], the second set occurs directly string-adjacent to *so* (126) [=modified version of Corver's #21]:

- (125) a. John is *fond of Mary*. Maybe he is [too \*(much) so].  
b. John is *fond of Mary*. Maybe he is [as \*(much) so as Bill].  
c. The weather was *hot* in Cairo – [so \*(much) so that we stayed indoors all day].  
d. John told me he was *afraid of spiders*, but I wonder [how \*(much) so he really is].  
e. ?John is *wild about Madonna*, but I am not really [that \*(much) so].
- (126) a. John is *fond of Mary*. Bill seems [(much) less (\*much) so].<sup>41</sup>  
b. Of all the *careless* people, no one is [more (\*much) so than Bill].  
c. John is *good at mathematics*. He seems [(\*much)<sup>42</sup> enough (\*much) so to enter our graduate program].

Corver explains the So Pronominalization data in terms of locality require-

<sup>41</sup> Corver's original example did not have parentheses around the first instance of *much*. However, I have chosen to present it this way since this particular *much* is not necessary for the sentence to be grammatical and since its presence or absence does affect the meaning of the sentence but does not affect the line of reasoning of which this sentence is a part.

<sup>42</sup> I include this option as well since we would expect Q's like *much* to permute around *enough*, in a manner analogous to *few* and *little* in *few enough* and *little enough*, respectively.

ments on theta-binding relations. Corver assumes, along the lines of Higginbotham (1985) and Williams (1981), that some predicates include in their theta-grid a referential argument that they need to assign. The XP acting as that argument needs to be bound locally by the predicate in question. Hence, a verb seeks tense so that the denotation of the verb is restricted referentially to those members of the verb's denotation set occurring a given point in time. Similarly, a common noun seeks a determiner which will restrict its reference to a subset of the noun's denotation. In the case at hand, degree-modified adjectives, such as compared adjectives, seek a degree referential argument, in addition to an external theme argument.<sup>43</sup>

Corver assumes that in order for a predicate to bind a referential argument, the two must either be heads in adjacent projections or stand in a specifier-head relationship. Thus, Corver claims that in the ungrammatical variants in (125), i.e., in the variants without *much*, the adjectival predicate represented by *so* is not, and cannot get, close enough to the degree element to bind its referential degree argument (see below for the reason why). In (126), however, the adjective is close enough to the degree element in order to bind its referential degree argument. The only way to explain why some degree elements are able to enter into a sufficiently local relationship with an adjective, whereas others are not, is to adopt a Split Degree System Hypothesis, as will become clearer below. This, as I commented earlier, is exactly what Corver proposes.

Corver considers those degree elements which may occur with *so* without any intervening *much* to be base-generated in Q. This includes *more*, *less*, and *enough*. Those degree elements which require a following dummy *much* before

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<sup>43</sup> Corver assumes that a bare positive adjective, such as *tall* in (i), does not subcategorize for a degree argument in its theta-grid, although he grants that one could claim the opposite, i.e., that all gradable adjectives subcategorize for a degree argument.

(i) Juan is tall.

Under this second, opposite claim, though, one would have to postulate some null degree element, i.e., a null operator, which would stand roughly for the degree *relatively very* or *more than the norm*.

*so* are considered by Corver to be base-generated in Deg.

Since those degree words which cannot directly precede *so* can precede it with an intervening *much*, Corver, in an effort to provide a slot for *much* and in order to lay the ground for a deeper explanation of the facts, concludes that all extended adjectival projections contain at least QP if not both QP and DegP.

Any degree element generated in Q will always be close enough to the head of AP or the pro-AP *so* to bind the referential degree argument of the adjective. A degree element in Deg, however, is too far away to directly bind the referential degree argument of the adjective it modifies, unless one of the two mechanisms discussed below takes place.

If the A slot is occupied by a lexical head, then that adjective may raise via head-to-head movement to Q, at which point, it and the degree in Deg are sufficiently local to enter into a theta-binding relationship. Thus, if a Deg word modifies a lexical adjective such as *intelligent*, then there is no need for an intervening *much*:

(127) too (\*much) intelligent.

The adjective *intelligent* moves to Q to bind the Deg *too* as its referential degree argument.

If, on the other hand, the A slot is contained within the pro-AP element *so*, which is the receptacle of the argument structure of its antecedent adjective, *so* cannot move closer to Deg via head-to-head movement since it is not a head – it is a pro-AP. Hence, according to Chomsky's (1993) principle of LAST RESORT, English is allowed to resort to a language-specific tactic: MUCH SUPPORT. The adjective-like element *much* is inserted in Q and inherits the adjectival argument structure carried in *so*. From its position in Q, *much* is able to bind the Deg as its referential degree argument since they are sufficiently close to one another.

The strategy referred to as Much Support does not occur when not necessary, i.e., when a lexical adjective, capable of raising to Q, occupies A. This fol-

lows from Chomsky's (1993) notion of ECONOMY IN DERIVATION, according to which any unnecessary step should be avoided.

#### Recursion in degree expressions and measure phrases

Corver's Split Degree System correct predicts that the cooccurrence of a degree element in both Deg and Q is limited to the one case where Q is Dummy *much*. In any other case, such as in (128), the degree word in Q will bind the referential argument of the adjective, leaving the degree word in Deg as an extra, unallowed argument and additionally, as an operator with no property to bind:

- (128)<sup>44</sup> a. \* Cleofas is [DegP too [QP more [AP cunning ]]].  
b. \* Poncho is [DegP as [QP less [AP mature ]]].  
c. \* [DegP How [ QP enough [ AP intelligent ]]] is Gonzalo ?

Note that a uniform degree system, such as that proposed by Jackendoff, would also rule these sentences out, since only one head can be base-generated in a given head position, here Deg.

Alternatively, one may adopt a split degree analysis in which *more* and *less* are not primitives but are composed of *much* and *little*, respectively, plus ER, which is what Bresnan (1973) and Rijkhoek (in progress) do. This, too, makes the correct prediction in (128a) and (128b), although (128c) requires an additional explanation, since it contains neither *much* nor *little*. Recall that Bresnan simply stipulates that *enough* subcategorizes for an empty Deg. An alternative solution for the example in (128c), to which Rijkhoek, for example, might make recourse, would be to invoke a semantic explanation, since *enough* is not a gradable property, and hence, is not compatible with a degree modifier. In syntactic terms, we could say that *enough* does not project a referential theta role, and hence, the Deg*how* quantifies vacuously.

The sentences in (128a) and (128b) cannot be ruled out on similar grounds

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<sup>44</sup> I ignore the issue of where the second associate of these constructions (comparisons and an *enough* construction) would be generated, as does Corver in his article.

if one takes *more* and *less* to be gradable predicates. Since there do exist differential comparative constructions (cf. §4.2.1.1 and §4.2.1.2), the concept of *more* and *less* being gradable is quite reasonable. There is a syntactic obstacle to making such a claim, however. Both Bresnan and Corver assume a structure for differential comparative constructions that treats not *more* or *less* alone, but rather, *more* or *less* plus the following adjective, as a gradable property (129):

- (129) a. Cleofas is [too much] [more cunning].  
 b. Poncho is [as much] [less mature].

Recall that Bresnan, who follows a traditional lexical head analysis, claims such structures in order to account for her rule of QP Shift in the case of nominal amount comparisons (130)-(131).

- (130) a. I have [as many] [[too many] marbles] as you. →  
 b. I have [as many] [marbles [too many]] as you.  
 [adapted from Bresnan's #132]

- (131) a. I have [6] [[too many] marbles]. →  
 b. I have [6] [marbles [too many]].  
 [adapted from Bresnan's #133]

Assuming the alternative constituency in (132) and (133), respectively, should prohibit QP Shift from occurring, since QP Shift can only affect constituents:

- (132) I have [[[as many] too ] many] marbles] as you.  
 (133) I have [[[6] too ] many] marbles].

Jackendoff, however, simply discards QP Shift as a rule altogether and accounts for the sentences in (130b) and (131b) using PRO:

- (134) I have as many marbles too many PRO as you.  
 (135) I have 6 marbles too many PRO.

We saw earlier that this alternative approach is not without its own flaws, but it is feasible enough to be considered as an alternative analysis to Bresnan's.

Secondly, if we adopt a functional head analysis, Bresnan's proposed rule of QP Shift moves Deg and Q independently of the NP complement of Q. This

means that QP Shift moves non-constituents, an undesirable claim in any framework which requires constituency for rule application.

There is an additional argument against Bresnan's proposed QP Shift. A variation in word order in an adjectival degree comparison, analogous to the variation seen above in nominal amount comparisons, is not possible, unless QP Shift occurs after adjectives have already moved to Q. In that case, we would predict string vacuous movement, as shown in (136c), (137c), (138c) and (139c), and hence there would be no overt signs of its having taken place.

- (136) a. Cleofas is [too much] [[more] cunning]. →
- b. \*Cleofas is [too (much)] [ $t_i$  cunning [more] $]_i$ .  
      c. ✓Cleofas is [too much]  $t_i$  [[more] cunning] $_i$
- (137) a. Poncho is [as much] [[less] mature]. →
- b. \*Poncho is [as (much)] [ $t_i$  mature [less] $]_i$ .  
      c. ✓Poncho is [as much]  $t_i$  [[less] mature] $_i$ .
- (138) a. Cleofas is [as much] [[too] cunning]. →
- b. \*Cleofas is as (much) cunning too (much).  
      c. ✓Cleofas is [as much]  $t_i$  [[too] cunning] $_i$ .
- (139) a. Poncho is [more] [[too] cunning]]. →
- b. \*Poncho is more cunning too (much).  
      c. ✓Poncho is [more]  $t_i$  [[too] cunning] $_i$ .

In any case, QP Shift is not viable as such under current theoretical assumptions (eg., Kayne (1994)) according to which rightward movement is disallowed. Since QP Shift is not an acceptable rule type under the current framework, it cannot be used to make predictions about constituency.

Recall, however, that Corver provides wh-extraction data involving differential degree constructions that supports the constituency shown in (140):

- (140) a. (?) [How many IQ-points] $_i$  is John [ $t_i$  less smart (than Bill)] ?
- b. \*[How many IQ-points less] $_i$  is John [ $t_i$  smart (than Bill)] ?  
      c. [How many IQ-points less smart (than Bill)] $_i$  is John  $t_i$  ?

Corver's extractability test, then, does support the constituency suggested in (129), repeated here for convenience:

- (129) a. Cleofas is [too much] [more cunning].

- b. Poncho is [as much] [less mature].

At this point, I present Corver's specific proposals regarding the position of differential measure phrases and measure phrases in general.

Although he phrases the following in different terms, Corver assumes more or less that a measure phrase like *six feet* in (140) is a complement to an adjective, whereas a differential measure phrase like *six feet* in (141) is an adjunct modifying a degree:

- (140) Luisa is six feet tall.  
(141) Luisa is six feet taller than Carmela.

He argues that the presence of *six feet* in (140) alters the interpretation of the adjective *tall* since without the measure phrase, the sentence would just mean that Luisa is relatively tall. The phrase *six feet* functions here in a manner analogous to the way it functions in (142):

- (142) a. Luisa's height is six feet.  
b. Luisa measures six feet.

In (141), on the other hand, *six feet* does not radically alter the nature of the sentence, since with or without it, the sentence conveys a difference in height between Luisa and Carmela. Although this distinction is not entirely clear to me, note that *six feet* may occur in an optional *by* phrase in a variant of (141), in the same same way as an agent may occur in an optional *by*-phrase in a passive sentence (143):

- (141') Luisa is taller than Carmela (by six feet).  
(143) Luisa was kindly greeted (by Carmela).

In any case, based on his distinction between measure phrases modifying adjectives and differential measure phrases, Corver proposes the following structures for each [based on his #49 and #44, respectively]:

- (144) Luisa<sub>i</sub> is [QP [six feet]<sub>j</sub>] [Q' Q [AP t<sub>i</sub> [A' tall t<sub>j</sub>]].

- (145) Luisa is [QP [DegP six feet] [Q' e [AP taller]] than Carmela].<sup>45</sup>

In both cases, the measure phrase surfaces in specQP, but in the non-differential case, the measure phrase originates as a complement to the adjective *tall* and undergoes OBJECT SHIFT. As for the differential measure phrase, it originates as a type of DegP directly in specQP.

Corver claims a slightly different structure for those differential degree constructions in which the degree element in question is a determiner-like degree element. In this case, the differential measure phrase originates in specDegP, as in (146) [=Corver's #78]:

- (146) a. [DegP [DegP as much] [Deg' too [QP e [AP tall]]]]  
b. [DegP [DegP too much] [Deg' too [QP much [AP so]]]]

Finally, Corver considers adjectival degree modifiers such as *extremely*, *terribly*, *highly*, etc., to originate in specQP, from which position it can bind an adjective's referential degree argument via spec-head agreement (147) [=Corver's #108a]. Recall that a degree element such as *too* is further away from AP and hence, *much* must be inserted in Q (148):

- (147) [QP extremely [Q' [AP so]]]  
(148) [DegP too [QP \*(much) [AP so]]]

Note that Lexical *much* functions like the adjectival degree modifiers:

- (149) Luisa is [QP [DegP much] [Q' e [AP taller]] than Carmela].

#### Different, alike, verbal adjectives

Recall that Bresnan and Jackendoff address a small group of adjectives, eg., *different* and *alike*, which may be preceded by *much*:

[Bresnan, fn #4]

- (150) a. A tangerine isn't as (much) different from an orange as I'd thought.  
b. You and I are as (much) alike as a horse and a cow.

<sup>45</sup> Corver appears to be assuming that morphology is a checking process rather than a concatenation process in this example, even though he assumed the opposite when attempting to prove the superiority of the Functional Head Analysis. One would expect the following structure instead, where *-er* is an allomorph of *more*, if he were assuming here that morphology is concatenation:

(i) [QP six feet [Q' -er [AP tall]] than Carmela]

In any case, this discrepancy does not appear to affect his argumentation.

Corver assumes that the version with *much* has a different structure than the version without *much*. The version with *much*, which is not Dummy *much* but in fact Lexical *much*, has the same type of structure as mentioned at the end of the preceding section:

- (151) A tangerine isn't [QP [DegP as much] [Q' e [AP different from an orange]] as I thought].

The fact that *much* can occur without a preceding degree element lends support to the claim that the *much* in (152) is lexical:

- (152) A tangerine is much different from an orange.

In the versions of (150) without *much*, the degree adverbial *as* is base-generated in Deg and *different / alike*, which is base-generated in A, simply moves to Q to gain access to its degree argument in Deg.

Corver also points out that certain adjectives of a verb-like nature, such as *afraid*, and *reliant*, behave like *different* and *alike* with respect to their ability to be modified by *much* (and *little*, too, for that matter).

All in all, Corver's work has tremendous value. It brings Bresnan's and Jackendoff's earlier seminal works into terms compatible with more recent work and offers a good theory to account for the earlier data and newer data. Nevertheless, it is not clear why a Q projection has to exist in the adjectival degree system, other than to account for the appearance of *much* in So Pronominalization data, which I grant does need to be addressed in any alternative proposal but which I do not analyze any further here. The only elements that ever appear in Q are Dummy *much*, which even Corver claims has no semantic content, and a group of elements which I believe actually belong in the same place as the other degree elements.

In Do Support, *do* appears in a projection which is otherwise motivated semantically. In Much Support, however, *much* resides in a position which arguably does not have independent semantic motivation if one adopts the position on *more* and *less* taken by Rijkhoek (in progress) below, in which they are not base-generated

ed as such in Q.

I turn now to Rijkhoek's model which suggests improvements to be made on Corver's work.

#### 4.2.1.4 Rijkhoek (in progress)

The most important modification which Rijkhoek suggests with regard to Corver's work concerns the elements that Corver takes to be quantifier-like degree words, i.e., *more*, *less*, *enough*, and Dummy *much*. In addressing *more* and *less* specifically, she claims that they are the morphological combination of a quantifier – *many / much* and *little*, respectively – which has raised to Deg – with the degree element ER sitting there. She compares this to an adjective which has raised to the degree head itself to form a synthetic comparative adjective.

As for *enough*, she assumes that it is composed of a Deg plus a Q, without claiming a specific morphological makeup. She does suggest that *enough* may distribute like cardinal numbers, and hence, should be a Q, but she treats this idea as mere speculation.

In Corver's terms, Rijkhoek claims a Uniform Degree System, with the only element originating in Q being the non-degree *much*. Although Corver does not address the nominal comparative system, Rijkhoek does. She mentions SLQZ data [quoted from a draft of this dissertation (cf. Chapter 3 and below)] in which the SLQZ equivalents to *mucher* and *manyer* are manifested quite transparently, lending support to the claim that *more* is actually morphologically complex. I address this data below myself.

#### 4.2.1.5 Taking stock of the proposals

Each of the proposals above has strengths and drawbacks. The following is a summary of the characteristics of each:

**Table 4.4 Strengths and drawbacks of the proposals**

<u>Characteristics</u>	Bresnan ('73)	Jackendoff ('77)	Corver ('97)	Rijkhoek (in progress)
framework orientation: lexical head analysis or functional head analysis	lexical head	lexical head	functional head	functional head
degree system [SPLIT or UNIFIED]	SPLIT	UNIFIED	SPLIT	UNIFIED Q also generated separately (in both Adj. and N system)
adjectival degree system includes QP (i.e., <i>much</i> may be generated in front of all adjectives)	yes	no	yes	yes
status of <i>more</i> , <i>less</i> : primitives vs. derived	derived	primitives	primitives	derived
Status of <i>much</i> : has semantic import ?	yes	yes (only shows up in nominal system)	1 type, yes and 1 type, no	?
account for <i>too</i> / <i>so</i> / <i>that</i> <i>this</i> / <i>as</i> + (* <i>much</i> ) Adj	Much Deletion	no QP in Adj. system	Least Effort / Economy	no account [but ok if A extracted or pronominalized]
account for <i>too</i> / <i>so</i> / <i>that</i> <i>this</i> / <i>as</i> *(* <i>much</i> ) <i>so</i>	? <i>so</i> somehow doesn't count for rule of Much Deletion	no account	<i>so</i> is pro-AP, cannot raise to Q to bind deg argument in Deg	no account
account for <i>too</i> / <i>so</i> / <i>that</i> <i>this</i> / <i>as</i> + <i>much</i> / <i>many</i> + N	Much Deletion N/A in nominal system	nominal system has QP	no account [N should be able to raise to Q]	nominal system has QP
account for <i>more</i> / <i>less</i> (* <i>much</i> ) <i>so</i>	Much Deletion is bled by -ER Encliticization	<i>more</i> / <i>less</i> in Deg, <i>so</i> in A, no problem	<i>more</i> / <i>less</i> generated in Q, local to <i>so</i>	<i>much</i> / <i>little</i> incorporates into ER in Deg

account for * <i>much</i> Adj.	Much Deletion	no QP in Adj. system	1) nothing to bind deg. argument of adj. if <i>much</i> is in Q as dummy, OR 2) no account, <i>much</i> within specQP, should be ok	no account [adj. system has QP's]
account for * <i>much so</i>	1) no account if <i>so</i> doesn't count as adj. for Much Deletion [see above] OR 2) ok if <i>so</i> does count as Adj. for Much Deletion	no QP in Adj. system	1) nothing to bind deg. argument of adj. if <i>much</i> is in Q as dummy, OR 2) no account, <i>much</i> within specQP, should be ok	no account [adj. system has QP's]
account for <i>much / little + different / alike / afraid / reliant / offended</i> , etc.	special adj. lexically marked so that Much Deletion is optional for them	special adj. lexically marked so that can be modified by QP	<i>much / little</i> generated in specQP [adj. with [+V] emphasis allow this option]	QP in adj. system
account for * <i>fifty lbs. heavy</i>	not marked in lexicon for measure phrase complement	not marked in lexicon for measure phrase complement	not marked in lexicon for measure phrase complement	?
account for <i>five feet tall</i>	<i>tall</i> marked in lexicon for measure phrase complement	<i>tall</i> marked in lexicon for measure phrase complement	<i>tall</i> marked in lexicon for measure phrase complement	?
account for <i>many / much</i> N	nominal system has QP	nominal system has QP	nominal system has QP [but somehow isn't dummy ?]	nominal system has QP

account for * <i>little</i> Adj.	no account	<i>less</i> is a primitive (but still need to allow <i>little</i> + N)	<i>less</i> is a primitive (but still need to allow <i>little</i> + N)	no account
account for <i>little</i> / <i>few</i> N	nominal system has QP	nominal system has QP	nominal system has QP [but why can't <i>little</i> show up in Adj. QP ?]	nominal system has QP
account of <i>more/less</i> + Adj.	adjectival system has QP projection, -ER Encliticization bleeds Much Deletion, also, spelling rules	<i>more/less</i> are primitives in Deg	<i>more/less</i> are primitives in Q	<i>much / little</i> moves to ER which heads DegP
account for Adj + er	Rules for Simple Comparatives copy -er from <i>much+er</i> onto Adj., then deletes <i>much + er</i>	idiosyncratic spelling rule for some adjectives ?	no account	adjective moves to Deg head (via Q ?)
account for * <i>manyer</i> / * <i>littler</i> /* <i>mucher</i> + N	spelling rules / suppletion	<i>more / less</i> are primitives there is no ER	<i>more / less</i> are primitives there is no ER	spelling rules/ suppletion
account for <i>fewer</i> N	-ER Encliticization	idiosyncratic spelling rules for some adjectives	no account	Q moves to Deg
account for * <i>more many</i> / * <i>more much</i> / * <i>more</i> <i>little</i> / * <i>more few</i>	<i>more</i> includes <i>much</i> or <i>many</i> , only 2 slots available (Q and Deg)	special spelling rules	only 1 slot available for Q	<i>more</i> includes <i>much</i> or <i>many</i> only 2 slots available [Q and Deg]
account for * <i>much</i> <i>enough</i> + adj. [=enough <i>much</i> adj.]	<i>enough</i> and <i>much</i> are both Q's	most adj. not subcateg. for QP	<i>enough</i> and <i>much</i> are both Q's	<i>enough</i> already includes Deg plus Q

account for * <i>much enough different / afraid / etc.</i> [=enough much different, etc.]	<i>enough</i> and <i>much</i> are both Q's	no account [special adj. subcateg. for QP]	<i>enough</i> and <i>much</i> are both Q's	<i>enough</i> already includes Deg plus Q
account for * <i>little enough + adj.</i> [=enough little adj.]	<i>enough</i> and <i>little</i> are both Q's	most adj. not subcateg. for QP	only one slot for Q <i>little</i> and <i>enough</i> are both Q's	<i>enough</i> already includes Deg plus Q
account for <i>little enough different / afraid / etc.</i> [=enough little different, etc.]	no account [ <i>enough</i> and <i>little</i> are both Q's]	special adj. subcateg. for QP	no account	no account [ <i>enough</i> already includes Deg plus Q]
account for * <i>more / less enough + Adj.</i> [=enough more / less + Adj.]	<i>more / less</i> contain Q, <i>enough</i> is Q	<i>more / less</i> and <i>enough</i> are all Deg's	<i>more / less</i> and <i>enough</i> are all base-generated in Q	<i>more / less</i> and <i>enough</i> all contain Q plus Deg
account for * <i>much / many enough + N</i> [=enough much / many + N]	<i>enough</i> and <i>many / much</i> are all Q's	rule of Many/Much Deletion after <i>enough</i>	<i>enough</i> and <i>many / much</i> are all Q's	<i>enough</i> already includes Q plus Deg
account for <i>few / little enough</i> in nominal system [=enough few / little]	no account [ <i>enough</i> and <i>little / few</i> are all Q's]	nominal degree system has QP slot	no account [ <i>enough</i> and <i>little / few</i> are all Q's]	<i>enough</i> already includes Q plus Deg
account for * <i>more / less enough + N</i> [=enough more / less + N]	<i>more / less</i> contain Q, <i>enough</i> is Q	<i>more / less</i> and <i>enough</i> are all Deg's	<i>more / less</i> and <i>enough</i> are all base-generated in Q	<i>more / less</i> and <i>enough</i> all contain Q plus Deg

#### 4.2.2 The distribution of *much* and how it favors or disfavors each of the proposals

##### 4.2.2.1 English

We saw earlier that any theory claiming that degree-modified adjectives are modified by QP's faces the challenge of explaining the usual absence of *much* in front of adjectives:

- (153) a. {how, too, so, as, this, that, too, very} + adj.  
b. \*{how, too, so, as, this, that, too, very} + much + adj.  
[unless adj. is replaced by *so*]

In the nominal degree system, however, the same degree words must be followed by *much* or *many* before the noun whose amount they modify:

- (154) a. {how, too, so, as, this, that, too, very} much / many + N  
b. \*{how, too, so, as, this, that, too, very} + N

Recall the solutions proposed in §4.2.1. Bresnan proposes a rule of Much Deletion before adjectives (and adverbs). This accounts for the above data but does not really explain why things occur this way.

Jackendoff assumes that adjectives may not be modified by a quantifier unless they are lexically marked as such, e.g. *different* and *alike*. Thus, the pattern shown above is expected.

Corver proposes a Q slot in between the Deg slot and adjectives. This Q slot is base-generated empty when an adjective is modified by a determinerlike degree word such as those shown above<sup>46</sup> since adjectives can raise into it and hence theta-bind the referential degree argument of the degree in Deg. The word *so* is exceptional in this sense, but it is actually a pro-AP and hence, cannot undergo head movement into Q. Therefore, as a Last Resort, Much Insertion takes place.

What is unclear in Corver's proposal is why *many* and *much* are usually overt in nominal degree expressions. By analogy with the adjectival system, one would expect a noun to be able to raise into Q in order to bind the referential degree

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<sup>46</sup> I return below to Corver's proposal regarding *more*, *less*, and *enough*.

argument of the degree in Deg unless *many* and *much* are needed for some other reason. Since *many* and *much* must in fact overtly intervene between a degree expression and a noun, I conclude that *many* and *much* in the nominal degree system are of a different nature than the dummy *much* that Corver proposes for the adjectival degree system.

Corver does propose that there are two instances of *much*: a lexical *much* and a dummy *much*. The latter appears only in cases of So Pronominalization. The former occurs as a difference in degree in differential degree comparisons (i.e., *much more tired*, *much too tired*, etc.) and as an adverbial extent complement to verbs (i.e., *sings too much*, *studies this much*, etc.). However, Corver does not assign these two cases of lexical *much* positions analogous to the position held by dummy *much* in the adjectival system and presumably held by lexical *many* and *much* in the nominal system.

There are adjectives which do appear after an overt copy of *much*: *much afraid*, *much alike*, *much different*, etc. This instance of *much* is lexical, as it has semantic import. I suggest, along the lines of Jackendoff, that these adjectives be marked lexically as being able to be modified by a QP. In any case, Corver treats these adjectives exceptionally – he allows these adjectives, as opposed to most others, to be modified by lexical *much* in specQP, in a manner analogous to modification of a degree element in Q or Deg by lexical *much* in the specifier of QP or DegP, respectively.

Other than in these exceptional cases, then, the Q slot in the adjectival system is reserved for a dummy element, i.e., dummy *much*, or one of the elements *more*, *less*, or *enough*.

Let us assume with Rijkhoek for the moment that *more* is composed of *much / many* plus ER, that *less* is composed of *little* plus ER, and that *enough* is composed of a Deg plus a Q. Suppose that in each case, only the Deg component

has semantic import in the adjectival degree system, whereas both components have semantic import in the nominal degree system. It seems odd for a given projection to consistently be semantically null in the adjectival system but consistently semantically meaningful in the nominal system.

I do take *many* and *much* to have semantic import in the nominal system, as I suggested in the first part of this chapter. They are adjective-like quantifiers that contain MUCH, which represents abstract quantity or amount. Adapting Corver's terms, I assume that nouns not used as predicate nominals bind an amount or quantity argument, not a referential degree argument, in a quantifier in QP. Some of these Q's are not gradable, for example, cardinal numbers such as *three* and existential quantifiers such as *some* or *a few*.<sup>47</sup> I take others, such as *much* and *many*, to be adjective-like quantifiers (as suggested by Corver himself) which assign a referential degree theta-role to a degree in Deg. When no such degree is overtly present, I will assume, contra Corver, that there is a covert degree element meaning roughly 'relatively' or 'more than the norm'. This is analogous to the case of bare gradable adjectives, which are also interpreted with a degree of 'relatively' or 'more than the norm'.

As for the adjectival system, Corver himself suggests that adjectives are capable themselves, just like *much* and *many* of the nominal degree system, of assigning a referential degree theta role to a degree element in Deg. Although the QP projection that he suggests for the adjectival degree system provides a reasonable explanation for the So Pronominalization data, I do not believe that it justifies the presence of the QP projection for the majority of adjectival degree expressions.

Perhaps *so* is not really a pro-AdjP. After all, *so* is also used to replace other phrasal categories:

- (155) I love to play the piano – so much so, that I hardly do anything else.  
[the second *so* represents at least the VP *love to play the piano*, and possibly the entire proposition *I love to play the piano*.]

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<sup>47</sup> Note that this is not the case for *few*, which is gradable: *very few*, *too few*, etc.

- (156) I am convinced that Estela is innocent, but Lucrecia doesn't think so.  
[so represents the entire proposition *Estela is innocent*.]

Even if one assumes, nevertheless, that *so* is definitely a pro-AdjP in the so-pronominalization data presented by Corver, perhaps *so* is lexically marked to subcategorize for QP, just like the words *alike*, *different*, *afraid*, etc., are and just like adjectives such as *tall*, *high*, *long*, etc., are lexically marked to allow modification by a measure phrase.

#### 4.2.2.2 SLQZ

SLQZ also exhibits asymmetries between the adjectival and nominal degree systems. There are some degree words which can directly modify an adjective but which modify a quantifier associated with a noun rather than directly modifying that noun.

##### 4.2.2.2.1 The Deg *ta'ann*

The first example is a construction in which *ta'ann* ‘so (much)’<sup>48</sup> begins a clause used as an explanation of the type ‘because of how (much...)’. It is optionally followed by *zhyë'b*, which Pamela Munro (p.c.) calls an exclamatory particle or adverb, which appears in exclamative-type sentences, both in the adjectival and nominal systems. Following *zhyë'b* if *zhyë'b* is present, or directly following *ta'ann* if not, comes an adjective in the adjectival system or *zye:einy* or *zi:i'lly* in the nominal system:

<sup>48</sup> Munro, Lopez, et al (in preparation) define this word as ‘because’. It is true that in my data, *ta'ann* occurs at the beginning of a sentence which serves as an explanation for another event or state of affairs, thus exhibiting the type of function served by English *because*. Nevertheless, it is likely that this word is a borrowing of the Spanish word *tan(to)* ‘so (much)’, a word which interestingly enough can be used, among other things, in a way similar to SLQZ *ta'ann*:

- (i) Dejé mi trabajo, tanto lo odiaba.  
leave.pret.1sg 1sg.poss work so.MUCH 3sg.acc hate.imp.1sg  
'I quit my job, I hated it so much'

- (157) Q: *Zhini*<sup>49</sup> r-yu'la:a:a'z-daa:a'n-u' UCLA ?  
 why hab-like-very-2sg UCLA  
 'Why do you like UCLA so much ?'
- A: Ta'ann (zhyë'b) (\*zye:einy / \*zi:i'lly) zagru:u  
 so excl MUCH.sol/abs / MUCH.liq/gas beautiful  
 n-a:a ra yu'uh.  
 neut-be pl house  
 'Because the buildings are so beautiful'
- A: Ta'ann (zhyë'b) \*(zye:einy) studya'aannd n-u' rë'cy.  
 so excl MUCH.sol/abs student neut-be there  
 'Because there are so many students there'
- (158) Q: *Zhini* r-yu'la:a:a'z-daa:a'n-u' plai ?  
 why hab-like-very-2sg beach  
 'Why do you like the beach so much ?'
- A: Ta'ann (zhyë'b) (\*zye:einy / \*zi:i'lly) nahll nnyi'lhs  
 so excl MUCH.sol/abs / MUCH.liq/gas cold water  
 nih n-u' rë'cy.  
 rel neut-be there  
 'Because the water there is so cold'
- A: Ta'ann (zhyë'b) \*(zye:einy) gyu'uhzh r-ii rë'cy.  
 so excl MUCH.sol/abs sand hab-be there  
 'Because there's so much sand there'
- A: Ta'ann (zhyë'b) \*(zi:i'lly) nnyi'lhs n-u' rë'cy.  
 so excl MUCH.liq/gas water neut-be there  
 'Because there's so much water there'

Note that nominals must be preceded by *zye:einy* or *zi:i'lly* rather than being preceded directly by *ta'ann*. This is the opposite situation from that of adjectives, which cannot be preceded by *zye:einy* or *zi:i'lly*.

#### 4.2.2.2.2 The suffixes *-daa:a'n*, *-ta'*, and *-x:a't*

A similar situation arises in the case of certain intensifying suffixes (which I take to be Deg's). SLQZ often translates the English degrees *very* and *too* as the

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<sup>49</sup> This word is given as a string of two words in Munro, Lopez, et al (in preparation). I give it as one word since its gloss is one word.

suffixes *-daa:a'n* and *-ta'*, respectively.<sup>50</sup> Such elements must attach directly to an adjective (159a) and (160a) without any intervening quantifier element *zye:einy* / *zi:i'lyy* (159b) and (160b):

**suffixation of *-daa:a'n* and *-ta'* in adjectival system**

- (159) a. Zyuu:a'll-daa:a'n Wsee.

tall-very José  
'José is very tall'

- b. \*{*Zye:einy-daa:a'n* / *Zi:i'lyy-daa:a'n*} zyuu:a'll Wsee.  
MUCH.sol/abs-very / MUCH.liq/gas-very tall José  
'José is very tall'

- (160) a. Zyuu:a'll-ta' Wsee.

tall-too José  
'José is too tall'

- b. \*{*Zye:einy-ta'* / *Zi:i'lyy-ta'*} zyuu:a'll Wsee.  
MUCH.sol/abs-too / MUCH.liq/gas-too tall José  
'José is too tall'

In contrast, *-daa:a'n* and *-ta'* cannot be suffixed directly to a nominal

(161a), (162a), (163a), and (164a), but must instead be suffixed to *zye:einy* or *zi:i'lyy*, depending on which type of noun is concerned (161b), (162b), (163b), and (164b):

**suffixation of *-daa:a'n* and *-ta'* in nominal system**

- (161) a. \*Liebr-daa:a'n b-zii:i' Wsee.

book-very perf-buy José  
'José bought very many books'

- b. *Zye:einy-daa:a'n liebr b-zii:i'* Wsee.  
many-very book perf-buy José  
'José bought very many books'

- (162) a. \*Nnyi'ihs-daa:a'n gwe:e'eh Wsee.

water-very perf.drink José  
'José drank very much water'

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<sup>50</sup> Sometimes SLQZ *-ta'* translates as something other than 'too', such as 'very', and sometimes the notion of 'too' is expressed in SLQZ via means other than suffixation of *ta'*. However, the generalization given in the text is adequate for the point being made.

- b. Zi:i'ly-daa:a'n nnyi'lhs gwe:e'eh Wsee.  
 MUCH.liq/gas-very water perf.drink José  
 'José drank very much water'

- (163) a. \*Liebr-ta' b-zi:i:i' Wsee.  
 book-too perf-buy José  
 'José bought too many books'

- b. Zye:einy-ta' liebr b-zi:i:i' Wsee.  
 MUCH.sol/abs-too book perf-buy José  
 'José bought too many books'

- (164) a. \*Nnyi'lhs-ta' gwe:e'eh Wsee.  
 water-too perf.drink José  
 'José drank too much water'

- b. Zi:i'ly-ta' nnyi'lhs gwe:e'eh Wsee.  
 MUCH.liq/gas-too water perf.drink José  
 'José drank too much water'

Furthermore, there is also a variant of the suffix *-daa:a'n*, namely *-x:a't*, which Rodrigo García reports (p.c.) as being more characteristic of female speech. Research thus far indicates that its distribution is similar if not identical to that of *-daa:a'n*. The following examples demonstrate that *-xa':t* behaves just like *-daa:a'n* and *-ta'* with respect to the nominal and adjectival degree systems – in the adjectival system, it must attach directly to an adjective (165a), never to *zye:einy* or *zi:i'ly* (165b), whereas in the nominal system, it must attach to *zye:einy* (166a) or *zi:i'ly* (167a) but not directly to a nominal (166b) and (167b):

#### adjectival system

- (165) a. Zyuu:a'll-x:a't Wsee.  
 tall-very José  
 'José is very tall'

- b. \*{Zye:einy-x:a't / Zi:i'ly-x:a't } zyuu:a'll Wsee.  
 MUCH.sol/abs-very / MUCH.liq/gas-very tall José  
 'José is very tall'

#### suffixation to quantifier

- (166) a. Zye:einy-x:a't liebr b-zi:i:i' Wsee.  
 MUCH.sol/abs-very book perf-buy José  
 'José bought very many books'

- b. \*Liebr-x:a't b-zi:i:i' Wsee.  
     book-very perf-buy José  
     ‘José bought very many books’
- (167) a. Zi:i'lly-x:a't nnyi'ihs gwe:e'eh Wsee.  
     MUCH.liq/gas-very water perf.drink José  
     ‘José drank very much water’
- b. \*Nnyi'ihs-x:a't gwe:e'eh Wsee.  
     water-very perf.drink José  
     ‘José drank very much water’

A final example of SLQZ parallelism to the English pattern in (153)-(154), i.e., where the adjectival system lacks a Q found in the nominal system, is that of comparatives. This is taken up separately in §4.2.3.

At this point, I discuss other cases of noun / adjective asymmetry in SLQZ that do not parallel the English case in (153)-(154) so closely but that still hint at a lack of quantifier projection in the adjectival system and the presence of one in the nominal system. In §4.2.2.2.3-§4.2.2.2.7, we will see that an expression modifying a nominal may contain *dya'* or *tya'*, which, as I stated earlier, I take to be allo-morphs of MUCH. In contrast, an analogous type of degree expression in the adjectival system lacks *dya'* / *tya'* except in the case of exceptional adjectives like *zyuu:a'll* ‘tall’ – this is not a problem since we already know that adjectives of the type *tall* have been shown to behave exceptionally in English, and it is reasonable that similar adjectives in other languages might behave exceptionally as well. We will also see the word *ba:all* ‘how many’, which can only precede nominal expressions.

#### 4.2.2.2.3 Questioned degree

First consider degree questions. When the degree of an adjective is questioned, the adjective is usually preceded by *cata'lly* (see examples below), which is borrowed from Spanish *qué tal*, literally ‘what such’. This Spanish expression has various meanings. For example, it means ‘How are you?’ if used in isolation but

‘How about if...’ when followed by *si* ‘if’ plus a proposition:

- (168) ¿Qué tal si nos vemos mañana?  
what such if refl see.1pl tomorrow  
‘How about if we see each other tomorrow?’

A similar Spanish expression, *qué tan*, literally meaning ‘what so’, is used in Spanish to question the degree of an adjective, often with a tone of incredulosity:

- (169) ¿Qué tan importante es la prueba?  
what so important be.3sg the.f test  
‘How important is the test?’

The SLQZ expression *cata’lly* appears to behave more like Spanish *qué tan* than like *qué tal*, since *cata’lly* is used to question the degree of an adjective:

- (170) Cata’lly nsinni’cy Jwaany?  
how intelligent Juan  
‘How intelligent is Juan?’

To question the degree of a measurable adjective, i.e., when an actual numerical measure is possible and expected, then the interrogative *xi zë’cydya* ‘how much’ is used:

- (171) Xi zë’cy-dya’ zyuu:a’ll Jwaany?  
what thus-MUCH tall Juan  
‘How tall is Juan?’

This is the same interrogative used when questioning the amount of a mass noun:<sup>51</sup>

- (172) Xi zë’cy-dya’ gyu’uhzh b-te:e’ch-u’?  
what thus-MUCH sand perf-drop-2sg  
‘How much sand did you drop?’

- (173) Xi zë’cy-dya’ nnyi’ihs gwe:e’eh Jwaany?  
what thus-MUCH water perf.drink Juan  
‘How much water did Juan drink?’

This is not a problem, since we have to mark adjectives like *zyuu:a’ll* in the

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<sup>51</sup> Note that there is no distinction here on the basis of physical form, i.e., solid, liquid, or gas.

lexicon as being able to admit quantification anyway:

- (174) Të'ihby meetr cuahnn seseenn sentime'tr zyuu:a'll Jwaany.  
one meter with sixty centimeter tall Juan  
'Juan is 1m60cm tall'

As mentioned above, count nouns use the form *ba:all* 'how many' to question the amount of a count noun:

- (175) Ba:all liebr b-zi:i:i' Jwaany ?  
how.MUCH.pl book perf-buy Juan  
'How many books did Juan buy ?'

Interestingly enough, if no precise answer is required, such as in an incredulous question about quantity, one may use *cata'ly* followed by *zye:einy*, so that once again, *zye:einy* distributes like adjectives in degree expressions:

- (176) Cata'ly zye:einy liebr b-zi:i:i' Jwaany ?  
how MUCH.sol/abs book perf-buy Juan  
'How many books did Juan buy ?'  
[asked incredulously or at least not expecting a precise numerical answer]

Thus, *cata'ly*, which does not include any form of *zye:einy* or *dya' / ty'a*, is used to question the degree of non-exceptional adjectives, whereas *xi zë'cydya'*, which overtly contains an amount expression is used to question the amount of mass nouns and the degree of exceptional adjectives, and *ba:all* is used to question the amount of mass count nouns.

Note that even count nouns admit modification by *xi zë'cydya'* if the emphasis is on not the exact amount of individual entities, such as books, but rather, a larger bulk quantity, such as the number of boxes in the case of books:

- (177) Xi zë'cy-dya' liebr b-zi:i:i' Liieb ?  
what thus-MUCH book perf-buy Felipe  
'How many books did Felipe buy ?'  
[expected answer is not individual books but a bulk amount such as the number of boxes of books]

Furthermore, both *xi zë'cy-dya'* and *ba:all* are also available in embedded clause:

- (178) Rodriiegw n-a:ann {xi zë'cy-dya' / ba:all} liebr  
           Rodrigo neut-know what thus-MUCH / how.MUCH.pl book  
                   b-z:i:i' Liieb.  
                   perf-buy Felipe  
                   ‘Rodrigo knows how many books Felipe bought’
- (179) W-nubdi:i'zh Rrodriiegw na:a' {xi zë'cy-dya' / ba:all} liebr  
           perf-ask     Rodrigo 1sg what thus-MUCH / how.MUCH.pl book  
                   b-z:i:i' Liieb.  
                   perf-buy Felipe  
                   ‘Rodrigo asked me how many books Felipe bought’

Again, the use of *xi zë'cydya'* refers more to a bulk quantity of books, such as the number of boxes of books involved, rather than to an exact amount of individual books, which is the case when *ba:all* is used.

#### 4.2.2.2.4 Deictic degree

Another type of degree expression showing an asymmetry between the nominal and adjectival systems is the degree referred to by pointing – i.e., a deictic degree. As seen in §4.1.2, nominal expressions are preceded by either *zagreen-tya'* or *të'ihbyzagreen-tya'*,<sup>52</sup> both meaning ‘this many’ (in case of count nouns) or ‘this much’ (in case of mass nouns):

- (180) (Të'ihby)-zagreen-tya' liebr b-z:i:i' Jwaany.  
              one-this-MUCH book perf-buy Juan  
              ‘Juan bought this many books’  
       [said pointing to a written amount of books or indicating a physically present amount of books]
- (181) Të'ihby-zagreen-tya'<sup>53</sup> gyu'uhzh: r-ca:a'z-a'.  
              one-this-MUCH sand hab-want-1sg  
              ‘I want this much sand’  
       [said pointing to an amount of sand (either written down or physically present)]

Within the adjectival system, only measurable adjectives such as *zyuu:a'll*

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<sup>52</sup> As mentioned in fn (9), the presence of *të'ihby* ‘one’ appears entirely optional in this degree expression, and therefore, I treat it as a separate morpheme, even though Munro, Lopez, et al. (in preparation) apparently do not. Further research may elucidate whether or not *të'ihby* truly is entirely optional and why or why not this may be.

<sup>53</sup> The element *të'ihby* is probably optional in this sentence, but I did not get the opportunity to verify this.

'tall' may be preceded by *za'crenntyā'* or *tē'ihbyza'crenntyā'*:

- (182) (Tē'ihby)-zagreen-tya' zyuu:a'll Jwaany.  
one-this-MUCH tall Juan  
'Juan is this tall'  
[said while gesturing how tall Juan is]

Adjectival verbs such as *wro:o'oh* 'big' also allow modification by

(*tē'ihby*)*za'crenntyā'*:

- (183) (Tē'ihby)-zagreen-tya' wro:o'oh paste'l (nih) r-ca:a'z-a'  
one-this-MUCH big cake rel hab-want-1sg  
si-a'.  
irr.buy-1sg  
'I want to buy a cake about this big'  
[said gesturing how big a cake speaker wants to buy or pointing to  
physically present cake]

True adjectives other than the exceptional ones of the *zyuu:a'll* type may not cooccur with *za'crenntyā'* or *tē'ihbyza'crenntyā'*. Instead, the element *za'crenn* '(like) this' must be used without the adjective that is understood in any particular case, accompanied by the emphatic suffix *-pa'*, apparently meaning 'exactly'. This type of construction does not really express the degree of an adjective but rather, constitutes a qualitative comparison of equality. Consider the following examples:

- (184) Zacrenn-pa' n-a:a x:-cotoony Liieb.  
this-emph neut-be poss-shirt Felipe  
'Felipe's shirt is just like that'
- (185) Za'crenn-pa' n-a:a x:-ye:e'cw-a'.  
this-emph neut-be poss-dog-1sg  
'My dog is just like that'  
[second dog must be present]

The sense in which Felipe's shirt is just like some other shirt being pointed to in (184) could involve various qualities, such as brightness, color, attractiveness or ugliness, etc. No specific adjectival quality may be referred to in the sentence. Similarly, the sense in which the speaker's dog is similar to another dog in (185) may involve one of many possible qualities such as size, color, degree of obedi-

ence, etc.

In order to liken one object to another using a specific adjectival quality, one may resort to a comparison of equality, which I turn to next.

#### 4.2.2.2.5 Comparisons of equality

I mention comparisons of equality here since, although they are not the main focus of this dissertation, they involve degree expressions relevant for the argumentation of this chapter.

In nominal comparisons of equality, either *të'ihbyzë'cydya'* or simply *zë'cydya'* appears before the noun whose quantity is being compared:

- (186) (Të'ihby)-zë'cy-dya' liebr nih b-zi:i:i' Liieb, b-zi:i:i' Rodriiegw.  
one-thus-MUCH book rel perf-buy Felipe perf-buy Rodrigo  
'Rodrigo bought as many books as Felipe bought'
- (187) (Të'ihby)-zë'cy-dya' biien nih gwe:e'eh Wsee, gwe:e'eh Jwaany.  
one-thus-MUCH wine rel perf.drink José perf.drink Juan  
'Juan drank as much wine as José drank'

In adjectival comparisons of equality involving measurable adjectives, *të'ihby zë'cydya'* or *zë'cydya'* appears but outside of a relative clause (a degree relative – I discuss this in Chapter 5) containing the adjective whose degree is being compared, not directly modifying the adjective:

- (188) a. (Të'ihby)-zë'cy-dya' nih zyuu:a'll Lia Paamm, zyuu:a'll Gyeeihlly.  
one-thus-MUCH rel tall miss Pam tall Mike  
'Mike is as tall as Pam'
- b. (Të'ihby)-zë'cy-dya' nih nllaag mee's re:e', nllaag mee's re:e'.  
one-thus-MUCH rel wide table this wide table that  
'That table is as wide as this table'

These adjectives may also participate in a construction used with all other adjectives, which may only participate in this second type of construction. In such a construction, the element *zë'cy* ‘thus’, usually suffixed by the emphatic particle *-ëg*, appears outside of a relative clause containing the adjective whose degree is

being compared:

- (189) a. Zë'cy-(ëg) nih zyuu:a'll Lia Paamm, zyuu:a'll Gyeeihlly.  
thus-emph rel tall miss Pam tall Mike  
'Mike is as tall as Pam'
- b. Zë'cy-(ëg) nih zyuu:a'll mee's re:e', zyuu:a'll mee's ree.  
thus-emph rel tall table this tall table that  
'That table is as wide as this table'
- (190) a. Zë'cy-(ëg) / ??Zë'cy nih ca-zhi'ch Lia Paamm,  
thus-emph thus rel prog-angry miss Pam  
ca-zhi'ch Gyeeihlly.  
prog-angry Mike  
'Mike is as angry as Pam'
- b. \*{Të'ihby-zë'cy-dya' / Zë'cy-dya'} nih ca-zhi'ch Lia Paamm,  
one-thus-MUCH / thus-MUCH rel prog-angry miss Pam  
ca-zhi'ch Gyeeihlly.  
prog-angry Mike  
'Mike as as angry as Pam'
- (191) Zë'cy-ëg nih difere'eenn nih n-a:a Liieb loh Jwaany,  
thus-emph rel different rel neut-be Felipe face Juan  
zë'cy-ëg difere'eenn n-a:a Gyeeihlly loh Jwaany.<sup>54</sup>  
thus-emph different neut-be Mike face Juan  
'Mike is as different from Juan as Felipe is'

Note that in either type of adjectival construction – that is, with (*të'ihby*) *zë'cydya'* or *zë'cy(ëg)* – the degree element appears outside of the relative clause containing the adjectival property being compared, not adjacent to the adjective. This may indicate that (*të'ihby*)*zë'cydya'* and / or *zë'cy(ëg)* are degree operators over entire propositions rather than just over an adjective property in adjectival comparisons of equality. Nevertheless, the fact that only measurable adjectives and nominals allow the variant containing *-dya'* at least shows that the comparison of equality data does not argue against the proposal that only the nominal system regularly contains a quantifier slot.

<sup>54</sup> SLQZ has a native word meaning 'different' – *yre:ein*. However, this word cannot be used in comparisons of equality. Instead, the borrowed word *difere'eenn* must be used in such a construction.

#### 4.2.2.2.6 Anaphoric degree

Another type of degree similar to the degree found in comparisons of equality is what I call anaphoric degree. This is a degree which is anaphoric on a degree which is salient on the discourse context. In English, this is usually manifested as *this, that, or so*:

- (192) I hope that everyone else is *this* friendly, too.
- (193) Do you always eat *that* much?
- (194) I didn't know that you had *so* many books.

Either the expression *të'ihbyzë'cydya'* or simply *zë'cydya'* is used before nouns (mass or count) in anaphoric degree expressions of quantity:

- (195) Të'ihby-zë'cy-dya' gyu'uhzh: b-e:e:i'ny Gyeeihlly ua's.  
one-thus-MUCH sand perf-do Mike use  
'Mike used that much sand'
- (196) La:a:a' Jwaany b-zi:i:i' të'ihby-zë'cy-dya' liebr.  
focus Juan perf-buy one-thus-MUCH book  
'JUAN bought that many books'

The special class of adjectives like *zyuu:a'll* 'tall' that can be measured can use *zë'cydya'* or *të'ihbyzë'cdya'* just like nominals in this type of expression (197a). However, they may also use a combination of *zë'cy* plus an emphatic element and the element *-za'* meaning roughly 'also' (197b)-(197c), which is the only option available to other adjectives (198)-(199):

- (197) a. (Të'ihby)-zë'cy-dya' zyuu:a'll Gyeeihlly.  
one-thus-MUCH tall Mike  
'Mike is also that tall'
- b. Zë'cy-cag-za' zyuu:a'll Gyeeihlly.  
thus-emph-also tall Mike  
'Mike is also that tall'
- c. Zë'cy-ëg-za' zyuu:a'll Gyeeihlly.  
thus-emph-also tall Mike  
'Mike is also that tall'

- (198) a. Zë'cy-cag-za' zagru:u n-a:a x:-nna:aan-a'.  
           thus-emph-also pretty neut-be poss-mother-1sg  
           'My mom's also that pretty'
- b. Zë'cy-ëg-za' zagru:u n-a:a x:-nna:aan-a'.  
           thus-emph-also pretty neut-be poss-mother-1sg  
           'My mom's also that pretty'
- c. \*Të'ihby-zë'cy-dya' zagru:u n-a:a x:-nna:aan-a'.  
           one-thus-MUCH pretty neut-be poss-mother-1sg  
           'My mom's also that pretty'
- (199) Zë'cy-dihzy zhyahah cajweell x:te:e' x:-ca'rr-a'.  
           thus-only full trunk poss poss-car-1sg  
           'The trunk of my car is always this full'

#### 4.2.2.2.7 Free relatives of quantity and degree

Free relatives of quantity and degree provide a final case of asymmetry between the nominal and adjectival degree systems. First I consider free relatives in argument positions, and then I turn to free relatives in adjunct position.

There are three cases of free relatives in argument position that I have discovered thus far. When the free relative involves quantity of a count noun, the interrogative *ba:all* 'how many' is used together with *-tyëhx:*, a suffix roughly equivalent to English *-ever*.<sup>55</sup>

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<sup>55</sup>The following free relatives are further proof that SLQZ *-tyëhx:* is roughly equivalent to English *-ever*:

- (i) Nyë'c xi-tyëhx: y-nni:i'-u:u' na:a' cë'i'ty-tya' g-a'cnie:e-dya'  
       not.even what-ever irr-say-2sg 1sg not-neg. irr-help-neg-1sg  
           li:u'w g-a'ty Jwaany.  
           2sg irr-die Juan  
       'I won't help you kill Juan no matter what you tell me'
- (ii) Nyë'c xi-tyëhx: r-uhnnny-u' cuhann-dihzy na:a' r-ca:a'z-a' li:u'w.  
       not.even what-ever hab-do-2sg with-only 1sg hab-want-1sg 2sg  
       'I'll always love you no matter what you do'
- (iii) Mahs tu-tyëhx laa:a:ng cuhann-dihzy na:a' cë'i'ty  
       despite who-ever name-3sg.SAM with-only 1sg not  
           r-yu'la:a:a'z-dy-a' la:anng.  
           hab-like-neg-1sg 3sg  
       'No matter what his name is, I don't like him'

- (200) Z-a:a'lle'eh ga'uw-u' ba:all-tyēhx: bx:aa:ady  
 def-be.possible irr.eat-2sg how.MUCH.pl-ever chapulin  
 nih r-ca:a'z-u'.  
 rel hab-want-2sg  
 'You can eat however many chapulines you want'
- (201) Z-a:a'lle'eh y-co'-o' ba:all-tyēhx: liebr  
 def-be.possible take.irr.-2sg.SAM how.MUCH.pl-ever book  
 nih rca:a'z-u'.  
 rel hab-want-2sg  
 'You can take as many books as you want'
- (202) Z-a:a'lle'eh y-nni:i'-ne:e-u:u' na:a' ba:all-tyēhx gweell  
 def-be.possible irr-say-with-2sg 1sg how.MUCH.pl-ever time  
 (nih) r-ca:a'z-u' nahzhih.<sup>56</sup>  
 rel hab-want-2sg today  
 'You can call me as many times as you want today'

Mass nouns are used with *zē'cydya'* instead of *ba:allyēhx:* as in the following sentence:

- (203) Z-a:a'lle'eh gyi'-u' zē'cy-dya' nnyi'ihs nih r-ca:a'z-u'.  
 def-be.possible irr.drink-2sg thus-MUCH water rel hab-want-2sg  
 'You can drink as much water as you want'

In general,<sup>57</sup> adjectives cannot appear with *ba:allyēhx* or *zē'cydya'*, i.e., with a quantifier. Instead, a variant of *zē'cy* without a quantity element is used:

- (204) Z-a:a'lle'eh chū'-u' orguyo's pohr ra zhii'iny-u'  
 def-be.possible irr.be-2sg proud because.of pl child-2sg  
 zē'cy-dihzy / \*zē'cy-dya' nih r-ca:a'z-u'.  
 thus-only thus-MUCH rel hab-want-2sg  
 'You can be however proud of your children as you want'

In adjunct free relatives, the degree element is preceded by *mahs* which means ‘despite’ or ‘even though’. Note in (207) that there is a special degree/quantifier conflation *blaa'c* ‘how much’ used only with reference to money.<sup>58</sup> Also note

<sup>56</sup> This expression is given as two words in Munro, Lopez, et al. (in preparation), but I write it as one word since its gloss is only one word.

<sup>57</sup> I do not have data with *zyuu:a'll* and the like in free relatives of degree.

<sup>58</sup> Pamela Munro (p.c.) notes that Felipe Lopez disagrees that *blaa'c* is restricted to money or monetary references. Rodrigo Garcia, however, asserts that it is. I will therefore gloss it as how.MUCH.\$.

that the element *x:a't* ‘very’ may be used in combination with *-tyēhx:* as to mean ‘however’ with adjectives such as *cansaad* ‘tired’:

- (205) Cëity-tya' y-zhi'ch-a' mahs ba:all-tyēhx: liebr  
not-neg.<sup>59</sup> irr-angry-1sg despite how.MUCH.pl-ever book  
si:i:-u'  
def.buy-2sg  
'I won't be mad no matter how many books you buy'
- (206) Mahs ba:all-tyēhx: gweell y-nni:i'-ne:e-u:u' na:a' cëi'ty-tya'  
despite how.MUCH.pl-ever time irr-say-with-2sg 1sg not-neg  
y-zhi'ch-a'.  
irr-angry-1sg  
'I won't get mad no matter how often you call me'
- (207) Cëity-tya' y-zhi'ch-a' mahs blaa'c-tyēhx:  
not-neg irr-angry-1sg despite how.MUCH.\$-ever  
y-xi:i'nny-u'.  
irr-spend-2sg  
'I won't be mad no matter how much (money) you spend'
- (208) Mahs x:a't-tyēhx: cansaad n-u'-u' pehr n-a:a-bēg  
despite very-ever tired neut-be-2sg but neut-be-emph  
pahr gyi:e'd-u'.  
for come.irr.-2sg  
'No matter how tired you are, you must come'

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<sup>59</sup> The attentive reader will notice that this negative element is homophonous with the amount element seen earlier. Perhaps they derive from a common etymon, which through time developed a negative polarity item usage (the one found in negatives now).

#### 4.2.2.3 Spanish

I now turn to surface asymmetries between the adjectival and nominal degree systems in Spanish. In contrast to English, the primary difference in these two systems in Spanish resides mainly in the fact that in the nominal system, number and gender agreement are manifested as suffixes on a given Deg, whereas they are absent on that Deg in the adjectival system.

##### 4.2.2.3.1 Degree of excess and exclamative degree

This can be seen transparently in the case of the degree of excess (209) and in certain types of degree expressions in subordinate clauses, such as in embedded exclamatives (210):

###### excess

- (209) a. Estela vio demasiad-[ ]-a-s<sup>60</sup> películas el  
Estela see.pret.3sg too-MUCH-f-pl movies the.m  
mes pasad-o como para aburrir-se.  
month past-m like for bore-refl  
'Estela saw too many movies last month to get bored.'

- b. Estela está demasiado cansad-a (como) para trabajar.  
Estela be.3sg too tired-f like for to.work  
'Estela is too tired to work.'

###### embedded exclamatives

- (210) a. Es increíble l-[ ]-a-s películas que vio Estela  
be.3sg incredible the-MUCH-f-pl movies that see.pret.3sg Estela  
el mes pasad-o.  
the.m month past-m  
'It's incredible how many movies Estela saw last month.'
- b. Es increíble lo cansad-a que está Estela.  
be.3sg incredible the.n tired-f that be.3sg Estela  
'It's incredible how tired Estela is.'

On the Deg's *demasiado* and *lo* in the preceding (a) examples, we see the suffixes *-a* and *-s*, representing feminine gender and plural number, respectively. These agreement markers are absent on the Deg's *demasiado* and *lo* in the (b) exam-

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<sup>60</sup> Recall that I use [ ] as a placeholder corresponding to the covert element MUCH following Deg's in the nominal system. The agreement morphemes attest to its presence.

ples. I claim that this is because the abstract element MUCH is only found in the nominal system, and the agreement markers that surface are associated with MUCH.

In the case of other degree words, we observe a secondary difference, insignificant in terms of the morphological composition of the elements involved. They undergo stem-reduction when modifying an adjective, on the one hand, but remain intact and are suffixed with the appropriate gender and number agreement markers when preceding a nominal, on the other, as is exemplified below.

#### 4.2.2.3.2 *Muy* – the Spanish Deg corresponding to English *very*

As discussed in the first part of this chapter, I take *mucho* and *muy* to be allomorphs, both meaning ‘very’.

- (211) a. Estela vio much-[ ]-a-s películas el  
Estela see.pret.3sg very-MUCH-f-pl movies the.m  
mes pasad-o.  
month past-m  
'Estela saw a lot of movies last month.'
- b. Estela está muy cansada.  
Estela be.3sg very tired  
'Estela is very tired.'

#### 4.2.2.3.3 Comparisons of equality

To form comparisons of equality in Spanish, the degree *tanto / tan* ‘so, as’ is used before the head of the comparison.

- (212) a. Estela vio tant-[ ]-a-s películas como yo  
Estela see.pret.3sg so-MUCH-f-pl movies like 1sg.nom  
el mes pasad-o.  
the.m month past-m  
'Estela saw as many movies as me last month.'
- b. Estela está tan cansad-a como yo.  
Estela be.3sg so tired-f as 1sg.nom  
'Estela is as tired as me.'

#### 4.2.2.3.4 Questioned degree

When quantity is questioned in Spanish, the interrogative form *cuánto* ‘how (much)’ is used with gender and number agreement, showing that what is really being asked is the degree of “many-ness” or “much-ness”:

- (213) *¿ Cuánt-[ ]-o-s libros compraste ?*  
      how-MUCH-m-pl books buy.pret.2sg  
‘How many books did you buy ?’

An alternative form, composed of *qué* ‘what’ plus *tanto* ‘so’ plus gender and number agreement, is available for approximate or incredulous quantity questions:

- (214) *¿ Qué tant-[ ]-o-s libros compraste ?*  
      what so-MUCH-m-pl books buy.pret.2sg  
‘How many books did you buy ?’  
[often said in incredulous tone]

Adjectival degree is questioned by *qué tan* ‘what so’ by most of the consultants surveyed (215a). One consultant from Spain had a clear preference for an alternative form considered literary by most of the other consultants, *cuán* (215b), which I take to be an allomorph of *cuánto* ‘how (much)’:

- (215) a. *¿Qué tan guap-o es tu prim-o ?*  
      what so handsome-m be.3sg 2sg.poss cousin-m  
‘How handsome is your cousin (m.) ?’
- b. *¿Cuán guap-o es tu prim-o ?*  
      how handsome-m be.3sg 2sg.poss cousin-m  
‘How handsome is your cousin (m.) ?’

These two constructions are used primarily for non-measurable adjectives. When the degree of a measurable adjective is questioned in an attempt to get a precise answer, a paraphrase involving quantity or verbal extent is preferred, especially in technical contexts:

- (216) a. *¿Qué tan alt-o es tu prim-o ?*  
      what so tall-m be.3sg 2sg.poss cousin-m  
‘How tall is your cousin (m.) ?’  
[approximate question or tone of incredulousness]

- b. *¿Cuánto-[ ] mide tu prim-o ?*  
     how-MUCH measure.3sg 2sg.poss cousin-m  
     ‘How tall is your cousin (m.) ?’  
     [fairly precise answer desired]
- (217) a. *? ¿Qué tan viej-o es tu prim-o ?*  
     what so old-m be.3sg 2sg.poss cousin-m  
     ‘How old is your cousin (m.) ?’  
     [incredulous question after assertion that hearer’s cousin is very old]
- b. *¿ Cuánt-[ ]-o-s años tiene tu prim-o ?*  
     how-MUCH-m-pl years have.3sg 2sg.poss cousin-m  
     ‘How old is your cousin (m.) ?’  
     [neutral question - no presupposition about age]

#### 4.2.2.3.5 Conclusions regarding MUCH in Spanish

As I proposed in §4.1.2, I maintain that MUCH is not manifested in Spanish as *mucho*, but rather, some other abstract head whose presence is signalled by number and gender agreement. Recall that if the Spanish equivalent to English *much / many*, which do not contain ‘very’, were *mucho*, which does, then we would face the following difficulties:

- (i) English *much / many* may be preceded by a degree element. Spanish *mucho* may not:
- (218) a. Juan bought very many books.  
     b. \*Juan compró muy much-[ ]-o-s libros.  
         Juan buy.pret.3sg very very-MUCH-m-pl books  
         ‘Juan bought very (very) many books’
- (219) a. Juan bought too many books.  
     b. \*Juan compró demasiado much-[ ]-o-s libros.  
         Juan buy.pret.3sg too very-MUCH-m-pl books  
         ‘Juan bought too (very) many books’
- (220) a. Juan bought as many books as me.  
     b. \*Juan compró tan much-[ ]-o-s libros como yo.  
         Juan buy.pret.3sg so very-MUCH-m-pl books like 1sg.nom  
         ‘Juan bought as (very) many books as me’
- (221) a. How many books did Juan buy ?  
     b. \*{¿Cuán / Qué tan } much-[ ]-o-s libros compró Juan ?  
         how what so very-MUCH-m-pl books buy.pret.3sg Juan  
         ‘How (very) many books did Juan buy ?’

(ii) English *very* and *much / many* are lexically unrelated. Spanish *muy* appears to simply be a reduced form of *mucho*, as seen in the truncated answer in the following question and answer pair:

- (222) Q. *¿ Está muy caliente l-a estufa ?*  
be.3sg very hot the-f stove  
'Is the stove very hot ?'
- A. *Sí, mucho / \*muy.*  
yes very  
'Yes, very.'

It is better to take *mucho* and *muy* to be two allomorphs of the Deg 'very' and to consider there to be an abstract morpheme equivalent to English *much / many* whose presence is signalled by the presence of gender and number agreement. Doing so, however, necessitates the claim that:

(iii) Bare English *many / much* is understood as indicating a large quantity or amount not inherently but because of the presence of a covert Deg meaning 'relatively' or 'more than the norm'.

This is not an unreasonable claim, since the same has been claimed for adjectives such as *tall*. Such adjectives are inherently only an indication of the dimension measured, and it is the degree expressions used with them that indicate how far along the scale they measure in a given circumstance. When no overt Deg is present, there is a covert Deg representing an understood / discourse-determined norm.

This claim and the asymmetric behavior between the nominal and adjective degree systems that we saw earlier show that the Spanish adjectival degree system lacks a quantifier projection, just like the English and SLQZ adjectival degree systems do.<sup>61</sup>

#### 4.2.3 ER and the comparative degree

I assumed above that Rijkhoek's proposal concerning *more* (and *less*, which I discuss next) is correct. Since I conclude, however, that there is not generally a Q slot in front of adjectives, I must claim that there are two *more*'s. A nominal *more*

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<sup>61</sup> This generalization is true for most adjectives. Recall that measurable adjectives in English and SLQZ allow quantification.

includes MUCH and ER, whereas an adjectival *more* includes only ER.

Although this account is somewhat undesirable, there are reasons why it should nevertheless be adopted. Recall from Chapter 3 that some adjectives form their comparative synthetically, simplying acquiring the suffix *-er*:

- (223) taller, smarter, faster

Any proposal which assumes that *more* is always composed of both *much* and ER must explain the absence of *much* in forms like (223).

Bresnan accounts for the absence of *much* in (223) via her Rules for Simple Comparatives, which copy *-er* from *much-er* onto the adjective and then delete *much-er*.

Jackendoff treats synthetically compared adjectives as a special case of analytically compared adjectives which are subject to Spelling Rules that convert [more + adj.] into [adj.-er].

Corver gives no account for synthetically compared adjectives.

Rijkhoek claims that synthetically compared adjectives raise all the way to ER in Deg, probably via Q, whereas analytically compared adjectives remain in A while *much* in Q raises to ER in Deg. What she does not explain, however, is why *much* is not present in the synthetically compared case.

I claim the following. In nominal comparisons, there is an instance of MUCH in Q, which raises to *-er* in Deg. The resulting form is replaced by *more* via suppletion. This is in a way equivalent to what Jackendoff proposes, except that he takes ER to be manifested as *more* and proposes Spelling Rules to convert *more + many / much* into simply *more*.

In the adjectival degree system, there is no Q (except in the special cases discussed above). Certain phonologically light adjectives (possibly marked in the lexicon as a special case) are capable of receiving the *-er* suffix in comparisons, and thus move from A to Deg via head-movement. Other adjectives cannot raise from A

to Deg (either lexically-marked as such or too heavy phonologically). In that case, *-er* is left stranded, but this is not acceptable since it is marked as a bound morpheme. Hence, it is replaced by *more*, which serves as an allomorph for it. Again, this is somewhat similar to what Jackendoff proposes, except that he proposes a Spelling Rules to convert [*more* plus adjective] into [adjective + *-er*] in cases of synthetic comparison.

A possible objection to this claim<sup>62</sup> is that it is too much of a coincidence that the independent allomorph of *-er* is identical to the combined form of MUCH and ER. I provide cross-linguistic evidence below for my claim, but in addition, note that one may simply resort to the insertion of a dummy *much* within Deg, different from the one proposed by Corver in Q but equal in lack of semantic import, to form *more* from *-er*. In fact, Rivara (1990) has suggested that *much* may simply indicate positive orientation in certain cases, i.e., an orientation which measures from small degrees to large degrees. Rivara's suggestion is not incompatible with Corver's claim that dummy *much* has its own projection, but it does not require *much* to have its own projection, either.

#### 4.2.3.1 SLQZ evidence for two instances of *more*

In SLQZ, ER is manifested as the suffix *-ru'*, as we saw in Chapter 3. Thus, a nominal amount comparison involves the suffixation of *-ru'* onto either *zye:einy* 'MUCH.sol/abs' (III-94) and (III-95) or *zi:i'lly* 'MUCH.liq/gas' (III-96), and *-ru'* can never be suffixed directly onto a non-predicative nominal in SLQZ (III-88), (III-89), and (III-90). This is analogous to what I propose for the English nominal system:

Count nouns

(III-94) Zye:einy-ru' liebr b-zi:i.i' Rrodriiegw cah Liieb.  
MUCH.sol/abs-ER book perf-buy Rodrigo than Felipe  
'Rodrigo bought more books than Felipe'

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<sup>62</sup> This was suggested by Dominique Sportiche (p.c.).

- (III-88) \*Liebr-ru' b-zi:i:i' Rrodriiegw cah Liieb.  
 book-ER perf-buy Rodrigo than Felipe  
 'Rodrigo bought more books than Felipe'

Mass nouns ( $\neq$ liquid  $\neq$ gas)

- (III-95) Zye:einy-ru' mu:uuly b-e:e:i'ny Rrodriiegw gaan cah Liieb.  
 MUCH.sol/abs-ER money perf-do Rodrigo earning than Felipe  
 'Rodrigo earned more money than Felipe'

- (III-89) \*Mu:uuly-ru' b-e:e:i'ny Rrodriiegw gaan cah Liieb.  
 money-ER perf-do Rodrigo gain than Felipe  
 'Rodrigo earned more money than Felipe'

Mass nouns (liquid or gas)

- (III-96) Zi:i'lly-ru' biien gwe:e'eh Rrodriiegw cah Liieb.  
 MUCH.liq/gas-ER wine perf.drink Rodrigo than Felipe  
 'Rodrigo drank more wine than Felipe'

- (III-90) \*Bienen-ru' gwe:e'eh Rrodriiegw cah Liieb.  
 wine-ER perf.drink Rodrigo than Felipe  
 'Rodrigo drank more wine than Felipe'

A compared adjective, on the other hand, consists of [adjective + *-ru'*], never including *zye:einy* or *zi:i'lly*:

Adjectives

- (III-82a) Connte'enn-ru' n-u' Jwaany cah Wsee.  
 content-ER neut-be Juan than José [with copula]  
 'Juan is more content than José'

- (224) \*Zye:einy-ru' / Zi:i'lly-ru' connte'enn n-u'  
 MUCH.sol/abs-ER / MUCH.liq/gas-ER content neut-be  
 Jwaany cah Wsee.  
 Juan than José  
 'Juan is more content than José'

- (III-84a) Nsinni'cy-ru' Jwaany cah Wsee.  
 intelligent-ER Juan than José [without a copula]  
 'Juan is more intelligent than José'

- (225) \*Zye:einy-ru' / Zi:i'lly-ru' nsinni'cy Jwaany cah Wsee.  
 MUCH.sol/abs-ER / MUCH.liq/gas-ER intelligent Juan than José  
 'Juan is more intelligent than José'

It is true that compared adjectives in SLQZ may follow *maazru'*:

- (III-82b) Maaz-ru' connte'enn n-u' Jwaany cah Wsee.  
MAAZ-ER content neut-be Juan than José  
‘Juan is more content than José’

- (III-84b) Maaz-ru' nsinni'cy Jwaany cah Wsee.  
MAAZ-ER intelligent Juan than José  
‘Juan is more intelligent than José’

It is not clear to me what the exact nature of *maaz* is, though. One might be tempted to claim that it shows the presence of a quantifier in the adjective system, analogous or identical to MUCH.

However, recall from Chapter 3 that the nominal system allows for the same alternation as the adjectival system between [predicate + *-ru'*] and [*Maazru'* + predicate], where “predicate” refers to *zye:einy* or *zi:i'lly* in this case:

#### Count nouns

- (III-97) Maaz-ru' zye:einy liebr b-zii:i' Rrodriiegw cah Liieb.  
MAAZ-ER MUCH.sol/abs book perf-buy Rodrigo than Felipe  
‘Rodrigo bought more books than Felipe’

#### Mass nouns ( $\neq$ liquid, $\neq$ gas)

- (III-98) Maaz-ru' zye:einy mu:uuly b-e:e:i'ny Rrodriiegw gaan cah Liieb.  
MAAZ-ER MUCH.sol/abs money perf-do Rodrigo earn than Felipe  
‘Rodrigo earned more money than Felipe’

#### Mass nouns (liquid or gas)

- (III-99) Maaz-ru' zi:i'lly biien gwe:e'eh Rrodriiegw cah Liieb.  
MAAZ-ER MUCH.liq/gas wine perf.drink Rodrigo than Felipe  
‘Rodrigo drank more wine than Felipe’

If *maaz* were truly an extra Q, it would be an extra Q in both the adjectival and nominal degree systems. Hence, there would still be an asymmetry between the adjectival and nominal degree systems, only the latter allowing for *zye:einy* or *zi:i'lly*.

#### 4.2.3.2 Spanish: extension of conclusions about SLQZ

The equivalent to English *more* in Spanish amount comparatives, i.e., *más*, does not transparently show the internal structure that it does in SLQZ. Nevertheless, I claim that it, too, is composed of MUCH, ER and agreement. As I suggest-

ed above, MUCH is not contained in *mucho* per se but instead is signalled by the presence of gender and number agreement on Deg's, a group of elements which includes *mucho*.

In Spanish adjectival comparisons, ER is manifested either as (i) an unsegmentable part of the few suppletive comparative adjectives that have survived into Spanish from Latin, such as *mejor* ‘better’, *peor* ‘worse’, *mayor* ‘greater / older’, and *menor* ‘younger / lesser’, or (ii) a type of *más* distinct from the instance of *más* discussed immediately above, i.e., distinct from the type which contains not only ER but also MUCH and agreement.

Since I already claim that there are two types of *more* in English, it is reasonable to claim that the same is true for similar elements in other languages such as Spanish *más*. The one used in nominal comparisons includes ER, MUCH, and agreement, and the one used in adjectival comparisons is simply the degree ER by itself but in an independent allomorph. The few synthetic comparisons that there are in Spanish include a fossilized suffix manifestation of ER.

#### 4.2.4 *Little* and *less*

Recall that Bresnan and Rijkhoek had no account of the impossibility of the sequence [*little* plus adj.]. Let us turn to Jackendoff and Corver, who both do.

They both take *less* to be a primitive, which explains why adjectives may follow *less* without necessarily being allowed to follow *little*. Jackendoff claims that the adjectival system has no quantifier position available, except in case of exceptional adjectives such as *different* and *afraid* which either are covert comparatives or have a verbal/participial nature. Thus it is no problem for him that most adjectives cannot follow *little*.

Corver claims that both the adjectival and nominal degree systems contain a QP. His claim that *less* is a primitive base-generated in Q does not necessarily explain why *little* cannot occur there, assuming he takes the adjectival QP to be the

same as the nominal QP, since the nominal QP may contain *little*:

- (226) I found little help that day.

Thus, the way in which Corver would have to account for the ungrammaticality of *\*little + adj.* is not entirely satisfying.

Even Jackendoff's account is problematic if one assumes the account I have given here for *more* in nominal comparisons. Recall that I propose a complex structure for *more* in nominal comparisons, consisting of MUCH plus ER.

Jackendoff considers *more* to be a primitive, just like *less*. If we take *more* to have the internal structure in nominal comparisons that was just suggested, then *less* should, too. A logical structure for *less* would be as proposed by Bresnan and Rijkhoek: *little* (or *few*) + ER.

There still remains the problem, then, of how to rule out [*little + adj.*].

Recall that in §4.2.1.1, I mentioned that one could take the inability of *little* to appear before adjectives to be English-specific – what superficially appears to be the equivalent to English *little* is allowed in some languages such as Spanish (42) and French (43), repeated here for convenience:

- (42) Juan es poco inteligente.  
Juan be.3sg NEG.very intelligent  
'Juan is not very intelligent'

- (43) Jean est peu intelligent.  
Jean be.3sg NEG.very intelligent  
'Jean is not very intelligent'

As I stated earlier, however, the glosses I choose for *poco* and *peu* show that I do not take them to include the element MUCH but merely some negative element NEG plus *muy / mucho* 'very' and *très* 'very', respectively. English, on the other hand, conflates not only these two morphemes in *little* (and *few*) but in addition, MUCH (and number agreement). Only nominals and exceptional adjectives such as *different* subcategorize for a Q slot and hence can be preceded by *little*.

In order to translate Spanish *poco* and French *peu* into English, one must

use some other construction other than using the word *little*, such as via an independent negative element plus *very* (227a) or *too* (227b), a negative prefix (227c), or the restricting expression *only a little (bit)* (227d):

- (227) a. Peter is **not** very intelligent.  
b. Peter is **not** too intelligent.  
c. Peter is **un**intelligent.  
d. Peter is **only a little (bit)** intelligent.

In comparisons of amount, *less* and *fewer* consist of ER plus [NEG.MUCH] plus number agreement. In adjectival comparisons, *less* consists of only NEG plus ER.<sup>63</sup>

Similarly, Spanish *menos* consists of ER plus [NEG.MUCH] plus number and gender agreement in amount comparisons, but only NEG plus ER in adjectival comparisons.

The SLQZ equivalent of *less* is *du:u'zh* '(a) few' plus *-ru'* in amount comparisons, whereas the equivalent to *less* in adjectival comparisons is *wzhi:i:a*<sup>64</sup> 'not very' plus ER. Hence, *du:u'zh* is the equivalent to English *little*, containing NEG and MUCH, as in (228), whereas *wzhi:i:a* is the equivalent to Spanish *poco* and French *peu*, containing NEG and 'very', as in (229):

- (228) Du:u'zh-ru' nny'ihs b-e:e:i'ny-ënn ua's loh iihahz re:e'  
NEG.MUCH-ER water perf-do-1pl use face year this  
cah u-duhb-iihahz  
than perf-one-year  
'We used less water this year than last year'

- (229) Wzhi:i:e-ru' nza'c liihaz Wsee cah liihaz Jwaany.  
NEG.very-ER pretty house José than house Juan  
'Jose's house is less pretty than Juan's house'

Thus, I have presented an account of the distribution of English *little* and re-

<sup>63</sup> I remain neutral as to whether *less* also includes the element 'very'. Similarly, I remain neutral as to whether Spanish *menos* contains the element 'very' and as to whether the SLQZ element *du:u'zh* contains 'very'.

<sup>64</sup> Munro, Lopez, et al. (in preparation) list the expression *a wzhi:i:a* with the meaning 'less'. Nevertheless, I distinctly recorded data with *wzhi:i:a* with the meaning 'not very' and *wzhi:i:eru* with the meaning 'less'. Perhaps this reflects an idiolectal difference between Felipe Lopez and Rodrigo Garcia.

lated elements in Spanish and SLQZ in which *little* contains both a negative element NEG and MUCH, as does *less* in amount comparisons. The word *less* in adjectival comparisons also contains NEG but does not contain MUCH, just as the Spanish word *poco* does not contain MUCH in the adjectival system and the SLQZ word *wzhi:i:a'* does not contain MUCH.

#### 4.2.5 Conclusions for §4.2

I have presented arguments as to why the adjectival degree system does not usually contain a quantifier, whereas the nominal degree system does.

Accordingly, I propose that there are two instances of *more* in English, a different one for adjectival and nominal comparisons. The former is a pure degree element with two allomorphs: the bound suffix-*-er* and the independent word *more*. As for nominal comparisons, *more* is the combination of MUCH plus ER. This dichotomous system enjoys cross-linguistic support, both transparently (SLQZ) and indirectly (Spanish).

In the process of establishing these claims about the nominal and adjectival degree systems, I have also provided evidence that Spanish *mucho* is more akin to English *very* than it is to English *much* or *many*. Rather, the presence of the element MUCH found in English *much* and *many* is signalled in Spanish by gender and number agreement.

SLQZ, on the other hand, often uses *zyeeinny* or *zi:illy* where English uses *many* or *much* (depending on whether a noun is count or mass [solid/abstract], on one hand, or mass [liquid / gas], on the other). Nevertheless, English *much* and *many* are more general across degree expressions than SLQZ *zye:einy* and *zi:i'lyy* are, which sometimes vary with the suffix *dya'* / *tya'*.

Lastly, I take orientation reversers of the type suggested by Rivara (1990) to manifest themselves in quite a variety of ways cross- and intra-linguistically, both in lexicalized forms and via negative morphemes or syntactic negation. The almost

entire lack of [*little* + adj.] in English is due to the fact that *little* contains MUCH (in addition to NEG), which must occupy a Q slot that most adjectival constructions do not have. By extension, there are two types of *less* in English: in the nominal system it consists of NEG, ER, and MUCH, whereas in the adjectival system, it only consists of NEG and ER. Spanish has two parallel types of *menos*, whereas SLQZ uses *du:u'zh* plus *-ru'* as the equivalent of English *less* with NEG, ER and MUCH, whereas it uses *wzhi:i:a'* plus ER as the equivalent of English *less* with just NEG and ER.

## Chapter 5 The Syntax of the Second Associate

### 5.0 Goals

In this chapter, I will examine the structure of the second associate in Spanish and SLQZ<sup>1</sup> comparisons of inequality.

Recall from Chapter 3 that the second associate in Spanish comparatives of inequality may be introduced either by *de* or *que*. I will claim that both of the following two types of comparatives in which the comparative particle is *de* involve the same type of linkage between ER and the second associate, namely prepositional complementation of a degree to ER:

#### second associate introduced by *de*

- (1) Tomás comió más de cinco hamburguesas.  
Tomás eat.pret.3sg ER.MUCH.f.pl of five hamburgers  
'Tomás ate more than five hamburgers'
- (2) Estela mantiene más amistades de l-[ ]-a-s  
Estela maintain.3sg ER.MUCH.f.pl friendships of the-MUCH-f-pl  
que Tomás pierde.  
that Tomás lose.3sg  
'Estela maintains more friendships than Tomás loses'

In contrast, I will claim that Spanish comparatives in which the comparative particle is *que* do not share this structural feature:

#### second associate introduced by *que*

- (3) Tomás comió más hamburguesas que Wilfredo.  
Tomás eat.pret.3sg ER.MUCH.f.pl hamburgers that Wilfredo  
'Tomás ate more hamburgers than Wilfredo'
- (4) Estela toma más vino que cerveza.  
Estela take.3sg ER.MUCH.m wine that beer  
'Estela drinks more wine than beer'

I will call those Spanish comparatives in which the comparative particle is *que*, and in which the second associate can be paraphrased with a clause, BARE CLAUSE COMPARATIVES. The motivation for this label is that the second associate in this type of comparative resembles a *que* clause with no preceding preposition or

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<sup>1</sup> I refer the interested reader to Napoli (1983) and Hankamer (1973) regarding the status of English *than*.

## Deg.

Note that this definition excludes those comparatives which I term in Chapter 3 Subset Comparatives, in which the second associate does not have an obvious clausal paraphrase, such as the one in (5), whose structure I will not address:

- (5) Estela vio más que a mí sol-o – también  
Estela see.pret.3sg ER.MUCH that p.a 1sg.obl alone-m also  
vio a Enrique.  
see.pret.3sg p.a Enrique  
'Estela saw more than just me - she also saw Enrique'

In this chapter, then, I will propose structures for the various types of second associate mentioned above, other than the type exemplified in (5). Some proposals (e.g., Napoli (1983) and Hankamer (1973)) have attributed differences in the structure of various types of second associate to a contrast between coordination vs. subordination.<sup>2</sup> However, I accept a view along the lines of Rijkhoek (1996),<sup>3</sup> according to which coordination and subordination constructions share the same overall syntactic conjunction structure and merely represent the two extremes on a scale of the degree of parallelism between two conjuncts, a parallelism (or relative lack thereof) both in semantic properties and in syntactic structure conjunct-internal-ly. In §5.1, I present evidence in favor of this claim.

Since in §5.1 I reject that notion that the key difference in structure between certain types of second associate lies in a difference between coordination and subordination, I make (in §5.2) a proposal which can explain the difference in another way. What I propose is that: (i) those second associates which are prepositional degree complements to ER, as in the case of Spanish *de* comparatives, may contain either a simple, unmodified degree or a degree modified by a special relative clause called a degree relative, and (ii), those second associates introduced by *que* contain no degree relative and are instances of adversative coordinations, a notion which I

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<sup>2</sup> There are also claims according to which some second associates are clauses whereas other are subclausal phrases, i.e., phrases smaller than IP's / propositions, such as DP's, PP's, and VP's. I do not address this directly here.

<sup>3</sup> Rijkhoek mentions that this is also suggested by Munn (1987, 1992).

explain below.

In §5.3, I turn to SLQZ comparatives. As observed in Chapter 3, the second associate in an SLQZ comparative of inequality follows either *cah*, *lohog*, or *ta'*:

second associate introduced by cah

- (6) Zye:einy-ru' bx:aa:ady b-da'uhw Liieb cah Rrodriiegw.  
MUCH.sol/abs-ER chapulin perf-eat Felipe than Rodrigo  
'Felipe ate more chapulines than Rodrigo'

- (7) Zye:einy-ru' liebr b-zi:i:i' Rrodriiegw cah nih b-to:o' Lieeb.  
MUCH.sol/abs-ER book perf-buy Rodrigo than rel perf-sell Felipe  
'Rodrigo bought more books than Felipe sold'

second associate introduced by lohog

- (8) Zyuu:a'lyy-ru' Rrodriiegw loh Liieb.  
tall-ER Rodrigo face Felipe  
'Rodrigo is taller than Felipe'

second associate introduced by ta'

- (9) Maaz-ta' ga:a'y liebr b-zi:i:i' Rrodriiegw.  
MAAZ-than five book perf-buy Rodrigo  
'Rodrigo bought more than five books'

I will discuss the varying use of the comparative particles in SLQZ in §5.3.

Even though Spanish and SLQZ employ more than one type of comparative particle for comparisons of inequality, English only uses *than* for comparisons of inequality. Nevertheless, it is beyond the scope of this dissertation to explain why there exists more than one comparative particle in comparisons of inequality in some languages whereas others have only one, and similarly, I do not attempt to explain why one particle is chosen over another in any given case.<sup>4</sup> I instead refer the interested reader to Price (1990), in the case of Spanish, for a discussion of the use of *de* vs. *que* in Spanish comparatives, and in the case of SLQZ, I leave the issue open for future research.

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<sup>4</sup> I do in some cases mention empirical observations regarding a subset of the distribution of one particle or another, without justifying why another particle could or could not have been used in the same instance.

## 5.1 Coordination vs. Subordination

In the type of framework assumed by Hendriks (1995, mentioned in Rijkhoek (1996)), the following are all taken to be types of conjunctions: (i) elements traditionally called coordinators, such as *and*, *but*, *or*; (ii) complementizers, such as *that*, *because*, *before*, and *after*; and (iii) prepositions, such as *in*, *at*, *on*, and *for*. Hendriks refers to the latter two types of elements in a general sense as subordinators, as opposed to coordinators. According to this typology, the conjunction of two clauses, a clause and a sub-clausal phrase, or two sub-clausal phrases must be an instance of either coordination or subordination, which Rijkhoek refers to more generally as conjunction.

It is traditionally assumed that coordination structures and subordination structures can be distinguished on the basis of the types of elements conjoined in each case and the syntactic behavior of the conjunction structure with respect to certain movement and deletion operations. In this section, I discuss some such properties, as proposed in the literature (Ross (1967) and Hendriks (1995, cited in Rijkhoek (1996))). However, I will present data, some taken from Rijkhoek (1996), showing that these properties do not consistently distinguish between what have traditionally been termed coordination and subordination structures, respectively.

There are, nevertheless, general trends in syntactic behavior that do appear to depend on the degree of parallelism between two conjoined elements. I will claim that constructions traditionally labelled respectively as coordination and subordination share the same overall syntactic conjunction structure and actually differ only in the degree of parallelism of semantic properties of the two conjuncts and/or the syntactic structure within the conjuncts. I will thereafter refer to traditional cases of coordination and subordination, respectively, as instances of coordination-type conjunction and subordination-type conjunction in recognition of both the tra-

ditional terminology and the real differences present both semantically and syntactically on the conjunct-internal level.

### 5.1.1 The nature of the conjoined elements

As indicated by Rijkhoek (1996), Hendriks (1995) claims that although co-ordinated elements can be of any syntactic category, the coordinated elements in a given instance must be of the same syntactic category. Rijkhoek provides the following counterexamples to this generalization [her #74]:

- (10) It seemed somewhat more dingy and in need of paint than I remembered it.<sup>5</sup>
- (11) John is a linguist and proud of it.
- (12) We talked about Mr. Colson and that he had worked at the White House.<sup>6</sup>

I must point out that (12) is essentially ungrammatical in my judgment, so it is questionable as evidence of coordination of unlike elements. It might be uttered marginally by some speakers as an elliptical version of the following:

- (13) We talked about Mr. Colson and the fact that he had worked at the White House.

In this case, what is actually being conjoined are two DP's, not a DP and a CP. Thus, (12) cannot be taken as clear evidence against Hendriks' generalization.

Nevertheless, the fact that unlike elements can be conjoined by *and* in (10) and (11) clearly demonstrates that Hendriks' generalization is not entirely true.<sup>7</sup>

Therefore, Rijkhoek's challenge to Hendriks' claim that two coordinated elements must be of the same syntactic category is valid.

Turning to conjunctions that are traditionally assumed to be subordinators,

<sup>5</sup> Rijkhoek credits this example to Simak (p.35, year not given in Rijkhoek's manuscript)

<sup>6</sup> Rijkhoek credits this example to Hendriks (1995, p.128).

<sup>7</sup> Rijkhoek does mention that cases such as (11) have been treated by some (e.g., Koster (1993)) as cases of coordination of like elements, namely Predicate Phrases. It is true that the conjoined phrases in (11) are both predicates, which is why there is sufficient semantic parallelism to warrant conjunction by a traditionally-labelled coordinator such as *and*. However, semantic parallelism does not necessarily imply syntactic identity; therefore, it cannot be definitively concluded that predicate nominals and predicate adjectives are in fact instances of the same syntactic category, PredP. In (10), too, we see sufficient semantic compatibility for coordination-type conjunction of two similar but non-identical categories, a predicative AP and a predicative PP.

we see a variety of behavior with respect to whether the elements that they conjoin must be, can be, or must not be, of the same syntactic category. Some subordinators must conjoin like categories. For example, the conjunction *when* must conjoin two clauses:

- (14) Griselda left when Jaime arrived.

Other subordinators may conjoin like categories but need not. The conjunction *before*, for example, may conjoin either two clauses, as in (15), or a clause and a subclausal element, as in (16):

- (15) Griselda left before Jaime arrived.

- (16) Griselda left before the end of the movie.

Finally, members of yet another group of subordinators cannot conjoin elements of the same syntactic category. For example, the conjunction *at*<sup>8</sup> can only conjoin a clause with a DP, as in (17):

- (17) Griselda slept at our house.

Since traditionally-labelled coordinators do not always need to conjoin two like elements, on the one hand, and since subordinators vary with respect to this property, on the other, the similarity or difference of the syntactic category of two elements that are conjoined does not reflect a definitive contrast between coordinators and subordinators.

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<sup>8</sup> Within the terminology presented here, prepositions are a type of conjunction, more specifically a subordinator in Hendriks' (1995) terminology.

### 5.1.2 Movement properties

Here I show that contrary to previous claims, there is no clearcut distinction between coordination-type constructions and subordination-type constructions with respect to the ability of different strings contained within these constructions to undergo A'-movement, i.e., movement to non-argument positions.

Ross (1967) identifies a Coordinate Structure Constraint (CSC) by which extraction out of a coordinate structure is impossible except when an identical (or at least coreferential) element is simultaneously extracted from a parallel position in each conjunct. Such parallel extraction is called across-the-board (henceforth ATB) extraction. According to Ross, ATB extraction, and only ATB extraction, is allowed out of coordination structures.<sup>9</sup> Furthermore, as pointed out by Hendriks (1995, cited in Rijkhoek (1996)), an entire conjunct in a coordinate structure cannot be moved.

Subordinate elements, on the other hand, are not generally taken to be islands per se, although some types of subordinate structures, such as adjuncts, are in fact islands for extraction. For example, the temporal adverbial clause in brackets in (18) is an island for extraction:

- (18) \*Who<sub>i</sub> did you fall asleep [while John was kissing t<sub>j</sub>] ?

Leaving aside well-studied cases such as adjunct islands, wh-islands, complex noun phrases, and sentential subjects, though, extraction out of a subordinate structure is expected to be allowed.

We will see below, however, that the picture is not really so clearcut. Some coordinate structures are less opaque to extraction than expected, e.g., some allow non-ATB extractions, and conversely, some coordinate structures disallow even ATB extractions. Similarly, some subordinate structures appear, rather surprisingly, to allow ATB extractions or to disallow non-ATB extractions for no obvious reasons.

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<sup>9</sup> Across-the-board extractions are illustrated in §5.1.2.3.

The types of A'-movement exemplified in the data below are wh-question formation, topicalization, and clefting. Rather than exhaustively testing each of these types of A'-movement, I have included only enough examples, in contexts which lend themselves to clear judgments for each type of A'-movement, respectively, to highlight the lack of any crisp distinction between coordination-like structures and subordination-like structures. Data involving relativization would be expected to provide similar results, although space does not permit inclusion of such data here. Most of the data are from English and are assumed to extrapolate to Spanish and SLQZ. Time limitations in research prevented comprehensive exploration of the relevant data in Spanish and SLQZ. Before presenting the relevant data, I note the following terminological issues.

Following Rijkhoek (1996), I will use the term second associate in non-comparative constructions to refer to (i) either a coordinator or a subordinator, i.e., the conjunction, taken together with (ii) the second conjunct, i.e., the string connected to the first conjunct by means of the conjunction.

Topicalization in the languages under study involves fronting material to sentence-initial position in order to call attention to a known referent and present the remainder of the sentence as new information pertaining to it:

- (19) [This book]<sub>i</sub>; you should read  $t_i$ .

Clefting is a mechanism for enabling certain types of constituents to be focussed. In English, it involves linking a focussed constituent to the expletive pronoun *it* across a copula, all of which is followed by a clause containing old information with a gap corresponding to the focussed constituent:

- (20) It is [this book]<sub>i</sub>; that you should read  $t_i$ .

Wh-question formation, in the languages under study, is the extraction of a constituent to clause-initial position to form a constituent question:

- (21) [Which book]<sub>i</sub> should I read  $t_i$  ?

### 5.1.2.1 A'-movement of the second associate

Consider the following instance of a coordination-type construction:

- (22) John gave Ted a stereo, and Sue gave him a TV.

The second associate is inert to A'-movement, presumably because such a movement would entail affecting a coordinate-type structure in an nonparallel fashion, thus violating the CSC. Hence, (23) and (24), which would hypothetically be derived from (22) via topicalization and clefting, respectively, are ungrammatical:<sup>10</sup>

- (23) \*[And Sue gave Ted a TV]<sub>j</sub>, John gave him a stereo  $t_i$ .  
(24) \*It was [and Sue gave Ted a TV]<sub>j</sub> that John gave him a stereo  $t_i$ .

In contrast, some instances of second associates traditionally considered to be subordinate, such as clausal adjuncts, can undergo A'-movement. Thus, the second associate in (25) can undergo either wh-question formation, topicalization, or clefting, as seen in (26), (27), and (28), respectively:<sup>11</sup>

- (25) Ted thanked Sue because she gave him a present.  
(26) Why<sub>j</sub> did Ted thank Sue  $t_i$ ?  
(27) [Because Sue gave Ted a present]<sub>j</sub>, he thanked her  $t_i$ .  
(28) It was [because Sue gave Ted a present]<sub>j</sub> that he thanked her  $t_i$ .

However, other instances of second associates traditionally considered to be subordinate, such as clausal complements, cannot undergo A'-movement. Thus, the second associate in (29) cannot undergo either topicalization or clefting, as seen in (30) and (31), respectively:

- (29) Ted thinks that Lyle is a liar.  
(30) \*[That Lyle is a liar]<sub>j</sub>, Ted thinks  $t_i$ .  
(31) \*It's [that Lyle is a liar]<sub>j</sub> that Ted thinks  $t_i$ .

It is not immediately clear what principled reason could account for the un-

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<sup>10</sup> The proper noun *Ted* and the pronoun *him* have been reversed to ensure that the unacceptability of the sentence could not be due to conditions on antecedence.

<sup>11</sup> Where relevant, antecedents and elements anaphoric on them have been reversed in derived sentences in order to avoid possible interference due to conditions on antecedence.

grammaticality of the attempted A'-movement in (30) and (31), and yet the fact remains that such A'-movement is prohibited.

We have seen, then, that although A'-movement of a second associate in a coordination-type constructions is consistently disallowed, similar movement in a subordination-type construction is also disallowed in certain cases. Therefore, the availability or unavailability of A'-movement of a second associate cannot be taken to be diagnostic of coordination-hood vs. subordination-hood. In fact, Hendriks (1995, mentioned in a footnote in Rijkhoek (1996, p.25)) similarly concludes that the availability of fronting a conjunction together with the clause introduced by it is not a characteristic distinguishing coordination and subordination.

#### 5.1.2.2 A'-movement of the second conjunct alone

One might also attempt to distinguish between coordinate and subordinate structures based on extractability of the second conjunct alone.<sup>12</sup>

We saw in §5.1.2.1 that A'-movement of the entire second associate is forbidden in the case of coordinate structures. Similarly, as predicted by Ross (1967),<sup>13</sup> since A'-movement of the second conjunct alone would involve affecting the coordinate structure in a non-parallel way, one would expect that this is also disallowed. This prediction is in fact borne out, as shown in the following set of examples. The second conjunct in the source sentence (32) cannot undergo topicalization (33) or clefting (34).<sup>14</sup>

- (32) John gave Ted a stereo and Sue gave him a TV.
- (33) \*[Sue gave Ted a TV]<sub>i</sub>, John gave him a stereo and t<sub>j</sub>.
- (34) \*It was [Sue gave Ted a TV]<sub>i</sub> that John gave him a stereo and t<sub>j</sub>.

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<sup>12</sup> I do not investigate the extractability of the first conjunct alone, since this would introduce unnecessary complications. For example, in some cases it is not entirely obvious what constitutes the first conjunct among the material to the left of the conjunction.

<sup>13</sup> This is also mentioned by Rijkhoek (1996) referring to Hendriks (1995).

<sup>14</sup> Again, antecedents and elements anaphoric on them have been switched where necessary.

We expect that a second conjunct, when found within a well-studied type of subordination-type island such as an adjunct, should be unable to undergo A'-movement. This is in fact the case, as seen in attempts to topicalize (36) or cleft (37) the second conjunct in (35):

- (35) Sue gave Ted a TV because Lyle told a lie.
- (36) \*[Lyle told a lie], Sue gave Ted a TV because  $t_i$ .
- (37) \*It was [Lyle told a lie] $_i$  that Sue gave Ted a TV because  $t_i$ .

There is no principled reason, however, why the second conjunct in a subordination-type structure should not be able to undergo A'-movement when well-known island conditions, as mentioned earlier, do not play a role. Surprisingly enough, though, second conjuncts not found in islands, such as those within a complement clause (38), may not undergo A'-movement, as seen in (39) and (40):

- (38) We think that you are smart.
- (39) \*[You are smart] $_i$ , we think that  $t_i$ .<sup>15</sup>
- (40) \*It is [you are smart] $_i$  that we think that  $t_i$ .

Whatever the explanation may be for the unavailability of A'-movement of the second conjunct in cases such as (38), we can see that both coordination-type constructions and subordination-type constructions disallow A'-movement of the second conjunct. Hence, availability or unavailability of such movement cannot substantiate any difference between coordination-type constructions and subordination-type constructions.

#### 5.1.2.3 Extraction from within one or both conjuncts: ATB movement vs. unilateral movement

Until this point, we have explored A'-extractions of elements including at least an entire conjunct. Now we will see that extractions from within one or both conjuncts are equally unconclusive regarding any systematic syntactic differences

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<sup>15</sup> In (38)-(40), I take the complement clause to include the complementizer, which does not move.

between coordination and subordination structures.

One might attempt to distinguish between coordination-type and subordination-type structures based on whether extraction from within the first and/or second conjunct can or must be unilateral, on the one hand, and whether it can or must be across-the-board (ATB), on the other.

As mentioned earlier, one would expect, based on Ross' (1967) Coordinate Structure Constraint, that extractions are expected to be allowed in coordination-type structures if they are applied ATB, but otherwise not. As indicated by Rijkhoek (1996), this is not entirely true – there are some cases in which unilateral extraction out of a coordination structure is also possible, and there are also some cases in which ATB extraction out of a coordination structure is not allowed.

Conversely, one might expect that subordination structures only allow unilateral extraction, that is, either from the matrix clause or the subordinate clause or PP but not both simultaneously, with the additional restriction that adjunct clauses and adjunct PP's are simply always islands to extraction. It turns out that some apparently ATB extractions do occur in subordinate structures, and some non-ATB extractions are surprisingly disallowed.

First, consider the following coordination-type construction:<sup>16</sup>

- (41) Bill said that John gave Ted a stereo and that Sue gave him a TV.

It is not possible to extract unilaterally from either the first conjunct (42) or the second conjunct (43):

- (42) \*What<sub>i</sub> did Bill say that John gave Ted t<sub>j</sub> and that Sue gave him a TV ?  
(43) \*What<sub>i</sub> did Bill say that John gave Ted a stereo and that Sue gave him t<sub>j</sub> ?

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<sup>16</sup> I have embedded the coordination structure within the matrix predicate *said* to ensure that auxiliary inversion could not even potentially occur in either of the conjoined clauses during the process of question-formation. Such inversion would add another variable, since extraction of an auxiliary could also hypothetically be either unilateral or ATB. Furthermore, since neither Spanish nor SLQZ obligatorily uses auxiliaries in question formation, any results gained involving the incidence of aux-inversion in English would shed no light on the behavior of subordinate-type and coordinate-type structures in Spanish and SLQZ.

However, Williams (1994, cited in Rijkhoek (1996)) points out that non-ATB extraction is allowed when coordination is asymmetrical.<sup>17</sup> Asymmetrical coordination can be detected, for example, when the meaning of sentence is changed by swapping coordinates, as in (44)-(45) [=Rijkhoek's #77]:

- (44) John went to New York and bought a painting. ≠  
(45) John bought a<sup>18</sup> painting and went to New York.

In cases such as (44), unilateral extraction out of the first conjunct (45) or second conjunct (46) is allowed:

- (45) Where<sub>i</sub> did John go t<sub>i</sub> and buy a painting ?  
(46) What<sub>i</sub> did John go to New York and buy t<sub>i</sub> ?<sup>19</sup>

Another similar case signalled by Rijkhoek (1996, her example #81, attributed to Lakoff (1986)), is the sentence in (48), derived via unilateral extraction out of the first conjunct in a sentence like the one in (47):

- (47) I can take four courses for credit and still remain sane.  
(48) [How many courses]<sub>i</sub> can you take t<sub>i</sub> for credit and still remain sane ?

Finally, consider the sentence in (49):

- (49) Bill said that you should fix your car or you'll have no way to get to school.

This type of sentence can give rise, via unilateral extraction out of the first conjunct, to echo questions such as those in (50) and (51), which, as opposed to many other types of echo questions, do involve A'-movement (witness the word

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<sup>17</sup> According to Rijkhoek (1996), though, Williams claims that it is only out of the second conjunct that unilateral extraction is allowed in such cases.

<sup>18</sup> In Rijkhoek's example, she uses *the* instead of *a*, but I use *a* in order to be consistent with the first sentence.

<sup>19</sup> This second sentence is Rijkhoek's example #79.

order):<sup>20</sup>

- (50) WHAT<sub>i</sub> did Bill say that I should fix t<sub>j</sub> or I'll have no way to get to school ?
- (51) WHO<sub>i</sub> did Bill say should fix their<sub>j</sub> car or they<sub>j</sub>'ll have no way to get to school ?

As for the availability of ATB extraction out of coordination-type structures, it is generally possible, as claimed earlier. This can be seen in the question in (52), derived from a sentence such as the one in (53):

- (52) Ted said that either John will punch Lyle or Sue will slap him.
- (53) Who<sub>i</sub> did Ted say that either John will punch t<sub>j</sub> or Sue will slap t<sub>j</sub> ?<sup>21</sup>

The acceptability of ATB extraction declines as a function of the complexity of the conjuncts. This can be seen in (55), derived from a sentence such as the one in (54):

- (54) Bill said that either John will give Ted a stereo or Mary will buy him a record.
- (55) ?\*Who did Bill say that either John will give a stereo or Mary will buy a record ?

One could argue that such a decline in acceptability is due to extraneous factors such as processing difficulties. Nevertheless, the fact that a sentence like (56) cannot yield a question such as (57) via ATB extraction shows definitively that not

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<sup>20</sup> The use of the pronoun *they* and *their* in the following sentences is more natural than *him* or the more politically correct *him or her* in colloquial English even though it is considered incorrect in formal English. Compare the interrogative sentence in the text with the following declarative sentence:

(i) Bill said that John gave someone<sub>i</sub> a stereo but that (whoever<sub>i</sub> it was,) Sue gave them<sub>j</sub> a TV.

If the person asking the question were to presuppose that the person being asked about is specifically male or specifically female (such as if this were an echo question), the pronoun would then be *him* or *her*, respectively, instead of *them*. From now on, I will continue to use *they*, *their*, and *them* in such cases since that is the most natural choice of pronoun in colloquial English for an unknown, animate referent, whether singular or plural.

It was brought to my attention by Pamela Munro (p.c.) that the claims that I make in this footnote are discussed in Lagunoff (1997), to which I refer the interested reader for more details.

<sup>21</sup> In colloquial English, *whom* may only occur directly following a preposition, such as when a preposition is pied-piped with its object to form a question or a relative clause, which in and of itself is unusual for colloquial English. Therefore, in this text sentence, or in any other sentence where the prescriptive form *whom* does not follow a preposition, *who* is used instead.

all coordination structures allow ATB extraction:

- (56) Bill said that you should fix your car or you'll have no way to get to school.  
(57) \*Who<sub>i</sub> did Bill say t<sub>i</sub> should fix their car or t<sub>i</sub> will have no way to get to school ?

We have seen thus far that not only do some coordination-type structures allow unilateral extraction, but furthermore, some coordination-type structures disallow ATB extraction.

Now we will see that subordination-type constructions do not always allow unilateral extractions, nor do they always disallow ATB extractions.

It should be noted that I will assume that the first conjunct in a sentence with an adverbial adjunct clause<sup>22</sup> is exactly that material which precedes the complementizer introducing the adjunct. This first conjunct is usually referred to as the matrix clause.

It is of course expected that extraction out of the adjunct clause is disallowed since it is well-known that adjunct clauses are islands. This can be seen in (59), derived from a sentence such as the one in (58):

- (58) John gave Mary a present because Ted gave Sue one.  
(59) \*Who<sub>i</sub> did John give Mary a present t<sub>i</sub> because Ted gave t<sub>i</sub> one ?

What is surprising is that extraction out of the matrix is sometimes somewhat marginal. Consider the following marginal question in (61) derived from a sentence such as the one in (60):

- (60) John gave Mary a new car because it was her birthday ?  
(61) ??What<sub>i</sub> did John give Mary t<sub>i</sub> because it was her birthday ?

One might be tempted to attribute the oddity of (61) to semantic considerations, but this argue does not hold up in the face of the questions in (62) and (63) which mean roughly the same thing as the question in (61):

- (62) What<sub>i</sub> did John give Mary t<sub>i</sub> on her birthday ?

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<sup>22</sup> In order to avoid unnecessary complications, I do not consider relative clauses here along with adverbial adjunct clauses, even though relative clauses are often taken to be a type of adjunct.

- (63) What<sub>i</sub> did John give Mary t<sub>j</sub> for her birthday ?

Further proof that the problem with (61) is syntactic and not semantic is the analogous contrast between (65), formed from (64), and the semantically similar questions in (66) and (67):

- (64) John lacks respect for Mary although she has many accomplishments.  
(65) ?Who<sub>i</sub> t<sub>j</sub> lacks respect for Mary although she has many accomplishments ?

- (66) Who<sub>i</sub> t<sub>j</sub> lacks respect for Mary despite her many accomplishments ?  
(67) Who<sub>i</sub> t<sub>j</sub> lacks respect for Mary in spite of her many accomplishments ?

We see, then, that some subordination-type constructions, just like most coordination-type constructions, disallow extraction out of either the first or second conjunct.

There are even cases of subordination-type constructions which seem to allow ATB extraction. Consider (69) and (71), derived from sentences such as the ones in (68) and (70), respectively:

- (68) I filed this article without reading it.  
(69) [Which article]<sub>i</sub> did you file t<sub>j</sub> without reading t<sub>i</sub> ?  
  
(70) John killed Ted after threatening him.  
(71) ?Who<sub>i</sub> did John kill t<sub>j</sub> after threatening t<sub>i</sub> ?

Questions such as (69) and (71) are considered by some (e.g., Engdahl (1983) and Taraldsen (1981)) to be cases of parasitic gapping, i.e., sentences in which a second A'-gap is licensed only in the presence of a preceding one. It may be that there is actually an A'-operator licensing the second gap in each of these cases. However, as long as one assumes that such an A'-operator is not base-generated but rather is a trace of an ATB extraction, then parasitic gapping can still be taken to be a case of ATB extraction.

In any case, we have seen that contrary to a priori expectations: (i) not all coordination-type constructions disallow unilateral extraction, (ii) not all coordina-

tion-type constructions allow ATB extraction, (iii) not all subordination-type constructions allow unilateral extraction, and (iv) some subordination-type constructions appear able to allow ATB extraction. Hence, there is no consistent difference in extraction properties between coordination-type constructions and subordination-type constructions. Any general trends that occur must be due to semantic factors and/or syntactic properties of the material within conjuncts.

#### 5.1.2.4 Summary of movement properties

We have seen that movement properties cannot consistently distinguish between coordination-type conjunction structures and subordination-type conjunction structures. This is true regardless of whether it is a question of extracting the entire second associate, the second conjunct, or a smaller constituent from within one or both conjuncts.

### 5.1.3 Deletion phenomena

We saw earlier that movement phenomena cannot distinguish between what are traditionally considered to be coordination constructions on the one hand and what are traditionally considered to be subordination constructions on the other. One might alternatively attempt to distinguish coordination structures and subordination structures based on their behavior with respect to deletion phenomena, such as gapping and stripping, since it is traditionally assumed that such deletions are allowed if and only if the relevant structure involves coordination rather than subordination. I will show, however, that this traditionally assumption, too, is more of a trend than an absolute distinction.

#### 5.1.3.1 Gapping<sup>23</sup>

Gapping is a phenomenon in which all but two subclausal constituents of a second conjunct are null or deleted under identity of sense with corresponding elements in the first conjunct. When gapping affects clausal coordination, the verb of the second conjunct cannot be one of the two constituents which surfaces:

- (72) Tomás bought<sub>i</sub> apples, and Estela [e]<sub>j</sub> oranges.  
(73) \*Tomás bought apples<sub>i</sub>, and Estela sold [e]<sub>j</sub>.

Therefore, in order for clausal gapping to occur, the verb must be identical<sup>24</sup> in each conjunct. Furthermore, the overall structure in the two conjuncts must be parallel. Lastly, only two constituents in the second constituent conjunct may be left behind. Thus, if more than two constituents in each conjunct differ from corresponding constituents in the other conjunct, if the structures in the conjuncts are not parallel, and/or if the verbs are not identical in each conjunct, then gapping may not occur.

The following sentences are a priori candidates for gapping, since in

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<sup>23</sup> I use coindexing here to indicate not movement but rather identity of sense.

<sup>24</sup> Although the verb may differ in person and number from one conjunct to the other, as pointed out by Pamela Munro (p.c.), the verb may not differ in tense, aspect, or lexical content.

each case, the verb is identical in each conjunct, and the structures are parallel. Nevertheless there are cases of conjoined clauses with apparently sufficient parallelism for gapping but which disallow gapping. Even though conjunction structures with *and* and *nor*, as seen in (74) and (75), respectively, tend to allow gapping, conjunction structures with *but* and *or* do not allow gapping, as seen in (76) and (77), respectively:

- (74) Alicia married Ricardo, and Arturo married Linda. →  
Alicia married Ricardo, and Arturo Linda.
- (75) Alicia didn't marry Ricardo, nor did Arturo marry Linda. →  
?Alicia didn't marry Ricardo, nor did Arturo Linda.  
?Alicia didn't marry Ricardo, nor Arturo, Linda.
- (76) Alicia married Ricardo, but Arturo married Linda. →  
\*Alicia married Ricardo, but Arturo Linda.
- (77) Either Alicia married Ricardo, or Arturo married Linda. →  
?\*Either Alicia married Ricardo, or Arturo Linda.

We see, then, that traditionally labelled clausal coordination structures do not consistently allow gapping. Thus we can already see that it is not true that all coordination structures, as traditionally classified, may undergo gapping. I now turn to gapping in subordination structures.

It is standardly claimed that gapping is disallowed in the second conjunct of a subordination structure, even if there is some degree of parallelism, such as in the following example:

- (78) Tomás bought apples because Estela bought oranges.
- (79) \*Tomás bought<sub>i</sub> apples because Estela [e]<sub>i</sub> oranges.

However, gapping is allowed although somewhat marginally in certain types of subordination structures in English, as shown by Rijkhoek (1996), while in Spanish, gapping in some subordinate structures is completely grammatical, as we will see below.

In the following adjunct clauses, there is sufficient parallelism to allow gap-

ping quite naturally in Spanish, although only marginally in English:<sup>25</sup>

- (80) a. John bought his copy of *Dracula* before Mary hers.<sup>26</sup>  
b. Juan compró su propia copia de *Dracula* antes que María la  
Juan buy.pret.3sg his own-f copy of Dracula before that María the-f  
suy-a.  
her-f  
'Juan bought his own copy of *Dracula* before María hers'
- (81) a. ??John gave Mary a kiss before she him.  
b. Juan besó a María antes que ella a él.  
Juan kiss.pret.3sg p.a María before that 3sg.f.nom p.a 3sg.m.obl  
'Juan kissed María before she him'
- (82) a. ??John gave Mary a kiss after she him.  
b. Juan besó a María después que ella a él.  
Juan kiss.pret.3sg p.a María after that 3sg.f.nom p.a 3sg.m.obl  
'Juan kissed María after she him'
- (83) a. ??John lost his wallet after Mary hers.  
b. Juan perdió su cartera después que María la suy-a.  
Juan lost 3poss wallet after that María the-f 3poss-f  
'Juan lost his wallet after María hers'
- (84) a. ??John put out his cigarette instead of Mary hers.  
b. Juan apagó su cigarrillo en vez de María  
Juan put.out.pret.3sg 3poss cigarette in time of María  
el suy-o.  
the.m 3poss-m  
'Juan put out his cigarette instead of María hers'

It is a significant result that gapping is allowed in some traditionally labelled subordination structures, here, involving clausal adjuncts, as long as the conjuncts

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<sup>25</sup> There are also cases in which an English sentence undergoes gapping more easily than its Spanish counterpart:

- (i) ??John put out his cigarette without Mary hers.  
(ii) Juan apagó su cigarrillo sin que María la suy-a.  
Juan put.out.pret.3sg 3poss cigarette without that María the-f 3poss-f

The sentence in (i) is taken from This example is based on Napoli's (1983) example in (i):

- (iii) John's putting out of his cigarette without María hers didn't help at all.  
[=part of Napoli's example #5c]

Another example she gives but which is quite marginal in my judgment is the following:

- (iv) The villain ended up with the woman instead of the hero with her.  
[also = part of her example #5c]

<sup>26</sup> This example is taken from Rijkhoek (1996, #75c). She does not take it to be odd even though I do, as shown by the stigmas. She also gives the following Dutch equivalent:

- (i) Jan koch zijn exemplaar van *Dracula* voor Marie het hare. [=Rijkhoek's #75d]

are sufficiently parallel. This means that gapping is not exclusive to coordination structures.

Despite the fact that not all subordination structures allow gapping, some do, and recall that some coordination structures disallow gapping. Therefore, we see that gapping cannot be used as a diagnostic for differentiating syntactically between coordination and subordination structures if in fact such a syntactic distinction exists.

### 5.1.3.2 Stripping

Stripping refers to a process in which all material is removed from a second conjunct except (i) one constituent other than the verb and (ii) optionally, a special tag adverb such as *too*, *also*, or a negative element such as *not* (MacCawley (1988)). Stripping is typically assumed to be available only in what I call coordination-type structures, although I will show that this is not really the case.

The following sentences exemplify stripping in coordination-type constructions. The sentence in (85) is the source for the stripped sentence in (86), and the sentence in (87) is the source for the stripped sentence in (88):<sup>27</sup>

- (85) Mary just bought a new house, and John just bought a new house, too.  
(86) Mary [just bought a new house]<sub>j</sub>, and John [e]<sub>j</sub>, too.

- (87) Mary is tired, but John is not tired.  
(88) Mary [is tired]<sub>j</sub>, but not John [e]<sub>j</sub>.

Note the following requirements for clausal stripping to occur.<sup>28</sup> The (lexi-

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<sup>27</sup> As was the case with gapping, I use subscripts to indicate identity of sense rather than actual movement.

<sup>28</sup> In their definition of stripping, Hankamer and Sag (1976) refer only to stripping on the clausal level. They define stripping (p.409) as “a rule that deletes everything in a clause [emphasis mine] under identity with corresponding parts of a preceding clause, except for one constituent (and sometimes a clause-initial adverb or negative)”. Therefore, some or all apparent cases of stripping on the phrasal level may actually be instances of clausal stripping. Since this is the case, it is not instructive to examine the behavior of potential cases of subclausal stripping.

cal) verb must be identical in each conjunct<sup>29</sup> and the overall structure must be parallel. Furthermore, only one constituent in the second conjunct, other than the special elements such as negation or special tags such as *too* and *also*, as mentioned above, may be left behind. Thus, if more than one constituent in each conjunct differs from the corresponding constituents in the other conjunct, if the structures in the conjuncts are not parallel, and/or if the verbs are not identical in each conjunct, then stripping may not occur.

In general, sentences containing the conjunctions *and* and *but* allow gapping, as can be seen in the following source sentence / gapped sentence pairs.<sup>30</sup>

- (89) John saw Ted, and he saw Sue, too. →  
John saw Ted, and Sue, too.

- (90) John saw Ted, but he didn't see Sue. →  
John saw Ted, but not Sue.

Note that Spanish allows stripping, too, as can be seen in the following examples:<sup>31</sup>

- (91) Juan vio a Pedro, y vio a Susana también. →  
Juan see.pret.3sg p.a Pedro and see.pret.3sg p.a Susana also  
'Juan saw Pedro, and he saw Susana, too'

Juan vio a Pedro, y a Susana también.  
Juan see.pret.3sg p.a Pedro and p.a Susana also  
'Juan saw Pedro, and Susana, too'

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<sup>29</sup> As was the case for gapping, a stripped verb need not necessarily match its antecedent verb in number and tense.

<sup>30</sup> These examples have been chosen carefully so that the gapped sentences' most probable source sentences are the source sentences indicated, although other interpretations are possible. The interested reader is directed to Kuno (1981) for issues regarding interpretation of gapped sentences.

<sup>31</sup> SLQZ allows stripping, too, but due to time limitations it was not possible to include examples here.

- (92) Juan vio a Pedro, pero no vio a Susana.→  
 Juan see.pret.3sg p.a Pedro but not see.pret.3sg p.a Susana  
 ‘Juan saw Pedro, but he didn’t see Susana’
- Juan vio a Pedro, pero a Susana no / pero no a Susana.  
 Juan see.pret.3sg p.a Pedro but p.a Susana not but not p.a Susana  
 ‘Juan saw Pedro, not Susana’<sup>32</sup>

We see, then, that structures involving *and* and *but* in English or their equivalents *y* and *pero* in Spanish do allow stripping.

Structures involving *nor* only marginally if at all allow stripping:

- (93) John didn’t see Ted, nor did he see Sue.→  
 ??John didn’t see Ted, nor Sue.

However, structures involving *ni*, the Spanish equivalent to *nor*, allow stripping quite well:

- (94) Juan no vio a Pedro, ni vio a Susana tampoco.→  
 Juan not see.pret.3sg p.a Pedro nor see.pret.3sg p.a Susana either  
 ‘Juan didn’t see Pedro, nor did he see Susana, either’
- Juan no vio a Pedro, ni a Susana tampoco.  
 Juan not see.pret.3sg p.a Pedro nor p.a Susana either  
 ‘Juan didn’t see Pedro, nor Susana, either’

Turning now to the case of the English conjunction *or* and its Spanish equivalent *o*, we see that constructions involving *or* or *o* do not allow stripping at all.<sup>33</sup> The following example shows that conjunction structures with English *or* disallow stripping:

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<sup>32</sup> The Spanish sentence here is not ambiguous, even though the English translation given is. In the Spanish sentence, *Susana* must be interpreted as the subject of the verb in the stripped clause, even though the English translation seems to imply that it could be the subject or the object of the verb in the stripped clause.

<sup>33</sup> English constructions containing *or* do allow VP-deletion such as in (ii) as a means for expressing the meaning intended in sentences such as (i):

- (i) Either John saw Ted, or Sue saw him.→
- (ii) Either John saw Ted, or Sue did.

Constructions containing Spanish *o* do not allow VP-deletion since Spanish disallows VP-deletion entirely.

- (95) Either John saw Ted, or Sue saw him. →  
\*Either John saw Ted, or Sue.

Likewise, Spanish sentences with *o* ‘or’ disallow stripping, too, as in the following example:

- (96) O Juan vio a Pedro, o Susana lo vio. →  
or Juan see.pret.3sg p.a Pedro or Susana 3sg.m.acc see.pret.3sg  
'Either Juan saw Pedro, or Susana saw him'

- (97) \*O Juan vio a Pedro, o Susana  
or Juan see.pret.3sg p.a Pedro or Susana  
'Either Juan saw Pedro, or Sue'

We see, then, that although many traditionally labelled clausal coordination structures do allow gapping, not all of them do.

What is important is that we have seen that not all cases of cases of coordination structures allow stripping, even though which are potentially candidates based on parallelism requirements. The major case disallowing stripping is that of coordination structures in which the conjunction is *or* or its Spanish equivalent *o*. We see that one cannot generalize the availability of stripping to all coordination structures.

I turn now to stripping in subordination structures. It is standardly claimed that stripping is disallowed in the second conjunct of a subordination structure. This makes sense considering the requirement that the two conjuncts be parallel and that fact that a subordinate element does not very often parallel the function or structure of the matrix clause. We will see, however, that stripping is in fact allowed in certain structures traditionally considered to be cases of subordination.

Consider first the sentences in (98)-(100), in which the adjunct clause very closely parallels the matrix clause in both structure in meaning. Note that stripping is barred regardless of this parallelism:

- (98) Mary just bought a new house because John just bought a new house. →  
\*Mary [just bought a new house]<sub>i</sub> because John [e]<sub>j</sub>(, too).

- (99) Sue and Ted snatched up the last remaining condo in the new neighborhood  
       since Elaine and Phil didn't snatch it up.  
     \*Sue and Ted [snatched up the last remaining condo in the new neighbor-  
       hood]; since not Elaine and Phil [e].
- (100) Alejandra went back to New York although John didn't go back to New  
       York.  
     ?\*Alejandra [went back to New York]; although not John [e].

However, stripping is perfectly grammatical in certain types of adjunct clauses, if one takes the following types of sentences, for example, to be derived via stripping rather than simply involving base-generated of prepositional phrases.

- (101) John left after Mary left. →  
       John left after Mary.
- (102) John left before Mary left. →  
       John left before Mary.

It is a significant result that stripping is allowed in some traditionally labelled subordination structures, here, involving clausal adjuncts, as long as the everything but the subject in each conjunct is identical and the subordinator chosen is *before* or *after*.

Note that stripping is also allowed in the equivalent Spanish sentences:

- (103) Juan se       fue       antes que María   se       fuera. →  
       Juan refl go.pret.3sg before that María refl go.imp.subj.3sg  
       'Juan left before María before'
- Juan se       fue       antes que María.  
   Juan refl go.pret.3sg before that María  
       'Juan left before María'
- (104) Juan se       fue       después que María   se       fue. →  
       Juan refl go.pret.3sg after that María refl go.pret.3sg  
       'Juan left after María left'
- Juan se       fue       después de<sup>34</sup> María.  
   Juan refl go.pret.3sg after of María  
       'Juan left after María'

---

<sup>34</sup> For the one speaker consulted, this sentence is impossible with *que* instead of *de*. It is unexpected that *después* needs to be followed by *de* instead of *que* when stripping occurs, since one would expect parallel behavior between *antes* and *después*. This merits further attention.

Thus, despite the fact that not all subordination structures allow stripping, some do, and recall that some coordination structures disallow stripping. Therefore, we see that stripping cannot be used any more than gapping can as a diagnostic for differentiating between coordination and subordination structures if in fact such a distinction exists.

#### 5.1.4 Coordination vs. subordination: review of results

We have seen that traditional methods of distinguishing between coordination and subordination structures are not entirely consistent. First we saw that elements traditionally assumed to be coordinators can sometimes conjoin unlike items. Then we saw that some subordinate structures disallow movement of the second associate or second conjunct just as much as coordinate structures do. Subsequently, it was shown that (i) not all coordination structures allow ATB extraction from within a conjunct, (ii) some coordination structures allow non-ATB extraction from within a conjunct, (iii) some subordination structures disallow non-ATB extraction from within a conjunct for reasons other than already well-known island conditions, and (iv) some subordination structures allow ATB extraction. Lastly, we saw that deletion processes such as gapping and stripping are not available in all coordination structures and are surprisingly available in certain subordination structures. Therefore, I conclude that there is no overarching structural distinction between coordination constructions and subordination constructions. Instead, there are differences in the degree to which the conjuncts are parallel semantically and differences in their internal syntactic structure.

## 5.2 The proposal: Spanish

I have shown that there is no clear syntactic difference between coordination and subordination. Thus, Spanish *de* and *que* comparatives cannot be distinguished in terms of subordination vs. coordination.

Instead, I propose the following. The second associate in a Spanish *de* comparative consists of a degree followed by a special type of relative clause, i.e., *de* comparatives involve a degree relative. In *que* comparatives, on the other hand, the second associate involves a type of adversative conjunction structure to be discussed below.

### 5.2.1 Degree relatives

Recall that at the beginning of this chapter, I suggested that Spanish *de* comparatives in which *de* is followed by the definite article *lo* with or without agreement have essentially the same structure as those comparatives in which *de* is followed either by a cardinal number or a measure phrase. That is, the type of comparison with a cardinal number or measure phrase, as in (105) and (106), respectively, is the model upon which comparative with degree relatives (107) are formed:

- (105) Juan comió más de cinco hamburguesas.  
Juan eat.pret.3sg ER.MUCH.f.pl of five hamburgers  
'Juan ate more than five hamburgers'
- (106) Juan corrió más de diez kilómetros.  
Juan run.pret.3sg ER.MUCH.m.pl of ten kilometers  
'Juan ran more than ten kilometers'
- (107) Juan comió más hamburguesas de l-o-s que  
Juan eat.pret.3sg ER.MUCH.f.pl hamburgers of the-m-pl that  
dijo que iba a comer.  
say.pret.3sg that go.imp.3sg to eat.inf  
'Juan ate more hamburgers than he said he was going to eat'

In 5.2.1.1, I discuss the nature and structure of degree relatives in general. Then in 5.2.1.2, based on this, I propose a structure for comparative degree relatives.

### 5.2.1.1 Non-comparative degree relatives

#### 5.2.1.1.1 The nature of degree relatives

Recall from Chapter 3 that in general, the second associate of a comparison in Spanish must be introduced by *de* plus the definite article with or without agreement plus *que* if it contains an overt verb:<sup>35</sup>

- (108) José compró más libros de lo que piensas.  
José buy.pret.3g ER.MUCH.m.pl books of the that think.2sg  
'José bought more books than you think'
- (109) \*José compró más libros que piensas.  
José buy.pret.3g ER.MUCH.m.pl books that think.2sg  
'José bought more books than you think'

Note that if the string *lo que* following *de* is missing, the sentence is ungrammatical:

- (110) \*José compró más libros de piensas.  
José buy.pret.3g ER.MUCH.m.pl books of think.2sg  
'José bought more books than you think'

In (108), the definite article *lo* shows no agreement. However, there are also cases in which the second term of comparison in a comparison of quantity is introduced by a string similar to *de lo que* but in which the definite article *lo* does show number and gender agreement with the noun whose quantity is being compared. This number and gender agreement signals the presence of the abstract amount morpheme MUCH discussed in Chapter 4, presumably followed by a covert copy of the noun complement to MUCH.

<sup>35</sup> The exceptions were mentioned in Chapter 3. I repeat them here for the reader's convenience. If the properties whose degrees are being compared in a partial comparison are the covert degree or extent complement of (distinct) verbs, rather than the amount of a covert object noun, then *que* may introduce the second term of comparison (Price (1990)), although Plann (1984) suggests that this construction is not part of the core grammar:

- (i) José duerme más que trabaja.  
José sleep.3sg ER.MUCH that work.3sg  
'José sleeps more than he works'

The second exception is the so-called *metalinguistic* (Napoli (1983)) or *epistemic* (McCawley (1988)) reading of a sentence like (i), meaning roughly (ii) or (iii):

- (ii) {What José is doing has more properties of sleeping than of working}  
(iii) {It is more the case that José is sleeping than it is the case that he is working}

This second construction occurs in comparative deletion, i.e., when the verb in the second associate actually takes the noun whose quantity or amount is in question itself as its own complement. This is in contrast with the construction in which *lo* does not show number and gender agreement is used preceding a verb exhibiting null complement anaphora, such as *piensas* ‘you think’ above in (108), which takes as its complement a larger proposition or entire clause containing that noun.<sup>36</sup> The following examples exemplify the *de lo que* construction in which *lo* shows agreement:

head of comparison is MUCH<sup>37</sup>

- (111) a. Miguel perdió más dinero  
          Miguel lose.pret.3sg ER.MUCH.m money  
               del<sub>i</sub> que encontró t<sub>i</sub>.  
               of.the.MUCH.m that find.pret.3sg  
              ‘Miguel lost more money than he found’  
              [The noun *dinero* is masculine]
- b. Josefina tomó más leche de  
      Josefina take.pret.3sg ER.MUCH.f milk of  
      l-[ ]-a<sub>i</sub> que me regaló a mí t<sub>i</sub>.  
      the-MUCH-f that 1sg.dat give.pret.3sg to 1sg.obl  
      ‘Josefina drank more milk than she gave me’  
      [The noun *leche* is feminine]
- c. Heriberto compró más libros de  
      Heriberto buy.3sg.pret ER.MUCH.m.pl books of  
      l-[ ]-o-s<sub>i</sub> que vendió t<sub>i</sub>.  
      the-MUCH-m-pl that sell.pret.3sg  
      ‘Heriberto bought more books than he sold’  
      [The noun *libros* is masculine and plural]

<sup>36</sup> Some speakers also allowing agreeing forms of the definite article in cases of null complement anaphora. See discussion below.

<sup>37</sup> The entire QP containing the quantifier which acts as the second head of comparison (cf. Ch. 3 for definition of second head of comparison), including the understood covert noun whose quantity is being compared, is fronted to specCP in the process of relativization (cf. Kayne (1994)). I have chosen to subscript the agreeing form of the definite article with the gap although the agreeing form of the definite article signifies the presence of not only the covert quantifier but also a subsequent covert nominal complement.

- d. Tomás consiguió más plumas para él  
 Tomás get.pret.3sg ER.MUCH.f.pl pens for 3sg.obl  
 mism-o de l-[ ]-a-s<sub>i</sub> que pidió t<sub>i</sub>  
 self-m of the-MUCH-f-pl that ask.for.pret.3sg  
 para nosotros.  
 for 1pl.obl  
 'Tomás got more pens for himself than he requested for us'  
 [The noun *plumas* is feminine and plural]

head of comparison is adjective

- (112) Poncho es más inteligente de lo [ ]<sup>38</sup> que es  
 Poncho be.3sg ER intelligent of the.n (intelligent) that be.3sg  
 su hermana t<sub>i</sub>.  
 his sister  
 'Poncho is more intelligent than his sister is'

head of comparison is extent of verb

- (113) Poncho quiere más a su hermana de lo [ ]<sub>i</sub> que  
 Poncho love.3sg ER.MUCH p.a his sister of the.n MUCH<sup>39</sup> that  
 odia a su cuñado.  
 hate.3sg p.a his brother.in.law  
 'Poncho loves his sister more than he hates his brother-in-law'

In (112) and (113), the second head of comparison is covert. In (111), the quantifier MUCH second head is covert but its presence is directly signalled by gender and number agreement on *lo* preceding its clause. Therefore, I take these structures to be an instance of special relative clauses which have been termed degree relatives by Gutiérrez-Rexach (1995) for non-comparative cases and by Sáez (1993) for comparative cases. Consequently, I turn the discussion momentarily to the structure of relative clauses in general.

#### 5.2.1.1.2 The structure of degree relatives

I follow Kayne (1994) in choosing a raising analysis of relative clauses in general. The raising analysis of relatives, originally proposed in a slightly different form by Vergnaud (1974) and refined by Kayne (1994), claims that the common

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<sup>38</sup> Here I use square brackets [ ] as a placeholder for the covert raised adjective.

<sup>39</sup> This instance of MUCH is verbal extent.

noun traditionally termed the head of the relative clause, i.e., the noun whose denotation is restricted by a restrictive relative clause or simply modified by a non-restrictive relative clause, actually originates within the relative clause and raises to specCP between D-str and S-str. In a degree relative, it is the syntactic manifestation of the gradable property whose degree is being relativized, i.e., the second head, that must raise to specCP of the relative CP. Referential relative clauses are preceded by a referential determiner, which determines the NP which has raised to specCP. Likewise, degree relatives are preceded by a degree, which “determines” the XP gradable property that has raised to specCP.

In either case, movement of the antecedent of the relative within a single clause, from its base-generated position to specCP, avoids the need to propose either (i) that the determiner and the relative clause are base-generated as a discontinuous constituent restricting an interspersed antecedent, or alternatively, (ii) that they are base-generated as a continuous constituent but that the relative clause must undergo rightward extraposition. Note also that in both referential relatives and degree relatives, the determiner (referential or degree) preceding the antecedent of the relative clause is base-generated outside of the relative clause.

I now exemplify the structures just discussed. (114a) is a referential relative clause, and it has the structure given in (114b):

- (114) a. Daniel es el niñ-o que conociste ayer.  
           Daniel be.3sg the.m child-m that met.pret.2sg yesterday  
           ‘Daniel is the child that you met yesterday’
- b. Daniel es [DP el [CP [NP **niño**]i que conociste **t<sub>i</sub>** ayer]]<sup>40</sup>

Gutiérrez-Rexach (1995) proposes a structure roughly of the type exemplified in the following examples for non-comparative instances of degree relatives:<sup>41</sup>

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<sup>40</sup> Later in this section, I address the issue of whether or not the NP *niño* originates within a DP within the relative clause. I also address analogous issues for the other examples in this section.

<sup>41</sup> Recall that the presence of MUCH is signalled by gender and number agreement when it has a nominal complement, i.e., when it functions as a quantifier over a noun KIND.

- (115) a. No me puedo creer lo [ ] que Daniel  
           not refl be.able.1sg believe.inf the.n MUCH<sup>42</sup> that Daniel  
           nadó.  
           swim.pret.3sg  
           'I can't believe how much Daniel swam'
- b. No me puedo creer [DegP lo [CP [QP MUCH]i que Daniel  
           nadó t<sub>i</sub>]]]
- (116) a. No me puedo creer l-[ ]-o-s libros  
           not refl be.able.1sg believe.inf the-MUCH-m-pl books  
           que compró Elisabeta.  
           that buy.pret.3sg Elisabeta  
           'I can't believe how many Elisabeta bought'
- b. No me puedo creer [DegP lo [CP [QP MUCH.m.pl libros]i  
           que compró Elisabeta t<sub>i</sub>]]]
- (117) a. No me puedo creer lo guap-o-s que son  
           not refl be.able.1sg believe.inf the-n handsome-m-pl that be.3pl  
           l-o-s hermanos Gómez.  
           the-m-pl brothers Gómez  
           'I can't believe how handsome the Gómez brothers are'
- b. No me puedo creer [DegP lo [CP [AP guapos]i que son los  
           hermanos Gómez t<sub>i</sub>]]]  
           [similar to Gutiérrez-Rexach's #18]
- (118) a. No me puedo creer lo niñ-o que es Pedro.  
           not refl be.able.1sg believe.inf the-n child-m that be.3sg Pedro  
           'I can't believe how childish Pedro is'
- b. No me puedo creer [DegP lo [CP [NP niño]i que es Pedro t<sub>i</sub>]]]

The relevant part of the structures corresponding to (115)-(118) as suggested by Gutiérrez-Rexach would be as in (119)-(122):<sup>43</sup> Note that he also includes a

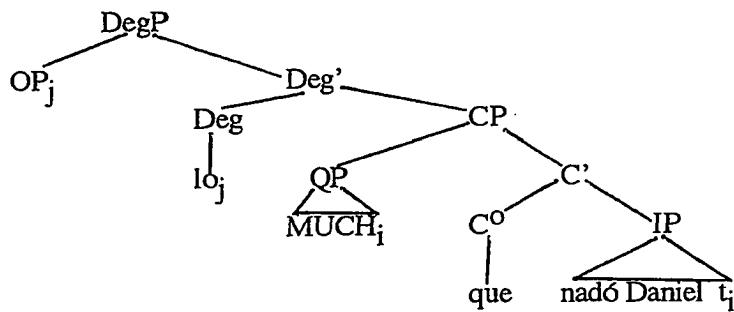
<sup>42</sup> This particular instance of MUCH is not signalled by gender and number agreement since it either takes no nominal complement at all or takes an abstract one.

<sup>43</sup> Gutiérrez-Rexach considers the operator in specDP to be a "null operator on degrees". I do not analyze this in any depth but include it here since it is part of the structure that he gives. For the interested reader, I include here the LF for (117) adapted from the LF that he proposes for an example of his similar to my (117):

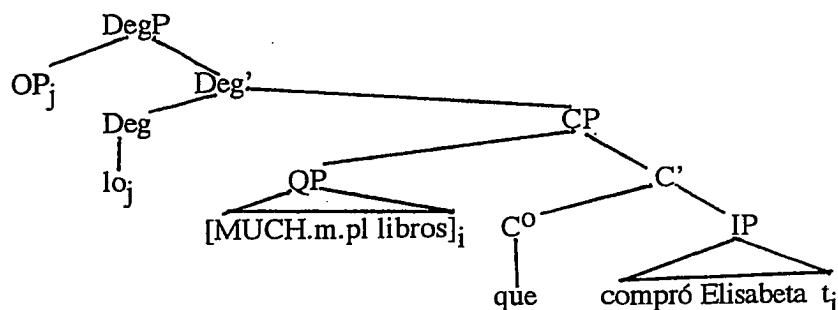
(i) [DegP i<sub>x</sub> [D' lo (d) [CP guapos<sub>i</sub> que son los hermanos Gómez t<sub>i</sub>]]]  
           [similar to Gutiérrez-Rexach's #20]

degree operator in the specifier position of the DegP (DP for him) headed by *lo*, although I will not refer to it again:

(119) ...

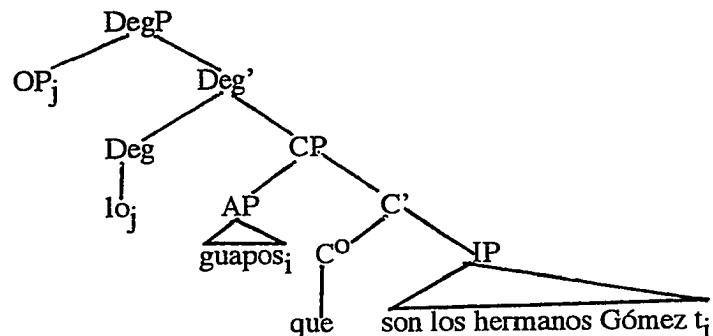


(120) ...

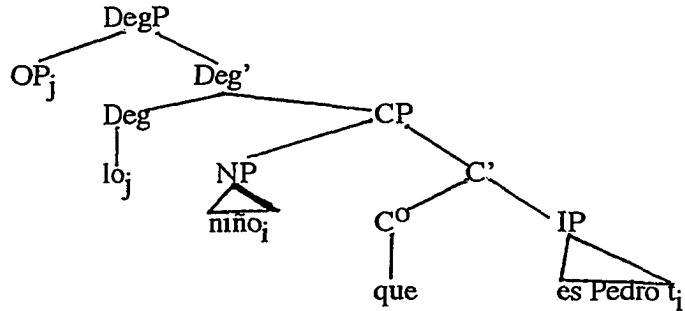


(121) ...

[adaptation of  
Gutiérrez-Rexach's  
#19]



(122) ...



These degree relatives are in accordance with Kayne's (1994) Antisymmetry framework since there is no rightward extraposition or adjunction.

### 5.2.1.2 Degree relatives in comparatives

I now address the issue of degree relatives that are specifically part of a comparative structure.<sup>44</sup>

#### 5.2.1.2.1 Comparative deletion (CD)

Plann (1984) considers those Spanish comparatives in which the comparative particle is *de* to be clausal comparatives, except in those cases in which what follows *de* is an amount or measure phrase, as in (105) and (106) at the beginning of this section. For example, she gives (123) [her #2, gloss and translation mine] as the source for (124) [her #3]:

- (123) Daniel puede nadar más de [S que Jesús  
           Daniel be.able.3sg swim.inf ER.MUCH of that Jesús  
           puede nadar [QP lo]]  
           be.able.3sg the.n  
           'Daniel can swim more than Jesús can swim'

- (124) Daniel puede nadar más de [S [QP lo] que Jesús puede nadar \_\_\_ ]

I agree that the second associate of the comparison does include a clause.

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<sup>44</sup> In the discussion, I simplify by ignoring the Deg that is associated with the second head within the relative clause. Some might claim that there is none, but I claim that there is some understood Deg appropriate to the context of the sentence.

However, I disagree that *lo* is base-generated inside of that clause,<sup>45</sup> nor do I take it to be a Q. Instead, I take *lo* to be a Deg analogous to a Det in the nominal system but taking a CP complement instead of an NP complement – in other words, this is a degree relative, just like the non-comparative cases just discussed. In this particular sentence, the relative clause CP contains a covert measure phrase QP (symbolized here as MUCH) acting as the extent of *nadar* ‘to swim’ but which has raised between D-str and S-str to specCP. That is, I propose the structure in (125) for the sentence in (124):

- (125) Daniel puede nadar más de [DegP *lo* [CP [QP MUCH que Jesús puede nadar *t<sub>i</sub>*]]]

Similarly, the other non-comparative degree relatives discussed above also have comparative equivalents as follows with the structures indicated:

- (126) a. Elisabeta compró más libros de  
                  Elisabeta buy.pret.3sg ER.MUCH.m.pl books of  
                  1-[ ]-o-s que tú vendiste.  
                  the-MUCH-m-pl that 2sg.nom sell.pret.2sg  
                  ‘Elisabeth bought more books than you sold’
- b. Elisabeta compró más libros de [DegP *lo* [CP [QP MUCH.m.pl  
                  (libros) *t<sub>i</sub>* que tú vendiste *t<sub>i</sub>*]]]
- (127) a. L-o-s hermanos Gómez son más guap-o-s ahora de  
                  the-m-pl brothers Gómez be.3pl ER handsome-m-pl now of  
                  lo [ ] que eran antes.  
                  the.n (handsome) that be.imp.3pl before  
                  ‘The Gómez brothers are more handsome now than they were  
                  before’
- b. Los hermanos Gómez son más guapos ahora de [DegP *lo* [CP  
                  [AP (guapos) *t<sub>i</sub>* que *pro* eran *t<sub>i</sub>* antes]]]

---

<sup>45</sup> I explain below that one can assume that there is a covert Deg within the relative clause (in the second associate) out of which the second head raises, but the overt Deg *lo* is base-generated outside of that relative clause as the complement to the preposition *de*.

- (128) a. Pedro es más niñ-o de lo [ ] que era  
           Pedro be.3sg ER child-m of the-n childish that be.imp.1sg  
                       yo a su edad.  
                       1sg.nom to his age  
                       'Pedro is more childish than I was at his age'
- b. Pedro es más niño de [DegP lo [CP [NP (niño) ]<sub>i</sub> que  
                       era yo t<sub>i</sub> a su edad]]]

The comparatives discussed earlier are now repeated here with structures predicted by the present discussion, structures which are just like those cases directly above:

head is MUCH

- (129) a. Miguel perdió más dinero  
           Miguel lose.pret.3sg ER.MUCH.m money  
                       del<sub>i</sub> que encontró t<sub>i</sub>.  
                       of.the.MUCH.m that find.pret.3sg  
                       'Miguel lost more money than he found'
- b. Miguel perdió más dinero de [DegP lo [CP [QP MUCH.m  
                       (dinero) ]<sub>i</sub> que pro encontró t<sub>i</sub>]]
- (130) a. Josefina tomó más leche de  
           Josefina take.pret.3sg ER.MUCH.f milk of  
                       l-[ ]-a<sub>i</sub> que me regaló a mí t<sub>i</sub>.  
                       the-MUCH-f that 1sg.dat give.pret.3sg to 1sg.obl  
                       'Josefina drank more milk than she gave me'  
                       'Josefina drank more milk than she gave me'
- b. Josefina tomó más leche de [DegP lo [CP [QP MUCH.f  
                       (leche) ]<sub>i</sub> que tú vendiste t<sub>i</sub>]]
- (131) a. Heriberto compró más libros de  
           Heriberto buy.3sg.pret ER.MUCH.m.pl books of  
                       l-[ ]-o-s<sub>i</sub> que vendió t<sub>i</sub>.  
                       the-MUCH-m-pl that sell.pret.3sg  
                       'Heriberto bought more books than he sold'
- b. Heriberto compró más libros de [DegP lo [CP [QP MUCH.m.pl  
                       (libros) ]<sub>i</sub> que pro vendió t<sub>i</sub>]]

- (132) a. Tomás consiguió más plumas para él  
           Tomás get.pret.3sg ER.MUCH.f.pl pens for 3sg.obl  
           mism-o de l-[ ]-a-s<sub>i</sub> que pidió t<sub>i</sub>  
           self-m of the-MUCH-f-pl that ask.for.pret.3sg  
           para nosotros.  
           for 1pl.obl  
           ‘Tomás got more pens for himself than he requested for us’
- b. Tomás consiguió más plumas para él mismo de [DegP lo  
       [CP [QP MUCH.f.pl (plumas) ]<sub>i</sub> que pro pidió t<sub>i</sub>  
       para nosotros ]]

head of comparison is adjective

- (133) a. Poncho es más inteligente de lo [ ]<sub>i</sub> que es  
           Poncho be.3sg ER intelligent of the.n (intelligent) that be.3sg  
           su hermana t<sub>i</sub>.  
           3poss sister  
           ‘Poncho is more intelligent than his sister is’
- b. Pancho es más inteligente de [DegP lo [CP  
       [AP (inteligente) ]<sub>i</sub> que es su hermana t<sub>i</sub> ]]

head of comparison is extent of verb

- (134) a. Poncho quiere más a su hermana de lo [ ]<sub>i</sub>  
           Poncho love.3sg ER.MUCH p.a his sister of the.n MUCH  
           que odia t<sub>i</sub> a su cuñado.  
           that hate.3sg p.a 3poss brother.in.law  
           ‘Poncho loves his sister more than he hates his brother-in-law’
- b. Poncho quiere más a su hermana de [DegP lo [CP  
       [QP MUCH ]<sub>i</sub> que pro odia t<sub>i</sub> a su cuñado]]

Note that in the case of comparisons in which the head is MUCH, the NP complement of MUCH is not realized overtly, presumably due to some principle of economy. There are non-comparative degree relatives of quantity in which the NP complement of the relativized amount adjective MUCH is realized overtly:

- (135) No me puedo creer el dinero que  
       not refl be.able.1sg believe.inf the.MUCH.m money that  
       perdió Miguel.  
       lose.pret.3sg Mike  
       ‘I can’t believe how much money Miguel lost’

- (136) No me puedo creer l-[ ]-a leche que Josefina  
not refl be.able.1sg believe.inf the-MUCH-f milk that Josefina  
tomó.  
take.pret.3sg  
'I can't believe how much milk Josefina drank'
- (137) No me puedo creer l-[ ]-o-s libros que  
not refl be.able.1sg believe.inf the-MUCH-m-pl books that  
Heriberto compró.  
Heriberto buy.pret.3sg  
'I can't believe how many books Heriberto bought'
- (138) No me puedo creer l-[ ]-a-s plumas que Tomás  
not refl be.able.1sg believe.inf the.MUCH.f.pl pens that Tomás  
consiguió.  
get.pret.3sg  
'I can't believe how many pens Tomás got'

Note that although I am claiming that there is a determiner or degree base-generated outside of relative clauses, this does not preclude the base-generation of an additional covert determiner or degree within the relative clause. There is in fact overt evidence for the presence of a determiner within one type relative clauses, namely wh-relatives. Kayne proposes a slightly different structure for referential relatives with an overt (wh-)relative pronoun than he does for relatives without an overt relative pronoun. In (139), what raises to specCP is only an NP, whereas in an example such as (140), the DP containing the common noun NP is pied-piped along with it, and then the common noun NP subsequently raises to the specifier of that DP:

- (139) a. the picture that Bill saw  
b. the [CP [NP picture]<sub>i</sub> that [ Bill saw [NP <sub>t<sub>i</sub></sub> ]]]
- (140) a. the picture which Bill saw  
b. the [CP [DP [NP picture]<sub>i</sub> which <sub>t<sub>i</sub></sub>]<sub>j</sub> [ Bill saw <sub>t<sub>j</sub></sub> ]]]

Without entering into arguments as to whether or not our theory should allow (139) and (140) to have different derivations, I note that if we do allow a derivation as in (140) for referential relatives, structures analogous to (140) will be

potentially available for non-comparative degree relatives such as in (141)-(144) and the comparative instances of degree relatives in (145)-(148) instead of the structures that I have already proposed for them. In such a construction, the degree phrase (with a null Deg head) containing the gradable property (the covert second head in case of a comparative degree relative) would be pied-piped to specCP, and then the property XP inside of the raised DegP would raise to the specifier of this DegP. I illustrate this alternative type of structure for both non-comparative and comparative degree relatives. Once again, covert material is shown in parentheses:

- (141) No me puedo creer [DegP<sub>lo</sub> [CP [DegP [QP MUCH]<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> quel Daniel nadó t<sub>i</sub>]]
- (142) No me puedo creer [DegP<sub>lo</sub> [CP [DegP [QP MUCH.m.pl libros]<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> que compró Elisabeta t<sub>i</sub>]]
- (143) No me puedo creer [DegP<sub>lo</sub> [CP [DegP [AP guapos]<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> que pro son los hermanos Gómez t<sub>i</sub>]]
- (144) No me puedo creer [DegP<sub>lo</sub> [CP [DegP [NP niño]<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> que es Pedro t<sub>i</sub>]]
- (145) Daniel puede nadar más de [DegP<sub>lo</sub> [CP [DegP [QP MUCH]<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> que Jesús puede nadar t<sub>i</sub>]]  
'Daniel can swim more than Jesús can swim'
- (146) Elisabeta compró más libros de [DegP<sub>lo</sub> [CP [DegP [QP MUCH.m.pl (libros)<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> que tú vendiste t<sub>i</sub>]]]
- (147) Los hermanos Gómez son más guapos ahora de [DegP<sub>lo</sub> [CP [DegP [AP (guapos)<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> que pro eran t<sub>i</sub> antes]]]
- (148) Pedro es más niño de [DegP<sub>lo</sub> [CP [DegP [NP (niño)<sub>j</sub>  $\emptyset$  t<sub>j</sub>]<sub>i</sub> que era yo t<sub>i</sub> a su edad]]]

I cannot see any means of choosing between the two analyses, since both analyses predict the same surface string.<sup>46</sup> Therefore, I will leave this issue open

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<sup>46</sup> The *que* in Spanish degree relatives (comparative or not) may not be taken to be a pied-piped determiner of the gradable property XP which has raised into specCP just as the English complementizer *that* is not a raised wh-element relative pronoun.

for future research and continue to assume the structures given in (129b)-(134b)<sup>47</sup> for the sentences in (129a)-(134a) for the sake of exposition. This will not affect anything significant in what I have to say.

### 5.2.1.2.2 Null complement anaphora (NCA)

I now return to the comparison in (108), repeated here in slightly modified form, exhibiting what I termed null complement anaphora (NCA) in Chapter 3.

- (108) José compró más libros de lo que piensas [e].  
José buy.pret.3g ER.MUCH.m.pl books of the that think.2sg  
'José bought more books than you think'

In this sentence, [e] stands for the understood complement of the verb *piensas*.

I take the string *lo que piensas* to be a degree relative. The problem is in deciding which property XP raises to specCP of the relative clause. If there were number and gender agreement on *lo*, I would take that to be a sign, as I have before, of the presence of an abstract instance of MUCH and its NP complement, here *libros*.

In fact, there are some speakers who allow an agreeing form of *lo* instead of unagreeing *lo* itself in this sentence:

- (149) José compró más libros de l-[ ]-o-s que  
José buy.pret.3g ER.MUCH.m.pl books of the-MUCH-m-pl that  
piensas.  
think.2sg  
'José bought more books than you think'

One might assume that for these speakers, null complement anaphora verbs like *pensar* 'to think' may take a null complement with equal syntactic complexity as its anaphor – a surface anaphor in Hankamer and Sag's (1976) terms. That is, one might postulate the underlying structure of (149) for those who allow it to be as follows:

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<sup>47</sup> Under either option, I consider there to be a covert Deg within the degree relative. I simply chose to assume that it is not pied-piped with the second head when the second head does.

- (150) José compró más libros de [<sub>DegP</sub> *lo* [<sub>CP</sub> [<sub>QP</sub> **MUCH.m.pl**  
**(libros)**]<sub>i</sub> que tú piensas [(que compró) *t<sub>i</sub>*]]

According to this point of view, the structure of comparative NCA for these speakers would be the same as the one involved in comparative deletion, the only difference being that more material is covert in NCA than in comparative deletion.

However, Hankamer and Sag (1976) claim that the null complement of an NCA verb is a deep anaphor; that is, it lacks any syntactic complexity in the underlying structure of the sentence. Their claim regarding NCA is based on non-comparative instances of NCA, although it is certainly plausible that it is correct for comparative NCA as well. Therefore, I propose that the structure of (149) is as follows:

- (151) José compró más libros de [<sub>DegP</sub> *lo* [<sub>CP</sub> [<sub>QP</sub> **MUCH.m.pl**  
**(libros)**]<sub>i</sub> que tú piensas [e]]

At LF, *que compró* and a variable *x<sub>i</sub>* to be bound by the material in boldface in (151) are copied from corresponding material in the first associate, as in (152):

- (152) José compró más libros de [<sub>DegP</sub> *lo* [<sub>CP</sub> [<sub>QP</sub> **MUCH.m.pl**  
**(libros)**]<sub>i</sub> que tú piensas [(que compró) *x<sub>i</sub>*]]

Returning to (108), we see that no QP of the form [MUCH.m.pl libros] has raised to or is base-generated in specCP. Otherwise, the definite article *lo* would show gender and number agreement

Under one approach consistent with Hankamer and Sag (1976), the appropriate interpretation of (108) would be (153a), with the structure in (153b), since degree cannot be associated with a subpart of a syntactically simple null complement. In such a structure, *lo* would be a degree determining an abstract extent quantifier which quantifies over the entire propositional complement of the NCA verb, here *piensas*:

- (153) a. {Jose bought more books than the extent to which you think that he bought books}
- b. José compró más libros de lo **MUCH<sub>i</sub>** que piensas **t<sub>i</sub>** [e].<sup>48</sup>

However, the interpretation of (108) given in (153a) implies the properties whose degrees are being compared are quantity (MUCH-ness) and extent (the extent of the proposition denoted by the null complement of *piensas*), which are incompatible.

One might alternatively propose that the usage of *lo* indicates that in comparative NCA, *lo* merely represents the direct object of the overt NCA verb.<sup>49</sup> That is, in a sentence such as (108), the appropriate interpretation would be as follows:

- (154) {José bought more books than what (=that which) you think}

This would be analogous to the referential usage of *lo* in the following sentence:

- (155) Tengo miedo de *lo que* podría pasar.  
have.1sg fear of the.n that be.able.cond.3sg<sup>50</sup> happen.inf  
'I'm afraid of what could happen'

I have two types of objections to this proposal. One involves the choice of comparative particle, and the other involves selectional properties.

choice of comparative particle: *que* (e.g., comparative ellipsis) vs. *de* (e.g., NCA)

First of all, the string *que lo que* usually occurs instead of *de lo que* when *lo* is used in a headless relative as a demonstrative, roughly equivalent to *aquello*

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<sup>48</sup> Here, [e] represents the null complement of *piensas*.

<sup>49</sup> This was suggested to me by Dominique Sportiche (p.c.).

<sup>50</sup> The abbreviation 'cond' stands for the condition mood.

'that which', if the referent is abstract.<sup>51</sup>

- (156) a. Tod-o lo que sucede aquí fuera de nuestr-a casa  
all-m the.n that happen.3sg here outside of our-f house  
me asusta más que lo que se  
1sg.dat scare.3sg ER.MUCH that the.n that refl  
ve en 1-a televisión.  
see.3sg in the-f television  
'Everything that happens here outside of our house scares me more  
what one sees on TV'
- b. Tod-o lo que sucede aquí fuera de nuestr-a casa  
all-m the.n that happen.3sg here outside of our-f house  
me asusta más que aquello que se  
1sg.dat scare.3sg ER.MUCH that that.n that refl  
ve en 1-a televisión.  
see.3sg in the-f television  
'Everything that happens here outside of our house scares me more  
what one sees on TV'

By the same token, a form of *que lo que* in which *lo* agrees in number and gender with a non-abstract referent 'the one(s) which' may be used, serving as an equivalent to *aquello* with similar agreement meaning 'that' or 'those':

- (157) a. Este libro es más interesante que el que me  
this.m book be.3sg ER interesting that the.m that 1sg.dat  
recomendaste.  
recommend.pret.2sg  
'This book is more interesting than the one that you  
recommended to me'

<sup>51</sup> Some speakers of Spanish appear to actually have the reverse interpretations of *de lo que* vs. *que lo que* (with or without agreement). That is, for them, *de lo que* means more or less 'than that which', and *que lo que* means 'than the amount/degree which'. For these speakers, only amount is relevant in (i) – witness the presence of MUCH in the second associate – this is CD:

- (i) Juan perdió más libros que 1-[ ]-o-s que le  
Juan lose.pret.3sg ER.MUCH.m.pl books that the-MUCH-m-pl that 3sg.dat  
regalaste.  
give.pret.2sg  
'Juan lost more books than you give him'
- (ii) Juan perdió más libros de 1-o-s que le regalaste.  
Juan lose.pret.3sg ER.MUCH.m.pl books of the-m-pl that 3sg.dat give.pret.2sg  
'Juan lost more books than the ones that you gave him'
- In (ii) identity of reference what is relevant – note lack of MUCH in the second associate – this is a subset comparative, as described in Ch. 3.
- I have decided to limit my discussion to those varieties of Spanish in which the judgments are as discussed above in order to present a coherent analysis for one system.

- b. Este libro es más interesante que aquél que me  
 this.m book be.3sg ER interesting that that.m that 1sg.dat  
 recomendaste.  
 recommend.pret.2sg  
 ‘This book is more interesting than the one that you  
 recommended to me’
- (158) a. Est-a revista es más interesante que l-a que me  
 this-f magazine be.3sg ER interesting that the-f that 1sg.dat  
 recomendaste.  
 recommend.pret.2sg  
 ‘This magazine is more interesting than the one that you  
 recommended to me’
- b. Est-a revista es más interesante que aquéll-a que me  
 this-f magazine be.3sg ER interesting that that-f that 1sg.dat  
 recomendaste.  
 recommend.pret.2sg  
 ‘This magazine is more interesting than the one that you  
 recommended to me’
- (159) a. Est-o-s libros son más interesante-s que l-o-s que  
 this-m-pl books be.3pl ER interesting-pl that the-m-pl that  
 me recomendaste.  
 1sg.dat recommend.pret.2sg  
 ‘These books are more interesting than the ones that you  
 recommended to me’
- b. Est-o-s libros son más interesante-s que aquéll-o-s que  
 this-m-pl books be.3pl ER interesting-pl that that-m-pl that  
 me recomendaste.  
 1sg.dat recommend.pret.2sg  
 ‘These books are more interesting than the ones that you  
 recommended to me’
- (160) a. Est-a-s revistas son más interesante-s que l-a-s que  
 this-f-pl magazines be.3pl ER interesting-pl that the-m-pl that  
 me recomendaste.  
 1sg.dat recommend.pret.2sg  
 ‘These magazines are more interesting than the ones that you  
 recommended to me’
- b. Est-a-s revistas son más interesante-s que aquéll-a-s que  
 this-f-pl magazines be.3pl ER interesting-pl that that-m-pl that  
 me recomendaste.  
 1sg.dat recommend.pret.2sg  
 ‘These magazines are more interesting than the ones that you  
 recommended to me’

If I restrict the discussion to those comparisons in which the comparative particle is followed by *lo*, with or without agreement, the following generalization holds:<sup>52</sup>

- (161) Choice of comparative particle in *lo que* comparatives Spanish  
(a)    *que*, if *lo* determines reference, i.e., ‘that’ / ‘that one’ / ‘those’  
(b)    *de*, if *lo* determines degree, i.e., ‘that much’ / ‘that many’

This is roughly how Plann (1984) differentiates between the two types of *lo que* comparatives, although her rule actually has broader scope than the rule in (161). She includes *que lo que* comparisons as a subgroup of a larger group - what she considers to be the non-clausal standards of comparison. That is, a sentence like (160a), meaning (160b), is analogous to a sentence like (162), with no overt indications of anything clausal following the DP *estos libros* at all:

- (162) Est-a-s revistas son más interesante-s que est-o-s libros.  
this-f-pl magazines be.3pl ER interesting-pl that this-m-pl books  
‘These magazines are more interesting than these books’

The clause after *las* in (160a) beginning with *que* is a referential relative clause restricting the reference of the understood covert noun *revistas* following the determiner *las*. Plann correctly considers this to be a non-clausal comparative in the sense that the entire DP containing the relative clause is in fact followed by additional clausal material, material which however is irrelevant to the degree of the compared property. That is, that clausal material contains nothing parallel to that found in the first term of comparison along the lines of the predicate *ser interesante* ‘to be interesting’. The entire DP, even with the clausal material inside of it, merely constitutes a DP contrast. In my terminology, (160a) is not an instance of comparative deletion but rather, of comparative ellipsis.

Plann does mention that what she calls non-clausal comparatives (instances of what I term comparative ellipsis) may derive at some stage from clausal compara-

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<sup>52</sup> This is not a comprehensive, theoretical explanation for why *de* occurs in some instances and *que* in others covering all types of Spanish comparatives. Rather, it presents the distributional facts for a subset of comparative types, namely those in which the comparative particle is immediately followed by *lo* (with or without agreement) and then *que*.

tives, although she does not commit to this possibility. I believe that this is in fact the case for most Spanish *que* comparatives and for all SLQZ *cah* comparatives. I address this in more detail below.

If *lo* is taken to be the direct object of *piensas* in *lo que piensas*, the comparative particle should be *que* instead of *de* if the pattern in (161) is taken to be correct. The fact that the comparative particle is *de* disfavors the hypothesis that *lo* is the direct object of *piensas*.

#### selectional considerations

There is another factor which argues against this hypothesis. Recall the interpretation of (108) under discussion:

- (154) {José bought more books than what (=that which) you think}

If *lo* is taken to be a DP direct object of *piensas* in *lo que piensas* ‘that which you think’, then that which the hearer thinks is the content of a thought and not a number of books. Similarly, that which the hearer thinks is not an individual who, just like José, bought books. Therefore, it is difficult to see how that which the hearer thinks could serve as a standard of comparison, explicit or implicit. That is, it is not clear how one would arrive at a number of books (more precisely, a degree of how many books) with which to compare the number that José bought if *what / that which* is merely a referential direct object of *think*.

One might also attempt similar type of interpretation in which *lo que piensas* ‘that which you think’ is a DegP direct object of *piensas*:

- (163) José bought more books than the number that you think.

Here, we are comparing a number with another number, or more precisely, one degree of how MUCH with another degree of how MUCH. However, even though *think* is a transitive verb (164), it does not ordinarily subcategorize for a DegP direct object (165):

- (164) a. I think lots of interesting thoughts.  
b. I think “What am I doing here ?”  
c. I think that you should leave.

- (165) #I think three.<sup>53</sup>

It is true that a sentence such as (165) would be fine as the answer to a question such as (166), but this is an example of sluicing, i.e., there is a covert clause here of which *three* is only a subpart (cf. its non-sluiced equivalent in (167)):

- (166) How many people came to the party ?  
[can be answered by (166) or (168)]

- (167) I think that three people came to the party.

In fact, the literal Spanish translation of (165) is ungrammatical (168) – only with the addition of the complementizer *que* can the elliptical sentence be uttered

- (169):

- (168) \*Pienso tres.  
think.1sg three

- (169) #Pienso que tres.  
think.1sg that three

Hence, it cannot be the case that Spanish *de lo que* NCA comparatives involve a referential relative clause whose antecedent is simultaneously interpreted as a DP or DegP direct object of the NCA verb.

I claim instead of either of the two previous proposals that at LF, the null complement of an NCA verb is replaced by a string containing the second head. In the case of (108), the null complement is replaced by the string in (170):

- (170) *que compró x.MUCH.m.pl libros*<sup>54</sup>

Subsequently, the second head and its complement, i.e., MUCH (along with agreement) and *libros*, raise to the specifier of the CP whose verb is *piensas*,

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<sup>53</sup> I use the symbol # to indicate that a sentence is elliptical and needs a context to be interpreted as a complement proposition.

<sup>54</sup> The symbol x represents the covert Deg associated with the second associate instance of MUCH and is determined by the context. I usually omit it when giving the structure of comparative sentences but include it here as part of the explanation of the copying mechanism of material in the first associate to the second associate (a slot for Deg must be copied from the first associate, even the Deg's are distinct between the two associates.)

the type of movement occurring in any other degree relative. Thus, the structure of (108) would end up as in (171) at some point in LF:

- (171) José compró más libros de [DegP lo [CP [QP MUCH.m.pl  
                           (libros) ]<sub>i</sub> que tú piensas [(que compró) t<sub>i</sub> ]]

Note that once the trace  $t_i$  is replaced by a variable  $x_i$  later in LF, this structure is identical to the one I propose for (149), i.e., NCA in which *lo* shows agreement (151).

#### 5.2.1.2.3 Comparative subdeletion (CS)

I extend the type of proposal I made in §5.2.1.2.2, in which I assigned (108) the structure in (171) at some point in LF, to the type of CS in Spanish involving the sequence *de lo que* without agreement and an in situ occurrence of the second head of the comparison, the difference being that the analog to the null complement of an NCA verb is mostly overt in CS – only MUCH and the understood Deg associated with it are covert in CS.

Recall from Chapter 3 that if the second head of a comparison is the abstract amount expression MUCH, its presence is indicated not by number and gender agreement, but instead by a partitive instance of *de* ‘of’ preceding the overt nominal complement of MUCH (e.g., *de oro*, *de agua*, etc., not *lo que encontró...de oro*)

- (172) a. Miguel perdió más dinero de lo que  
                  Miguel lose.pret.3sg ER.MUCH.m money of the.n that  
                  encontró [ ] de oro  
                  find.pret.3sg MUCH of gold  
                  ‘Miguel lost more money than he found gold’
- b. Josefina tomó más leche de lo que  
                  Josefina take.pret.3sg ER.MUCH.f milk of the.n that  
                  me regaló a mí [ ] de agua  
                  1sg.dat give.pret.3sg to 1sg.obl MUCH of water  
                  ‘Josefina drank more milk than she gave me water’
- c. Heriberto compró más libros de lo  
                  Heriberto buy.3sg.pret ER.MUCH.m.pl books of the.n

que vendió [ ] de revistas  
 that sell.pret.3sg MUCH of magazines  
 'Heriberto bought more books than he sold magazines'

- d. Tomás consiguió más plumas para él  
 Tomás get.pret.3sg ER.MUCH.f.pl pens for 3sg.obl  
 mism-o de lo que pidió [ ]  
 self-m of the.n that ask.for.pret.3sg MUCH  
 de lápices para nosotros.  
 of pencils for 1pl.obl  
 'Tomás got more pens for himself than he requested pencils for us'

Of course, since MUCH is covert, one might wonder whether it has raised to the specifier of CP in its clause, stranding behind its nominal complement, rather than remaining in situ (at least until LF). These two alternatives would be expected to look the same on the surface, so an instance in which the second head is an adjective is needed to decide this issue.

If the head of the comparison is an adjective, the second head is overt and remains in situ (173) rather than raising to specCP (174):

head of comparison is adjective

- (173) Poncho es más guapo de lo que es **inteligente**.  
 Poncho be.3sg ER handsome of the.n that be.3sg intelligent  
 'Poncho is more handsome than he is intelligent'
- (174) \*Poncho es más guapo de lo inteligente que es.

Since I have concluded that the gradable adjective of a comparison in (174) and the adjective-like quantifier MUCH behaves in an analogous fashion with respect to degree modification, it follows that in the sentences in (172), MUCH must remain in situ just as the adjective *inteligente* does in (173). This behavior is in fact witnessed by the lack of number and gender agreement on *lo* in the sentences in (172).

There are three possible conclusions arising from the data in (172) and (173). First, it is possible that comparative subdeletion structures are not truly degree relatives. This would be an undesirable result, since a unified explanation of intuitively related phenomena is always better than a disjoint explanation.

Secondly, it could be that the true head in Spanish comparative subdeletion is not any of the gradable adjectives proposed above – i.e., prenominal MUCH and adjectives such as *inteligente*. Instead, in subdeletion, there is a covert VP or propositional extent quantifier MUCH which is relativized.

Under this second proposal, the previous cases of comparative subdeletion would have the structures and interpretations indicated:<sup>55</sup>

- (175) a. Miguel perdió más dinero de lo que encontró [ ]<sup>56</sup> [ ] de oro.  
 Miguel lose.pret.3sg ER.MUCH.m money of the.n  
 that find.pret.3sg MUCH<sup>57</sup> MUCH<sup>58</sup> of gold  
 {Miguel lost more money than the degree to which he found gold}

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<sup>55</sup> Note that whatever explanation underlies the sentences in the main text ought to extend to the following sets of non-comparative sentences [I have omitted all potential instances of MUCH from the glosses in order to present the glosses as neutral with regard to the presence and location of MUCH]:

- (i) No me puedo creer lo que Miguel perdió de dinero.  
 not refl be.able.1sg believe.inf the.n that Miguel lose.pret.3sg of money  
 'I can't believe how much money Miguel lost'
- (ii) No me puedo creer lo que Josefina tomó de leche.  
 not refl be.able.1sg believe.inf the.n that Josefina drink.pret.3sg of milk  
 'I can't believe how much milk Josefina drank'
- (iii) No me puedo creer lo que Heriberto compró de libros.  
 not refl be.able.1sg believe.inf the.n that Heriberto buy.pret.3sg of milk  
 'I can't believe how many books Heriberto bought'
- (iv) No me puedo creer lo que Tomás consiguió de plumas.  
 not refl be.able.1sg believe.inf the.n that Tomás get.pret.3sg of pens  
 'I can't believe how many pens Tomás got'

<sup>56</sup> This covert element could just as well have already raised to specCP by Spellout. There is no empirical way to tell whether or not it has already raised by Spellout.

<sup>57</sup> This instance of MUCH, according to the proposal at hand, is the second head and acts as an extent adverbial modifying either the verb *encontró* or the proposition *encontró oro*. This explanation extends to the analogous instance of MUCH in the following examples in an analogous manner.

<sup>58</sup> Under this second proposal, this particular instance of MUCH, which is associated with the *oro*, is not related to the second head MUCH. Recall that there is an understood Deg associated with this MUCH determined by the context. This explanation extends to the analogous instance of MUCH in the following examples in a similar fashion.

- b. Josefina tomó más leche de lo que  
 Josefina take.pret.3sg ER.MUCH.f milk of the.n that  
     me regaló [ ] a mí [ ] de agua.  
     1sg.dat give.pret.3sg MUCH to 1sg.obl MUCH of water  
 {Josefina drank more milk than the degree to which she gave me  
 water}
- c. Heriberto compró más libros de  
 Heriberto buy.3sg.pret ER.MUCH.m.pl books of  
     lo que vendió [ ] [ ] de revistas.  
     the.n that sell.pret.3sg MUCH MUCH of magazines  
 {Heriberto bought more books than the degree to which he sold  
 magazines}
- d. Tomás consiguió más plumas para él  
 Tomás get.pret.3sg ER.MUCH.f.pl pens for 3sg.obl  
     mism-o de lo que pidió [ ]  
     self-m of the.n that ask.for.pret.3sg MUCH  
     [ ] de lápices para nosotros.  
     MUCH of pencils for 1pl.obl  
 {Tomás got more pens for himself than the degree to which he  
 requested pencils for us}

- (176) Poncho es más guapo de lo que es [ ]<sup>59</sup> inteligente.  
 Poncho be.3sg ER handsome of the that be.3sg [ ] intelligent  
 {Poncho is more handsome than the degree to which he is intelligent}

Since this second proposal would introduce an incompatible comparison (except when the first and second heads are verbal extent) – a comparison between amount (172) or adjectival degree (173), on the one hand, and propositional or verbal extent, on the other, I discard it as incoherent.

Lastly, it could be that Spanish CS does in fact involve degree relatives but that the gradable degree simply does not raise to specCP until LF, perhaps because the overt partitive *de* plus nominal is too heavy to raise in the overt syntax. The structures at Spellout of the sentences in (172) and (173) would be as in (177) and (178), respectively:

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<sup>59</sup> This position is for verbal extent MUCH, not a QP slot in the adjectival system of *intelligent*, even though the interpretation given below it gives that impression. The problem is an artifact of the ambiguity of the English sentence given as the interpretation.

- (177) a. Miguel perdió más dinero de lo que encontró [ ] de oro.  
           Miguel lose.pret.3sg ER.MUCH.m money of the.n  
           que encontró [ ] de oro.  
           that find.pret.3sg MUCH of gold
- b. Josefina tomó más leche de lo que me regaló a mí [ ] de agua.  
           Josefina take.pret.3sg ER.MUCH.f milk of the.n that  
           me regaló a mí [ ] de agua.  
           1sg.dat give.pret.3sg to 1sg.obl MUCH of water
- c. Heriberto compró más libros de lo que vendió [ ] de revistas.  
           Heriberto buy.3sg.pret ER.MUCH.m.pl books of  
           lo que vendió [ ] de revistas.  
           the.n that sell.pret.3sg MUCH of magazines
- d. Tomás consiguió más plumas para él mismo de lo que pidió [ ] de lápices para nosotros.  
           Tomás get.pret.3sg ER.MUCH.f.pl pens for 3sg.obl  
           mism-o de lo que pidió [ ]  
           self-m of the.n that ask.for.pret.3sg MUCH  
           de lápices para nosotros.  
           of pencils for 1pl.obl
- (178) Poncho es más guapo de lo que es inteligente.  
           Poncho be.3sg ER handsome of the that be.3sg intelligent

At LF, the second head would raise as shown in (179) and (180):

- (179) a. Miguel perdió más dinero de lo [ [ ] de oro]i que encontró t<sub>i</sub>.  
       b. Josefina tomó más leche de lo [ [ ] de agua]i que me regaló a mí t<sub>i</sub>.  
       c. Heriberto compró más libros de lo [ [ ] de revistas] que vendió t<sub>i</sub>.  
       d. Tomás consiguió más plumas para él mismo de lo que pidió [ [ ] de lápices]i para nosotros t<sub>i</sub>.
- (180) Poncho es más guapo de lo inteligentei que es t<sub>i</sub>.

I claim this third proposal to be the correct one, since it allows a coherent interpretation and a consistency of structure among related constructions.

#### 5.2.1.2.4 A note on archaic *cuanto*

We saw in Chapter 3 that there is an apparently archaic variation of the sequence *de lo que* in which *lo que* is replaced by *cuanto*, which otherwise is used as an interrogative (181), an exclamative (182) or a headless relative (183):

- (181) ¿Cuánto quieres a Juan?  
 how.MUCH want.2sg p.a Juan  
 'How much do you love Juan?'
- (182) ¡Cuánto quieres a Juan!  
 how.MUCH want.2sg p.a Juan  
 'You love Juan so much!'
- (183) Puedes comer cuantos quieras.  
 be.able.2sg eat.inf how.MUCH want.subj.2sg  
 'You can eat however much you want'

This element may be used without agreement (in cases of NCA) or with agreement (in comparative deletion), in a manner analogous to the variation observed with *de lo que*, as shown in the following table:

**Table 5.1 Forms of definite article and *cuanto* as Deg's in Spanish gender and number**

	<u>article as degree</u>	<u>cuanto as degree</u>
neuter (sing.)	lo	cuanto
masc. sing.	el	cuanto
fem. sing.	la	cuanta
masc. pl.	los	cuantos
fem. pl.	las	cuantas

Recall that I concluded that when there is not agreement on *lo* in an instance of NCA, there is LF copying from the first associate to the second associate of the second head and the clause containing it. A sentence with NCA using *cuanto* without agreement has the same type of interpretation. The sentence in (184), for example, has the structure in (185) after copying into the null complement from the first associate and raising the second head:<sup>60</sup>

NCA, no agreement

- (184) José compró más libros de cuanto piensas [e].  
 José buy.pret.3sg ER.MUCH.m.pl books of how.n think.2sg  
 'José bought more books than you think'
- (185) José compró más libros de [DegP lo [CP [QP MUCH.m.pl  
 (libros) ]<sub>i</sub> que tú piensas [(que compró) t<sub>i</sub>] ]

---

<sup>60</sup> Other movements take place in LF as well. This structure focusses on only one subset of the post-Spellout operations.

In cases of CD, however, the presence of number and gender agreement on *cuanto* reveals that even prior to Spellout, there is already an instance of the second head MUCH within the second associate, and furthermore, MUCH has raised to specCP along with number and gender agreement, hence the agreement on *cuanto*:

Comparative deletion, agreement

- (186) a. Miguel perdió más dinero de cuant-[ ]-o<sub>i</sub>  
           Miguel lose.pret.3sg ER.MUCH.m money of how-MUCH-m  
           find.pret.3sg  
           encontró t<sub>i</sub>.  
           ‘Miguel lost more money than he found’
- b. Josefina tomó más leche de cuant-[ ]-a<sub>i</sub>  
           Josefina take.pret.3sg ER.MUCH.f milk of how-MUCH-f  
           me regaló a mí t<sub>i</sub>.  
           1sg.dat give.pret.3sg to 1sg.obl  
           ‘Josefina drank more milk than she gave me’
- c. Heriberto compró más libros de cuant-[ ]-o-s<sub>i</sub> vendió t<sub>i</sub>.  
           Heriberto buy.3sg.pret ER.MUCH.m.pl books of how-MUCH-m-pl sell.pret.3sg  
           ‘Heriberto bought more books than he sold’
- d. Tomás consiguió más plumas para él mism-o de cuant-[ ]-a-s<sub>i</sub> pidió t<sub>i</sub>.  
           Tomás get.pret.3sg ER.MUCH.f.pl pens for 3sg.obl self-m of how-MUCH-f-pl ask.for.pret.3sg  
           para nosotros.  
           for 1pl.obl  
           ‘Tomás got more pens for himself than he requested for us’

I assume that this construction involving *cuanto* and its various agreeing forms is also a type of degree relative. The complementizer *que* is covert, but this is not strange when Wh-Relatives in English are taken into account. There is an empirical property of English which prohibits the overt realization of both a complementizer and a wh-expression in specCP, referred to as the Doubly-Filled Comp Filter (e.g., Chomsky and Lasnik (1977)), and therefore, a relative clause in English may be introduced by the complementizer *that* (187) or a wh-expression

(188), but not both (189):

- (187) The man that you saw is named Ted.
- (188) The man which you saw is named Ted.
- (189) \*The man which that you saw is named Ted.

### 5.2.1.3 Unification of degree relatives with amount and measure phrase standards of comparison

Recall that I claimed at the beginning of this section that degree relatives have a structure based on amount and measure phrase standards of comparison. Plann (1984) mentions the function of *de* in introducing a cardinal number or a measure phrase, as in (15) and (16), as an additional, non-clausal usage of comparative *de*:

- (190) José compró más [de tres] libros.  
José buy.pret.3sg ER.MUCH.m.pl of three books  
'José bought more than three books'  
[cardinal number, amount of N denotation]
- (191) Elisa corrió más [de diez millas].  
Elisa run.pret.3sg ER.MUCH.f.pl of ten miles  
'Elisa ran more than ten miles'  
[measure phrase, extent of VP denotation]

Whereas Plann classifies examples such as (190) and (191) as an extra case requiring *de*, in addition to what she considers to be clausal comparatives, I suggest instead that these are actually two subcases of a larger comparative construction. Namely, *de* is used to introduce elements denoting quantities or degrees – i.e., complements of ER – some of which are self-contained (measure phrases or cardinal numbers) while others are introduced by an abstract degree or quantity marker (*lo* or agreeing form) and defined via a subsequent relative clause as discussed above. Thus, we are able to unite Plann's comparatives having clausal second terms and comparatives with cardinal quantifiers and measure phrases.

#### complementation of ER

This conclusion is consistent with the notion that one way in which the

comparative Deg ER may take a complement is via a prepositional phrase serving as a standard for comparison, i.e., a starting point from which to measure upwards in making a comparison, in a manner analogous to an adjective or verb taking a prepositional complement filling a source theta role:

- (192) a. Pedro está cansad-o de est-a clase.  
Pedro be.3sg tired-m of this-f class  
'Pedro is tired of this class'
- b. Pedro salió de l-a casa.  
Pedro go.out.pret.3sg of the-f house  
'Pedro went out of the house'

Similarly, a complex preposition such as *lejos de* 'far from' is composed of an adverb plus a preposition, the latter of which introduces the same type of source complement as for an adjective or a verb (cf. (192)):

- (193) Pedro está lejos de aquí.  
Pedro be.3sg far of here

The starting point for the comparison may be simply a cardinal number or measure phrase, as in (190)-(191), or it may be defined compositionally by a quantity or degree relative, as we saw in non-comparative cases such as those analyzed by Gutiérrez-Rexach (1995) (cf. (115)-(118)).

Returning to some of our earlier examples of comparative deletion in Spanish introduced by the string *de lo que*, repeated here, we thus obtain the following interpretations:<sup>61</sup>

- (194) a. Miguel perdió más dinero del que encontró.  
b. {Miguel lost more money than the amount (of money) that he found}
- (195) a. Josefina tomó más leche de la que me regaló a mí.  
b. {Josefina drank more milk than the amount (of milk) that she gave me}
- (196) a. Heriberto compró más libros de los que vendió.  
b. {Heriberto bought more books than the amount (of books) that he sold}

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<sup>61</sup> Cf. §5.2.1.2.2 for discussion about the interpretation of non-agreeing *de lo que* in comparative NCA.

- (197) a. Tomás consiguió más plumas para él mismo de las que pidió para nosotros.  
b.' {Tomás got more pens for himself than the amount (of pens) that he requested for us}

#### 5.2.1.4 Conclusion

We have seen that my proposal unifying the types of elements introduced by *de* finds itself supported by cross-categorial thematic properties of *de* complements as well as syntactic similarities, in the case of degree relatives, with non-comparative degree relatives.

## 5.2.2 Bare clause comparatives

### 5.2.2.1 A unified analysis or a split analysis ?

Recall from Chapter 3 that comparative ellipsis is preferred to comparative deletion or comparative subdeletion if possible. In Spanish specifically, this amounts to a preference for comparatives with *que* as the comparative particle (i.e., *que* comparatives) over comparatives with *de* as the comparative particle, followed by *lo que*, i.e., degree relative comparatives, whenever possible. It was concluded in §5.2.1 that the latter type of comparatives involve a preposition *de* whose complement is a degree *lo*, which in turn is modified by a special relative clause in which it is a gradable property that raises to specCP, hence the label. It is not as immediately clear how to analyze Que Comparatives, which I henceforth refer to as bare clause comparatives, since there is no preposition *de* or Deg element such as *lo* (or *cuanto*) introducing the second associate.

There are two reasonable options at this point. On one hand, we could take bare clause comparatives to constitute a subcase of degree relative comparatives. I will call this the UNIFIED ANALYSIS. Alternatively, we could take bare clause comparatives to constitute a distinct construction from degree relative comparatives. I will call this the SPLIT ANALYSIS. Each option has its advantages and disadvantages, although I opt for the latter.

#### The unified analysis

If we claim that bare clause comparatives are simply a subcase of degree relative comparatives, then we can preserve a unified analysis of ER complementation in Spanish. That is, ER always subcategorizes for both a QP or AP argument, denoting the compared property, and a prepositional degree argument, denoting the standard of comparison.

There are restrictions on what can separate the comparative particle and the understood base-generated position of the QP or AP whose degree is being com-

pared. Such restrictions hold both in degree relative comparatives and bare clause comparatives.<sup>62</sup> In the former, the island effects can be explained by the fact that the compared property AP or QP must raise to the specifier position of the degree relative via A'-movement, a type of movement which is subject to being blocked by island effects. The same restriction could potentially explain the locality constraints in bare clause comparatives if they, too, are a case of degree relative comparatives.

Nevertheless, there are also disadvantages to the unified analysis. First of all, there is no obvious reason why *de* and the appropriate form of *lo* are absent in bare clause comparatives if these constitute a subcase of degree relative comparatives. We would have to stipulate that degree relatives can either be introduced by a preposition (i.e., *de*) or simply occur as a bare clause with no overt indication of any preposition or the relativized Deg, i.e., the determiner of the relative clause.<sup>63</sup>

Secondly, bare clause comparatives allow deletion processes such as gapping and stripping that are not allowed in degree relative comparatives containing the string *de lo que* (with or without agreement on *lo*). We saw earlier that such deletion processes are generally allowed in those conjunction structures containing the type of symmetry traditionally associated with coordination, whereas they are generally disallowed in those less symmetrical conjunction structures traditionally associated with subordination.

#### The split analysis

The objections stated above show that there are also reasons to treat bare clause comparatives as a construction separate from degree relative comparatives. This is in fact the position I will take. I will specifically claim that bare clause comparatives in Spanish do not involve degree relatives but rather what I term an ADVERSATIVE CONJUNCTION STRUCTURE. This is what Stassen (1985) refers to as a

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<sup>62</sup> We will see below, however, that the restrictions involved are not the same in both cases.

<sup>63</sup> The head of the relative clause is actually the raised second head, denoting the compared property.

type of comparative construction called a Conjoined Comparative. According to Stassen (p.44), this type of comparison:

is typically effected by means of the adversative coordination of two clauses; one of these clauses contains the comparee NP, and the other clause contains the standard NP. Furthermore, there is a structural parallelism between the two clauses, to the effect that the grammatical function which the comparee NP fulfils in its clause is matched by the grammatical function of the standard NP in its clause. As a result, this type of comparative involves two grammatically independent clauses, which are connected in such a way that a gradation between the two objects can be inferred.

Stassen presents two subtypes of the Conjoined Comparative (p.44):

(198) [= Stassen's Type 5A] conjoined comparatives in which the two clauses contain *antonymous predicates*

(199) [=Stassen's Type 5B] conjoined comparatives in which the comparative predicates in the two clauses exhibit a *positive-negative polarity*

Stassen gives (200)[=his #22] as an example of the construction in (198) and (201)[=his #23] as an example of the construction in (199) [language name is given in caps]:

(200) SIKA:  
Dzarang tica gahar , dzarang rei kesik  
horse that big horse this small  
'That horse is bigger than this horse'

(201) HIXKARYANA:  
Kaw-ohra naha Waraka, kaw naha Kaywerye  
tall-not he-is W. tall he-is K.  
'Kaywerye is taller than Waraka'

These sentences are parallel to the two following sentences in English, respectively:

(202) Juan is tall, (but) Pedro is short. [antonymous predicates]

(203) Juan is tall, (but) Pedro isn't. [positive-negative polarity]

These are not comparative constructions in the sense described in the Introduction, although they are certainly comparisons. I claim in this chapter that

Spanish bare clause comparatives are actually adversative conjunction comparatives of the positive-negative polarity type. This will be developed in detail below.

The split analysis, in which bare clause comparatives involve adversative conjunction rather than a degree relative, removes the need to explain the lack of *de* and *lo* in bare clause comparatives, since there is no need for a subordinator-type element like *de* in a coordination-like structure, and *lo* is a Deg that denotes a relativized degree. Neither of these two elements is needed if the second associate is merely conjoined to the first clause in a coordination-type construction. Furthermore, the split analysis removes the need to explain the ability of bare clause comparative to undergo deletion processes such as gapping and stripping, which are typically limited to conjunction structures with a high degree of symmetry. As exemplified above in (200)-(201), the construction which I call adversative conjunction comparatives are attested cross-linguistically (Stassen (1985)).

The split analysis, however, introduces problems of its own. First of all, if a bare clause comparative involves adversative conjunction rather than a relative clause, we must claim that in even in coordination-type conjunction structures there is some dependency between conjuncts and that ER may optionally subcategorize either for a coordination-type adversative second conjunct or for a degree within a PP. I will call this the subcategorization problem. There are certainly other heads which can subcategorize for more than one type of complement, and we will see that in fact, there are other coordination-type conjunction structures in which there is an interdependency between the two conjuncts. Furthermore, the fact that some languages form comparatives exclusively through adversative conjunction constructions makes it feasible that such a construction is available in Spanish, even though it is not the only construction available.

Another potential problem for the split analysis is that it necessitates a distinct explanation of locality constraints between the comparative particle and the base-generated position of the understood QP or AP representing the compared

property in bare clause comparatives. A degree relative comparative involves A'-movement of the QP or AP involved, but it is not obvious that a bare clause comparative does if it is merely a second conjunct in a coordinate-type conjunction structure. I will show that in fact there are other movements that are involved which explain the locality restraints involved in bare clause comparatives, and hence, the locality problem does not favor the unification of degree relative comparatives and bare clause relatives. As a matter of fact, the locality constraints are not the same in degree relative comparatives and bare clause relatives. I will call the need to characterize a distinct locality condition for bare clause comparatives the LOCALITY PROBLEM.

### 5.2.2.2 The subcategorization problem

Recall from Chapter 3 that if ER occurs in a sentence without a second associate, the sentence is felt to be missing something. Consider, for example, the sentence in (204):

- (204) #Juan compró más libros.<sup>64</sup>  
 Juan buy.pret.3sg ER.MUCH.m.pl books  
 'Juan bought more books'

This sentence is not ungrammatical but is felt to be elliptical. It is preferable for there to be an overt second associate, introduced either by *de* or *que* in Spanish:

- (205) Juan compró más libros de [ ]-o-s  
 Juan buy.pret.3sg ER.MUCH.m.pl books of the-MUCH-m-pl  
 que vendió.  
 that sell.pret.3sg  
 'Juan bought more books than he sold'
- (206) Juan compró más de cinco libros.  
 Juan buy.pret.3sg ER.MUCH.m.pl of five books  
 'Juan bought more than five books'
- (207) Juan compró más libros que yo.  
 Juan buy.pret.3sg ER.MUCH.m.pl books that 1sg.nom  
 'Juan bought more books than I did'

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<sup>64</sup> As pointed out to me by Pamela Munro (p.c.), this sentence is grammatical if given a context, e.g., if *más* means 'additional'. However, the sentence is elliptical and needs a context.

I have claimed that a standard of comparison introduced by *de* is a PP complement to ER. Under the split hypothesis, a standard of comparison introduced by *que* is conjoined with what precedes it in a symmetric, coordination-type construction. This is a problem under the standard assumption that complements are introduced via subordination and not via coordination. On one level, we could simply dismiss this problem immediately by saying that since subordination and coordination do not differ in their external structure, any requirement demanding that a complement be a subordinate element must be discarded. Nevertheless, a *que* second associate is not like most complements in that most complements are not on a symmetric level with the clause containing the head that subcategorizes for them, so it is worthwhile to investigate the matter.

A second associate in a bare clause comparative is certainly not an adjunct, since if that were the case, we would expect a bare clause comparative to still express a complete proposition even if its second associate were removed. On the contrary, a bare clause comparative would be elliptical (cf. (204) above) without its second associate. Furthermore, we would expect it to be possible for there to be both a degree relative and a bare clause if the former is a complement and the latter is an adjunct, but this is not the case (208)-(209), since adjuncts can usually cooccur with complements (210) [hypothetical complements underlined, hypothetical adjuncts double-underlined]:

- (208) \*Juan compró más libros de que vendió que yo.  
 Juan buy.pret.3sg ER.MUCH.m.pl books of the-MUCH-m-pl  
 that buy.pret.3sg that 1sg.nom  
 'Juan bought more books than he sold than me'
- (209) \*Juan compró más de cinco libros que yo.  
 Juan buy.pret.3sg ER.MUCH.m.pl of five books that 1sg.nom  
 'Juan bought more than five books than me'
- (210) Juan comió un-a pizza en su casa.  
 Juan eat.pret.3sg a-f pizza in his house  
 'Juan ate a pizza in his house'

Instead, following Sáez (1993), I will take a bare clause second associate to stand in the same relationship to the clause preceding it (211) as a clause beginning with *ni* 'nor' does to the clause preceding it in correlative conjunction ('neither...nor...') (212) or as a clause beginning with *y* 'and' (in the sense of 'both') does to the clause preceding it (213) in correlative conjunction ('both...and...'):

- (211) Juan compró más libros que María discos.  
Juan buy.pret.3sg ER.MUCH.m.pl books that María records  
'Juan bought more books than María did records'
- (212) Ni compró Juan libros, ni compró María discos.  
nor buy.pret.3sg Juan books nor buy.pret.3sg María records  
'Neither Juan bought books, nor did María buy records'
- (213) Y compró Juan libros, y compró María discos.  
and buy.pret.3sg Juan books and buy.pret.3sg María records  
'Both Juan bought books and María bought records'

In any of these three sentences, removal of the second conjunct creates a sentence which seems incomplete or different in meaning:

- (214) #Juan compró más libros.  
Juan buy.pret.3sg ER.MUCH.m.pl books  
'Juan bought more books'
- (215) # Ni compró Juan libros.<sup>65</sup>  
nor buy.pret.3sg Juan books  
'Neither Juan bought books'
- (216) ?Y compró Juan libros.  
and buy.pret.3sg Juan books  
'And Juan bought books'

Dominique Sportiche suggests (p.c.) that if coordination involves any dependency relationship between the two conjuncts at all, it is a special type of cooccurrence requirement between the highest element in each respective conjunct. Thus, in (212) and (213), we would say that there is a dependency relationship between the two occurrences of *ni* and *y*, respectively.

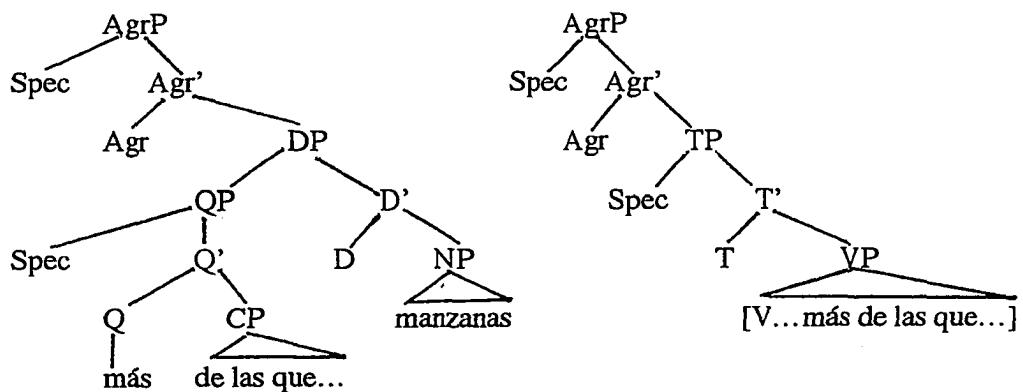
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<sup>65</sup> This sentence is grammatical but only under irrelevant readings in which *ni* means 'not even', such as 'Juan didn't even buy BOOKS', 'Not even JUAN bought books', etc.

I adopt Sáez's (1993) claim that *más* and *que* in (211) are also interdependent. Even though *más* does not appear to be the highest element in the first conjunct at S-str, it is reasonable to claim that it raises to a higher position at LF for purposes of quantifier raising (May (1985)).

Although the details of Sáez's (1993) account are somewhat different from mine, I present his proposal first and subsequently turn to mine. I begin with the structures that Sáez gives for the nominal system and the verbal system in his proposal. For the nominal system, he takes *más* to head a QP in the specifier of DP, and DP to be the complement of an AgrP (217).<sup>66</sup> As for the verbal system, he takes VP to be a complement of T, and TP, in turn, is a complement of Agr (218), AgrP being the highest projection other than CP according to Chomsky (1989).<sup>67</sup>

(217) Comparison in nominal system (218) Comparison in verbal system  
[=based on Sáez's #128-#130] [=based on Sáez's #131]



Sáez claims that at LF, *más* adjoins to the AgrP nearest to and higher than it, whether this AgrP is part of nominal agreement or clausal agreement. From there, *más* moves to successively higher and higher AgrP's, as long as no definite NP boundary, no CP boundary, nor any instance of a functional category that he tenta-

<sup>66</sup> Sáez attributes this last part of the structure to class notes by Esther Torrego (Spring 1990, institution and course not mentioned).

<sup>67</sup> Sáez bases this structure on Pollock (1987) and Chomsky (1989). [In the references section of his manuscript, Sáez only gives the names and years of these two sources].

tively calls WP, representing temporal or spatial location, intervenes. From its eventual landing site, *más* must c-command *que*, or else the sentence is not grammatical. This follows from Sáez's claim that comparative *que* is a polarity item which must be licensed by *más*.<sup>68</sup>

The exact mechanism that Sáez proposes for *más* raising is not entirely compatible with assumptions I make, since he takes *más* in amount comparisons to be a quantifier in the specifier of DP, whereas I consider *más* in amount comparisons to be the manifestation of the degree ER plus its Q complement MUCH, which in turn itself takes an NP complement. Nevertheless, his proposal at first glance seems to account very well for the scope of *más*. For example, it correctly predicts (219) to be grammatical and (220) to be ungrammatical:

- (219) Juan les dijo a más personas [que iba  
       Juan 3pl.dat say.pret.3sg to ER.MUCH.f.pl persons that go.imp.3sg  
           a haber<sup>69</sup> un-a fiesta] que yo.  
           to have.inf a-f party that 1sg.nom  
       ‘Juan told more people that there was going to be a party than I did’
- (220) \*Juan dijo [que más personas vinieron  
       Juan say.pret.3sg that ER.MUCH.f.pl persons come.pret.3pl  
           a 1-a fiesta] que yo.  
           to the-f party that 1sg.nom  
       ‘Juan said that more people came to the party than I did’

According to Sáez's proposal, the derivation of these two sentences should be as follows. The word *más* in (219) raises at LF first to the specifier of the AgrP corresponding to *personas*, and subsequently, it raises to the specifier position of the matrix AgrP. From that position it c-commands and hence licenses *que*, which, as I mentioned earlier, Sáez takes to be a polarity item.

In (220), *más* moves to the specifier of the AgrP corresponding to *personas* and then to the specifier of the subordinate AgrP, but from there, it cannot

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<sup>68</sup> Alternatively, *que* can be licensed by *menos*. The following discussion about *más* also applies to *menos*.

<sup>69</sup> This verb is used both as an existential verb 'for there to be' and as an auxiliary verb 'to have'. I gloss it as 'have' for space considerations and consistency, even in its use as an existential verb, such as in this example.

raise any higher since it cannot cross a CP boundary.

It is not clear why *más*, if it is indeed a quantifier, should not be able, via quantifier movement (May (1985)), to raise to specCP in the matrix. In fact, although *más* usually behaves as a clause-bound element,<sup>70</sup> it is not actually the case that *más* cannot ever cross a CP boundary. Consider, for example, the following sentence:

- (221) José piensa que yo soy más alt-o de lo  
José think.3sg that 1sg.nom be.1sg ER tall-m of the.n  
que soy de verdad.  
that be.1sg of truth  
'José thinks that I am taller than I really am'<sup>71</sup>

In (221), *más* takes scope over the verb *piensa*,<sup>72</sup> which it can only do if it raises out of the CP complement of *piensa*, under the assumption that an element can only have scope over another element if at some syntactic level the former c-commands the latter (cf. May (1985)).

Recall from Chapter 4 that I do not take *más* to be a quantifier. Nevertheless, we can assume that there is some position within an articulated complementizer system (cf. Rizzi (1995), also discussed below) to which the projection containing ER and the compared property can raise at LF, rather than raising to IP. I will

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<sup>70</sup> Sáez (1993) also discusses the fact that certain nominals are opaque to *más*:

(i) [=his (141a.)] \*L-a construcción de más iglesias que de tabernas...  
the-f construction of ER.MUCH.f.pl churches that of taverns  
'The construction of more churches than taverns...'

In order for (i) to be grammatical, *más* would have to c-command *que* at some point in the derivation. However, the nominal *la construcción..iglesias* acts as a barrier for *más*, and hence, the sentence is ungrammatical.

Thus, *más* is also nominal-bound in some cases, too.

<sup>71</sup> This example is based on a famous dialogue attributed by Von Stechow (1984, p.5) to Russell (1905):

Guest: I thought your yacht was larger than it is.  
Yacht owner: No, my yacht is not larger than it is.

The yacht owner's answer addresses a reading of the guest's comment that he or she probably did not intend. Under that reading, the guest would be confessing to having had an absurd thought, the one expressed by the yacht owner.

<sup>72</sup> I am referring to the non-absurd reading. Under the absurd reading, *más* takes narrow scope with respect to the verb *piensa*.

assume that the reason why *más* cannot raise across a CP boundary in (220), even though it can in (221), is that the intended scope of the matrix predicate in (220) is wider than that of *más*, and hence, *más* must not raise higher than it. In any case, we see that for a sentence to be grammatical, *más* must raise to a position from which it can c-command, and hence license, the *que* second associate, assuming that doing so will not result in an unintended or incoherent scopal relation between *más* and some other predicate.

Of course, even though *más* can cross some clause boundaries, we will see below that islands to wh-movement are also barriers for *más*.

I consider the raising of *más* to a high position at LF in order to license the *que* second associate<sup>73</sup> to be analogous to the raising of negation to a high position at LF in cases of coordination-type conjunction of the following type, similar to the type discussed by Sáez (1993):<sup>74</sup>

- (222) Juan no comió, ni comió María.  
 Juan not eat.pret.3sg nor eat.pret.3sg María  
 ‘Juan didn’t eat, nor did María’

The second conjunct must be licensed by *no* in the first conjunct, since without it, the second conjunct may not appear:

- (223) \*Juan comió, ni comió María.  
 Juan eat.pret.3sg nor eat.pret.3sg María  
 ‘Juan ate, nor did María eat’

We can see, then, that *más* and *que* have a relationship very similar to pairs of correlative conjunctions such as *y...y...* ‘both...and...’, *o...o...* ‘either...or...’, and *ni...ni...* ‘neither...nor...’. In each pair, the presence of the first element requires the presence of the second element, except that *más* may alternatively select a PP headed by *de*. In order for the cooccurrence requirement to be checked, both el-

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<sup>73</sup> ER may carry some feature, such as [+comparative], which must be checked in some projection within an articulated complementizer system. Alternatively or in addition, ER may raise for scopal reasons. Thus, ER would raise for reasons of its own rather than simply in order to license the *que* second associate. This would satisfy Chomsky’s principle of Greed (1993).

<sup>74</sup> The exact type he discusses is presented below.

ements in each pair must raise sufficiently high to be visible to each other.

### 5.2.2.3 The locality problem

#### 5.2.2.3.1 Defining the locality conditions in Spanish bare clause comparatives

In bare clause comparatives in Spanish not only must the Deg that is understood to modify the compared property AP or QP be covert but also most of the remaining elements understood to be present semantically in the bare clause, too. The one exception to this is the case of comparative subdeletion with a preposed second head, as in (224) [=III-155]:

- (224) Felipe lavó más coches que camionetas  
Felipe wash.pret.3sg MUCH.m.pl.ER cars that pick.up.trucks  
lavó Rodrigo.  
wash.pret.3sg Rodrigo  
'Felipe washed more cars than Rodrigo washed pick-up trucks'

Sáez (1993) is the only native speaker of Spanish that I have found who accepts bare clause cases of comparative subdeletion with regular word order as in

(225) below:

- (225) Felipe lavó más coches que Rodrigo  
Felipe wash.pret.3sg MUCH.m.pl.ER cars that Rodrigo  
lavó camionetas.  
wash.pret.3sg pick.up.trucks  
'Felipe washed more cars than Rodrigo washed pick-up trucks'

Most speakers choose instead the construction in (224), also accepted by Sáez. Sáez claims that this construction has the same structure as degree relative comparatives. I will not address this issue, however, but instead refer the interested reader to Sáez (1990, for example).

As far as all other types of bare clause comparatives in Spanish are considered, however, we only have indirect evidence there there is really an entire clause in the second associate. For example comparative deletion is not possible in a bare clause comparative:

- hypothetical underlying bare clause comparative exhibiting comparative deletion
- (226) \*Juan compró más manzanas que tú vendiste [ ]  
 Juan buy.pret.3sg ER.MUCH.f.pl apples that 2sg.nom sell.pret.2sg  
 'Juan bought more apples than you sold'

The way in which comparative deletion is actually manifested in Spanish is in the form of a degree relative comparative:

- (227) Juan compró más manzanas de I-[ ]-a-s  
 Juan buy.pret.3sg ER.MUCH.f.pl apples of the-MUCH-f-pl  
 que tú vendiste.  
 that 2sg.nom sell.pret.2sg  
 'Juan bought more apples than you sold'

There are, however, surface structures which seem to derive from a source with the same type of underlying structure as (226).<sup>75</sup> For example, recall from Chapter 3 that if the verb in each conjunct is identical, then a reduced bare clause may surface in the form of gapping, a construction which I introduced in that chapter as comparative gapping:

comparative gapping

- (228) Juan comió más manzanas que tú peras.<sup>76</sup>  
 Juan eat.pret.3sg ER.MUCH.f.pl apples that 2sg.nom pears  
 'Juan ate more apples than you, pears'

If everything but one phrasal constituent is identical in each conjunct, then comparative ellipsis usually results instead (229), which I take to be a specific instance of stripping – the result of stripping applied to a sentence such as (226):

stripping

- (229) Juan comió más manzanas que tú  
 Juan eat.pret.3sg ER.MUCH.f.pl apples that 2sg.nom  
 'Juan ate more apples than you'

Thus, I will assume that the locality requirements between *que* and the gap of hypothetical Spanish bare clause comparatives such as in (226) can be deduced

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<sup>75</sup> The sentences in (228) and (229) do not have the exact same underlying sentence as (226) since some of the lexical items are different. I have adjusted the lexical items in each case so that the number and types of contrasts are appropriate to the construction at hand.

<sup>76</sup> Recall from Chapter 3 that although some speakers of English disallow comparative gapping, comparative gapping in Spanish is uncontroversially grammatical.

from the behavior of analogous, actually occurring sentences involving gapping or stripping.

The English translation of (226) shows that English comparative deletion, as opposed to Spanish comparative deletion, does take the form of a bare clause comparative. Note that in such a structure, there is a locality constraint between *than* and the position of the second head of the comparison,<sup>77</sup> here the abstract MUCH. The word *than* and the second head of a comparison may not be separated by any domains which are opaque to A'-movement, such as a complex noun phrase (230), a wh-island (231), an adjunct (232), or a sentential subject (233).<sup>78</sup>

A complex noun phrase is a nominal expression which includes either a relative clause (230a) or a complement clause to a noun (230b). Such complement clauses and all relative clauses are barriers to A'-movement according to Ross's (1967) Complex Noun Phrase Constraint:

- (230) a. \*Juan bought more apples **than** I saw [the girls [who<sub>j</sub> t<sub>j</sub> found [e]]]  
b. \*Juan bought more apples **than** I resent [the fact that Pedro sold [e]].

Wh-islands are also a barrier to A'-movement and block the appropriate local relationship between *than* and the base-generated position of the covert second head:

- (231) \*Juan bought more apples **than** I asked [why<sub>j</sub> Pedro sold [e] t<sub>j</sub>].

Adjunct clauses, which block A'-movement, such as the temporal clause in (232) also interfere with the locality requirement under discussion:

- (232) \*Juan bought more apples **than** I left the market [after Pedro sold [e]].

Lastly, sentential subjects such as the one in (233) are also islands for A'-

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<sup>77</sup> I use the symbol [e] in the following examples as a placeholder for the gap corresponding to the covert second head without making a claim as to whether or not the second head actually moves. I do claim, however, that in the case of the contrast or contrasts, there is movement to a focus projection.

<sup>78</sup> The domains which are barriers to A'-movement are indicated by (the outermost) square brackets [ ].

movement:

- (233) \*Juan bought more apples **than** [that Pedro sold [e]] is surprising.

However, outside of these constraints, the distance between the word *than* and the gap is in principle<sup>79</sup> unbounded (234)-(236), although processing difficulties arise after a certain degree of embedding (236):

- (234) Juan bought more apples **than** [you said [that Pedro sold [e]]].  
(235) Juan bought more apples **than** [I could swear [that you said [that Pedro sold [e]]]].  
(236) ?Juan bought more apples **than** [I could swear [that you asked me [to get Pedro [to say that [Elisa sold [e]]]]]]].

This is true as long as the subcategorization requirements of *más* that we saw earlier can be met – *más* must be able to c-command *que*. Thus, even if *más* is embedded within a complement clause in the first associate, for example, as long as the matrix predicate, such as *thought* in (237), can take narrow scope with respect to *más*:

- (237) Juan thought that you had bought more apples **than** we eventually all found out [that you really did buy [e]].

The locality constraint between the Spanish comparative particle *que* and the hypothetical position of the gap in an instance of comparative gapping or comparative stripping (i.e., comparative ellipsis), which I take to be surface realizations of an underlying bare clause, turn out to be even tighter than the islands effects seen

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<sup>79</sup> There are certain other factors involved here, although I will not discuss them as that is beyond the scope of this work. As an example, though, Pamela Munro offers (p.c.) the following sentence as ungrammatical, even though it violates no principles mentioned in the text:

(i) \*Juan bought more apples **than** [you were surprised [that Pedro sold [e]]].

I actually take this sentence to be somewhat grammatical, but the point that grammaticality of these types of sentences is weakened by increasing complications in structure or inclusion of certain particular predicates is a well taken one.

directly in the case of English bare clause comparatives,<sup>80</sup> as we will see presently.<sup>81</sup>

First of all, those structures functioning as islands in English bare clause comparatives, i.e., the structures that are expected to function as islands to wh-movement, such as degree relatives, also do so in the case of bare clause comparatives. That is, the comparative particle *que* and the hypothetical base-generated position of the covert second head in an instance of comparative gapping or comparative stripping cannot be separated across barriers to wh-movement.<sup>82</sup>

If, for example, the first head is embedded within a wh-island, so is *más*. This is the case because: (i) *más* either includes the second head if the second head is MUCH, or takes the second head as its complement if the second head is an adjective or adverb, and (ii), even though *más* can raise out of some CP's, it cannot escape wh-islands. Therefore, in order for *más* to license the *que* clause, i.e., the entire second associate, the second associate must be located within that wh-island as well, including the comparative particle *que* and the second head (as well as the contrast within the second associate). Even though the second associate is highly elliptical, and both the second head and other material that would help us elaborate the structure of the second associate are covert, we know that both the comparative particle *que* and the second head are interpreted within the wh-island since only the interpretation denoted by a structure in which they are both within the wh-island is acceptable. The interpretation denoted by a structure in which *que* is located outside

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<sup>80</sup> Recall that whereas Spanish bare clause comparatives may not contain a verb and hence are only assumed to be clauses based on their interpretation, a second associate with a virtually full overt clausal structure may appear after *than* in English. It may be, of course, that some or all of English *than* comparatives involve degree relatives, although there is no overt equivalent to Spanish *de* in such cases (unless *than* is taken to be that equivalent (cf. Napoli (1983), for example), in which case there is no equivalent to Spanish *que* in such constructions), nor is there an overt equivalent to Spanish *lo* in such cases. I remain neutral as to whether or not the second head undergoes movement in second associates in English comparatives.

<sup>81</sup> Material shown in parenthesis in the following examples does not surface but appears to be present underlyingly based on the semantic properties of the second associate.

<sup>82</sup> In the following examples, the word *than* and the hypothetical base-generated position of the second head are given in boldface, and the first word of constituents functioning as barriers are underlined.

of the wh-island is unacceptable:<sup>83</sup>

- (238) Celia me preguntó quién escribió más libros que Eduardo.  
Celia 1sg.dat ask.pret.3sg who write.pret.3sg ER.MUCH.m.pl books that Eduardo
- ✓ 'Celia asked me [who wrote more books **than** Eduardo wrote [e]]'  
\* 'Celia asked me [who wrote more books [**than** Eduardo asked me who wrote [e]]]'  
[= {Celia asked me the names of the authors of more books than Eduardo asked me}]

Similarly, if the first head is embedded within a relative clause, both *que* and the second head must be interpreted within the relative clause:

- (239) Conozco a escritores que han escrito más libros que tú.  
know.1sg p.a writers that have.3pl write.pastpart<sup>84</sup> ER.MUCH.m.pl books that 2sg.nom
- ✓ 'I know writers [who have written more books **than** you have written [e]]'  
\* 'I know writers who have written more books [**than** you know writers who have written [e]]'  
[= {I know the authors of more books than you know authors of books}]

It should come as no surprise that if the first head is embedded within the complement of a noun, *que* and the second head must be interpreted as occurring within the noun's complement:

- (240) Admiro el hecho de que hayas podido conocer a más escritores que Eduardo.  
admire.1sg the.m fact of that have.subj.2sg be.able.pastpart know.inf a.p ER.MUCH.m.pl writers that Eduardo
- ✓ 'I admire the fact [that you've been able to meet more writers **than** Eduardo has been able to meet [e]]'  
\* 'I admire the fact that you've been able to meet more writers [**than** Eduardo admires the fact that you've been able to meet [e]]'  
[= {There are more writers that I admire the fact that you've been able to meet than there are writers that Eduardo admires the fact that you've been able to meet}]

Lastly, if the first head is embedded within an adjunct island, *que* and the

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<sup>83</sup> The unacceptable interpretations in these examples are also partially ruled out simply on the basis of the oddity (although not impossibility) of giving *más* wide scope over the matrix verb.

<sup>84</sup> The abbreviation 'pastpart' indicates that the verb form so designated is a part participle.

second head must be interpreted as occurring within the adjunct isalnd:

- (241) Estoy content-o porque has podido conocer a  
be.1sg content-m because have.2sg be.able.pastpart know.inf a.p  
más escritores que Eduardo.  
ER.MUCH.m.pl writers that Eduardo  
✓ 'I am happy [because you have been able to meet more writers **than**  
Eduardo has been able to meet [ e ]]'  
\* 'I am happy because you have been able to meet more writers [**than**  
Eduardo is happy because you have been able to meet [ e ]]'  
[= {There are more writers that I am happy because you have been able to  
meet them than there are writers that Eduardo is happy because you  
have been able to meet them}]

These locality conditions are due to the subcategorization properties between ER and the comparative particle (i.e., between ER and the second associate).

In addition to these locality conditions, which English bare clause comparatives are subject to,<sup>85</sup> degree relative comparatives in Spanish would be expected to be subject to, and Spanish bare clause comparatives are subject to, bare clause comparatives are actually, as stated above, subject to even more stringent locality conditions than the other types of comparatives – The word *que* and the hypothetical position of the gap may not be separated by any clausal boundary at all, even if no island domains are present.

For example, the sentence in (242) is unproblematic, since the hypothetical position of the gap is not separated from *que* by any clausal boundaries.

- (242) Juan comió más manzanas que tú.  
Juan eat.pret.3sg ER.MUCH.f.pl apples that 2sg.nom  
'Juan ate more apples than you'

Interpretation:

{Juan comió más manzanas que tú  
Juan eat.pret.3sg ER.MUCH.f.pl apples that 2sg.nom  
( comiste [e] manzanas)  
eat.pret.2sg MUCH.f.pl apples  
{Juan ate more apples than you ate apples}}

However, even though *más* can take wide scope with respect to a verb like

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<sup>85</sup> This first group may be a member of the second group, depending on one's analysis of English bare clause comparatives. As mentioned earlier, I remain neutral on this issue.

*piensa*, the sentence in (243) may only receive Interpretation #1, since Interpretation #2 forces a clausal boundary to separate *que* and the hypothetical position of the gap:

- (243) Juan piensa que Gerardo come más manzanas  
 Juan think.3sg that Gerardo eat.3sg ER.MUCH.f.pl apples  
 que tú.  
 that 2sg.nom

✓Interpretation #1:

{Juan think.3sg that [Gerardo eat.3sg ER.MUCH.f.pl apples  
 que tú. (comes [e] manzanas)]}  
 that 2sg.nom eat.2sg MUCH.f.pl apples  
 {Juan thinks that Gerardo eats more apples than you (eat [ ] apples)}

\*Interpretation #2:

{Juan piensa que [Gerardo come más manzanas] que  
 Juan think.3sg that Gerardo eat.3sg ER.MUCH.f.pl apples that  
 tú (piensas que [Gerardo come [e] manzanas])  
 2sg.nom think.2sg that Gerardo eat.3sg MUCH.f.pl apples  
 {Juan thinks that Gerardo eats more apples than you think that Gerardo eats  
 [ ] (apples)}

Note that the locality constraint which holds between *de lo que* (with or without agreement on *lo*) and the position of the gap in degree relative comparatives in Spanish is subject to island effects, as expected, but not clausal embedding in general (244), just as we saw was the case for the locality constraint between *than* and the position of the gap in English *than* comparatives (cf. (234)-(236) and (245)):

- (244) Juan compró más manzanas de l-[ ]-a-s que  
 Juan buy.pret.3sg ER.MUCH.f.pl apples of the-MUCH-f-pl that  
 me dijiste [que Pedro vendió [e]].  
 1sg.dat say.pret.2sg that Pedro sell.pret.3sg  
 'Juan bought more apples than you told me that Pedro sold'

- (245) Juan bought more apples than you told me [that Pedro sold [e]].

Furthermore, the sentence in (244) simultaneously demonstrates another difference between degree relative comparatives and bare clause comparatives with regards to locality restrictions. It demonstrates that degree relative comparatives

allow clausal boundaries (although not barriers to wh-movement) between *de lo que* (again, with or without agreement on *lo*) and the contrast or contrasts in the second associate of the comparison.<sup>86</sup>

In bare clause comparatives, on the other hand, it is not possible to separate *que* from the hypothetical base-generated position of the contrast or contrasts in the second associate across a clause boundary. In the following example, only the first interpretation is possible, since in the second interpretation, there would be a clause boundary between *que* and the hypothetical base-generated position of *tú*, i.e., the contrast in the second associate in these examples:<sup>87</sup>

- (246) Juan dice que Gerardo es un imbécil con más  
Juan say.3sg that Gerardo be.3sg a.m imbecile with ER.MUCH.f  
frecuencia que tú.  
frequency that 2sg.nom

✓Interpretation #1:

{Juan dice que Gerardo es un imbécil con más  
Juan say.3sg that Gerardo be.3sg a.m imbecile with ER.MUCH.f  
frecuencia que tú (dices que Gerardo es un imbécil)}  
frequency that 2sg.nom say.2sg that Gerardo be.3sg a.m imbecile  
'Juan says that Gerardo is an imbecile more often than you do[=say so]'

\*Interpretation #2:

Juan dice que Gerardo es un imbécil con más frecuencia que (Juan dice que)  
tú (eres un imbécil).  
'Juan says that Gerardo is an imbecile more often than Juan says that you are  
[an imbecile]'

Thus, the locality conditions in bare clause comparatives are stricter than the ones in *de lo que* comparatives. This supports my proposal that bare clause comparatives are not a subcase of degree relative comparatives. What remains to be explained is why bare clause comparatives involve locality conditions at all despite the absence of a relative clause structure.

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<sup>86</sup> The second associate contrast is *Pedro* in this example.

<sup>87</sup> In the following examples, the adverbial expression *con más frecuencia* 'more often' should be taken to modify the verb *decir* (in its various forms) rather than the embedded verb *ser*.

### 5.2.2.3.2 Explaining the Spanish locality conditions

The solution that I propose essentially combines two proposals: Saéz's (1993) proposal regarding second associate contrasts in comparatives and Rizzi's (1995) articulated CP proposal.

Sáez (1993, p.13) reports the following proposal made by Pesetsky (1982): "the correspondents in a coordinate structure...move to Comp at LF...just as wh-in-situ constituents in an interrogative sentence do..."<sup>88</sup>

Although Sáez does not report any definition that Pesetsky may have given for the term correspondents, I assume that Pesetsky takes correspondents in a coordinate structure to be those elements in the second of two conjoined clauses which have parallel functions in their respective clauses and which contrast with one another. For example, in (247), *Mary* is one correspondent, corresponding to the subject *John* of the first clause, and *the record* is a second correspondent, corresponding to the direct object *the book* in the first clause. The structure of (247a) is given in (247b):

- (247) a. John bought the book, and Mary, the record.  
b. CP[John<sub>i</sub> the book<sub>j</sub>] IP[e<sub>i</sub> bought e<sub>j</sub>]  
and  
CP[Mary<sub>k</sub> the record<sub>l</sub>] [e<sub>k</sub> (bought) e<sub>l</sub>]]

In (247b), we see that the correspondents in the second clause have risen to clause-initial position, which Pesetsky takes to be Comp but which I take to be the specifier position of a focus projection.<sup>89</sup> Sáez claims that in this example the correspondents that have moved to Comp at LF undergo absorption in the same way that two wh-elements as in (248) do, along the lines of Higginbotham and May (1981):

- (248) a. Who bought what ?  
b. CP[who<sub>i</sub> what<sub>j</sub>] IP[e<sub>i</sub> bought e<sub>j</sub>]

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<sup>88</sup> The ellipses indicate omission of example numbers from Sáez (1993).

<sup>89</sup> They are both associated with a single focus projection but not in a ternary structure. Rather, one of the contrasts is actually in the specifier position of the other – this is a Kayne (1994) style interpretation of a traditional adjunction structure.

Absorption is the combination of n-many independent operators into one n-ary operator, specifically a binary operator in the examples at hand.

Sáez extends Pesetsky's claim regarding the correspondents in a non-comparative coordination structure to the correspondents in what he calls COORDINATE COMPARATIVES, which correspond to what I have labelled bare clause comparatives). Thus, the LF representations for (249) and (251) [Sáez's examples #28a and #44, respectively, glosses and translations mine] are as in (250) and (252), respectively [based on his examples #64a and #64b, respectively]:

- (249) Estuve con más amigos en Roma que en París.  
be.pret.1sg with ER.MUCH.m.pl friends in Rome that in Paris  
'I was with more friends in Rome than in Paris'
- (250) IP[más<sub>i</sub> PP[en Roma]<sub>k</sub>] IP[estuve PP[con NP[e<sub>i</sub> amigos]] PP[e<sub>k</sub>]]]  
que  
IP[PP[en París]<sub>j</sub> e<sub>j</sub>]]
- (251) Más chicos vieron films de Chaplin que de Keaton.  
ER.MUCH.m.pl guys see.pret.3pl films of Chaplin that of Keaton  
'More guys saw films of Chaplin's than of Keaton's'
- (252) IP[más<sub>i</sub> PP[de Chaplin]<sub>k</sub>] IP[e<sub>i</sub> chicos vieron NP[films PP[e<sub>k</sub>]]]  
que  
IP[PP[de Keaton]<sub>j</sub> e<sub>j</sub>]]

Note that for Sáez, raising to Comp means adjunction to IP. I instead choose to characterize the raising of the element ER and the raising of the contrast or contrasts in each associate within the schema proposed by Rizzi (1995), which is in line with the overall framework discussed in Chapter 1.

Rizzi (1995) proposes an articulated structure for the outermost portion of clauses, with what he terms *force* as the outermost / highest projection, followed by at most one focus interspersed with possibly several topics, all followed by the finiteness projection. In brief, the element ER in the matrix raises to the specifier position of one of the projections in the articulated matrix CP, most likely specCP itself given its quantifier-like nature. Secondly, the contrast or contrasts in each re-

spective term of comparison carries a feature [+Foc] which must be checked by the head of the focus projection proposed by Rizzi in its own associate, called FocP, which also carries the feature [+Foc]. If there is more than one contrast in each associate, then contrasts are stacked, one located directly in specFocP, the next located in the specifier of the contrast located directly in specFocP, and so on. Feature-checking is accomplished via spec-head agreement.

Consider the following example:

- (253) José compró más libros que Fernando.  
 José buy.pret.3sg ER.MUCH.m.pl books that Fernando  
 'José bought more books than Fernando'

In this sentence, Fernando is the focus of contrast, since it is as a function of him that we arrive at a number of books, namely the amount of books that he bought, which serves as the starting point from which to measure the amount of books that José bought. In fact, there is a *de lo que* construction with the same interpretation as (254):

- (254) José compró más libros de l-[ ]-o-s que  
 José buy.pret.3sg ER.MUCH.m.pl books of the-MUCH-m-pl that  
 compró Fernando.  
 buy.pret.3sg Fernando  
 'José bought more books than Fernando bought'

If we were to claim that (254) is the source of (253), we would have to explain why the unit *de los* and the second verb *compró* are covert in (253). Although this type of solution would allow a syntactic unification between the semantically related *que* and *de lo que* comparatives in Spanish, it would require ad hoc stipulations.

I propose, instead, that (253) involves (255), with the interpretation indicated, as its source instead of (254), the string in parentheses either base-generated null or deleted at some point in the derivation:

- (255) José compró más libros que Fernando (no compró  
           José buy.pret.3sg ER.MUCH.m.pl books that Fernando not buy.pret.3sg  
           [ ] libros).  
           x.MUCH.m.pl books  
           {José bought more books, but/and Fernando didn't buy as many / very  
           many books}

The symbol *x* here, as opposed to in degree relatives, represents a semantic degree denoted by a covert Deg such as *very*, *so*, or *as*, not defined clearly in terms of the actual amount of books bought by Fernando. In a degree relative, on the other hand, such a position is occupied instead by a covert Deg representing the actual degree to which the element or elements constituting the second term hold the compared property.

It is not clear whether Fernando, the focus of contrast, raises to specFocP before or after Spellout, since the string in brackets is null by Spellout and hence cannot be used to diagnose the position of Fernando at Spellout. In either case, Fernando must raise to specFocP by Spellout, yielding an LF as in (256):

- (256) más<sub>i</sub> FocP [José<sub>k</sub> Foc'[e<sub>k</sub> compró e<sub>i</sub>] libros]  
           que  
           FocP [Fernando<sub>j</sub> Foc' [t<sub>j</sub>]].

By adopting the source sentence in (255), I am proposing an adversative conjunction structure, discussed earlier in this section, syntactically resembling certain comparative types found in other languages in the world and semantically resembling one of the interpretations that has been proposed for comparatives in general. The type of interpretation I am referring to is that attributed to Seuren (1973) by Breivik (1991) as demonstrated in (259) for the sentence in (258):

- (258) [=Breivik's #1]  
       Jim is taller than Joe.  
  
  (259) [=Breivik's #2]  
       Ǝe: extent[Jim is tall to e ^ ~[Joe is tall to e]]  
       There is an extent *e* such that Jim is tall to *e* and Joe is not tall to *e*

Breivik claims that the following two claims are central to Seuren's analysis

of (260):

- (260) [=Breivik's #3]

- a. Particle comparatives<sup>90</sup> are related to coordinate structures.
- b. Comparatives of inequality involve negation.

These characteristics are in fact predicted for one subtype of the kind of construction which I introduced earlier as adversative conjunction comparatives, namely the type exhibiting positive-negative polarity. This is exemplified further in the following examples, all taken from Stassen (1985, pp. 186-188):<sup>91</sup>

MENOMINI [Stassen's #10a]

- (261) Apeqsek tata'hkesew, nenah teh kan.  
more he-is-strong I and not  
'He is stronger than me'

MIXTEC [Stassen's #12a]

- (262) Luu caa nuu yaha, nasuu nuu ndijnu  
good very people this, not people Tlaxiaco  
'This people is better than the Tlaxiaco people'

MOTU [Stassen's #14a]

- (263) Ina na namo herea, una na dia namo  
this is good more that is not good  
'This is better than that'

SHIPIBO [Stassen's #18a]

- (264) Nato aibo hakun, wuitsa kiskaribi  
this woman beautiful others not-be-so  
'This woman is more beautiful than others'

YAVAPAI [Stassen's #20a]

- (265) Kmtu -v -c mine: rav-a kmtuq<sup>W</sup>ath-c  
watermelon-DEM-SUBJ tasty very-TNS , canteloupe-SUBJ  
ke mine: rav-a om-i  
not tasty very-TNS not-TNS  
'Watermelons are tastier than canteloupes'

Note that all of these structures lack an overt conjunction except for (261), which contains the overt conjunction *teh* 'and'. The existence of negative-positive

<sup>90</sup> I assume that Breivik is referring to comparatives in which the second associate is introduced by a comparative particle. I refer the interested reader to Stassen (1985) for a classificatory system of world comparative types, including particle comparatives.

<sup>91</sup> The language names are in all caps.

polarity constructions in comparatives in these languages nevertheless makes it reasonable to claim that such a construction exists, even somewhat disguised, in other languages such as Spanish. I claim that Spanish comparatives such as (253) have a similar or identical underlying structure (cf. (255)).

The examples in (261) and (262) appear to be instances of stripping, since there are no overt constituents of the second clause other than a focus of contrast, a negative element, and in the case of (261), a conjunction. Hence they are even more similar to the Spanish example in (253) than the others.

So in (255), the element *que* is a coordinator-type conjunction, accompanied by a covert negative morpheme, together functioning in a manner somewhat similar to English *but* or *whereas*. An English paraphrase of (255) is given in (266):

- (266) José bought more books, whereas Fernando didn't buy (as/so/very)<sup>92</sup> many books.

We have seen that in Spanish bare clause comparatives, *que* and the hypothetical base-generated position of the second associate contrast may not be separated by a clausal boundary, nor may *que* and the second head within the second associate be separated by a clausal boundary. It is only the former restriction which follows from the raising of the contrast that I propose. The latter restriction is probably an epiphenomenon resulting from the former restriction. The relevant restriction follows from my proposal that the second associate contrast or contrasts, including the second head if different than the first head, must raise at LF to specFocP. This movement is clause-bound, as opposed to wh-movement.

Although there is not an entire overt clause present to diagnose how far a contrast within the second associate of a bare clause comparative has raised, we can reconstruct what the proposed clause should consist of based on the interpretation that is implied by overt elements in the matrix clause, as I stated earlier.

Another important question arises at this point – why is the clause out of

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<sup>92</sup> I don't have enough information to decide which of these three Deg's is the most appropriate in this paraphrase.

which the focus of contrast raises obligatorily covert? A tentative answer is that there is some principle of economy by which repetition of material in general is avoided. In comparatives, this means that repetition of elements in the second associate that are also elements in the first associate, i.e., either the second head, if non-distinct from the first head, and/or the common ground, is avoided if possible. Contrasts, on the other hand, must always be overt, both to receive focus and in order to provide material that would be unrecoverable unless entirely clear from context. In (267), the common ground elements *pasa* and *tiempo*, the second head MUCH, and the understood negative element *no* are covert in the second associate, whereas the two contrasts in the second associate, *Fernando* and *en el gimnasio*, are both overt. A post-Spellout stage of (267) is given in (268) [covert elements are given in outline font]:

- (267) Gonzalo pasa más tiempo en l-a biblioteca que Fernando en el gimnasio.  
 Gonzalo pass.3sg ER.MUCH.m time in the-f library that Fernando in the.m gym  
 'Gonzalo spends more time in the library than Fernando (does) in the gym'
- (268) Gonzalo pasa más tiempo en l-a biblioteca que Fernando;  
 Gonzalo pass.3sg ER.MUCH.m time in the-f library that Fernando  
 [en el gimnasio]<sub>j</sub>, t<sub>i</sub> no pasa much-[ ]-o tiempo t<sub>j</sub>.  
 in the.m gym not pass.3sg very-MUCH-m time

As we saw before, this is an instance of gapping, which also occurs in non-comparatives. Hence, in the following non-comparative instance of gapping, we also see that the common ground, *pasa los sábados*, is covert, whereas the contrasts in the second clause, *Fernando* and *en el gimnasio*, are overt:

- (269) Gonzalo pasa l-o-s sábados en l-a biblioteca, y Fernando;  
 Gonzalo spend.3sg the-m-pl Saturdays in the-f library and Fernando  
 [en el gimnasio]<sub>j</sub>, t<sub>i</sub> pasa l-o-s sábados t<sub>j</sub>.  
 in the.m gym pass.3sg the-m-pl Saturdays  
 'Gonzalo spends Saturdays in the library, and Fernando in the gym'

Since stripping occurs in both comparative and non-comparative sentences,

one would expect that a non-comparative version (271) of a sentence like (270), which is an example of *comparative ellipsis* should be allowed, but it is not:

- (270) Pedro tiene más dinero que Fernando.  
Pedro have.3sg ER.MUCH.m money that Fernando  
'Pedro has more money than Fernando'
- (271) \*Pedro tiene much-[ ]-o dinero y Fernando.  
Pedro have.3sg very-MUCH-m money and Fernando  
'Pedro has a lot of money, and Fernando (has a lot of money)'

First, note that there are languages which do allow sentences like (69), for example, Dutch (Rijkhoek (1996)):

[Rijkhoek's #8a]

- (272) Mannen bewonderen deze film (,) en vrouwen.  
men admire this movie and women  
'Men admire this movie, and women (do, too)'

Second, even Spanish permits structures more or less like (271) as long as there is another element present to mark whether the contrast in the second conjunct holds the shared property in the same or the opposite orientation as the contrast in the first conjunct:

- (273) a. Pedro tiene much-[ ]-o dinero y Fernando también.  
Pedro have.3sg very-MUCH-m money and Fernando also  
'Pedro has a lot of money, and Fernando, too'
- b. Pedro no tiene much-[ ]-o dinero y Fernando tampoco.  
Pedro not have.3sg very-MUCH-m money and Fernando either  
'Pedro doesn't have a lot of money, and Fernando, either'
- c. Pedro tiene much-[ ]-o dinero pero Fernando no.  
Pedro have.3sg very-MUCH-m money but Fernando not  
'Pedro has a lot of money, but not Fernando'
- d. Pedro no tiene much-[ ]-o dinero pero Fernando sí.  
Pedro not have.3sg very-MUCH-m money but Fernando yes  
'Pedro doesn't have a lot of money, but Fernando does'

In (273a) and (273b), Fernando shares the same orientation as Pedro with respect to the property of having a lot of money. Although I do not explore comparisons of equality in depth here, I propose that *tanto* and *tan poco*, respectively,

taken together with the comparative particle *como* in (274a) and (274b), respectively, are equivalent to *mucho...y...también* and *no...mucho...y...tampoco*, respectively:

- (274) a. Pedro tiene tanto dinero como Fernando.  
Pedro have.3sg so.MUCH.m money like Fernando  
'Pedro has as much money as Fernando'
- b. Pedro tiene tan poco dinero como Fernando.  
Pedro have.3sg so NEG.MUCH.m money like Fernando  
'Pedro has as little money as Fernando'

(273c) and (273d), on the other hand, are the relevant cases analogous to comparisons of inequality – comparisons of superiority and inferiority, respectively:

- (275) a. Pedro tiene más dinero que Fernando.  
Pedro have.3sg ER.MUCH.m money that Fernando  
'Pedro has more money than Fernando'
- b. Pedro tiene menos dinero que Fernando.  
Pedro have.3sg ER.NEG.MUCH.m money that Fernando  
'Pedro has less money than Fernando'

Hence *más...que* and *menos...que* are roughly equivalent to *mucho...pero no...mucho* (comparison of superiority) and *no mucho...pero sí...mucho* (comparison of inferiority), respectively. It is left to be explained why the understand elements cannot surface exactly as such, other than the availability of an overt *no* in the second associate of comparisons of inequality in certain dialects:

- (276) a. Pedro tiene más dinero que no Fernando.  
Pedro have.3sg ER.MUCH.m money that no Fernando  
'Pedro has more money than Fernando'
- b. Pedro tiene menos dinero que no Fernando.  
Pedro have.3sg ER.NEG.MUCH.m money that no Fernando  
'Pedro has less money than Fernando'

Hence, there is something different about this structure from that involved in generic coordination with *pero*. Nevertheless, this is at least a step in the right direction in showing that a conjunction may occur in Spanish followed by only a focus of contrast and a polarity marker, without the full clause being present.

### 5.2.3 Spanish second associates: conclusion

We have seen those second associates in Spanish comparatives that begin with *de*, followed by a form of *lo*, and then by *que* are prepositional complement to ER in which the complement of the preposition *de* is a Deg, modified by a degree relative. On the other hand, bare clause comparatives in Spanish involve a coordination-type conjunction structure in which the first associate is conjoined to a mostly covert second associate whose overt members hold the properties held by their corresponding contrasts in the first associate in the opposite orientation.

### 5.3 Extension of Analysis to SLQZ

#### 5.3.1 Brief review of the data

We concluded in §5.2 that Spanish comparatives in which the comparative particle is *de* have a different structure than those in which the comparative particle is *que*. The former group consists of both degree relative comparatives and those comparatives in which the standard of comparison is a simple, unmodified amount, quantity or measure phrase. The latter group, i.e., those comparatives with the comparative particle *que*, is not entirely homogeneous (cf. subset comparatives in Ch. 3, for example), but I have studied in this chapter a type which I refer to as adversative conjoined comparatives. I rejected a unified analysis by which both groups of comparatives would ultimately derive from the same structure and have instead opted for a split analysis, by which each group of comparatives constitutes a fundamentally distinct construction.

SLQZ presents a somewhat different pattern from Spanish, although I claim a split analysis for SLQZ, too. We saw in Chapter 3 that those comparatives in which the standard of comparison is a simple, unmodified amount, quantity or measure phrase require the use of the comparative particle *ta'* (preceded by *maaz*) or one of its allomorphs presented in Chapter 3,<sup>93</sup> whereas neither those comparatives corresponding to Spanish degree relative comparatives nor those corresponding to Spanish adversative conjoined comparatives allow the use of that particle. Instead, the former group requires the particle *cah* followed by the relative pronoun *nih*, whereas the latter group requires the use of either the particle *cah*<sup>94</sup> or the particle *lohoh*.<sup>95</sup>

These are exemplified again here for the convenience of the

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<sup>93</sup> I refer the reader to Chapter 3 for the various forms that *ta'* may take. At this point in my research, I have not yet found any principled way of determining which allomorph this particle will take, if in fact this is not a case of free variation.

<sup>94</sup> Also, as noted in Chapter 3, this particle has another allomorph, *queh*.

<sup>95</sup> The use of *lohoh* is only allowed under a limited set of circumstances, as mentioned in Chapter 3.

reader:

standard is simple amount or measure phrase

- (277) Maaz-ta' ga:a'y liebr b-z:i:i' Jwaany.  
MAAZ-than five book perf-buy Juan  
'Juan bought more than five books'

- (278) Maaz-ta' tē'ihby mii b-zh:u:u'nny Jwaany.  
MAAZ-than one mile perf-run Juan  
'Juan ran more than one mile'

standard is degree relative

- (279) Zye:einy-ru' liebr b-z:i:i' Jwaany cah nih b-to:o' Liieb  
MUCH.sol/abs-ER book perf-buy Juan than rel perf-sell Felipe  
'Juan bought more books than Felipe sold'

standard is contrast (i.e., a contrasting noun phrase)

- (280) Zye:einy-ru' liebr b-z:i:i' Jwaany cah Gyeeihlly.  
MUCH.sol/abs-ER book perf-buy Juan than Mike  
'Juan bought more books than Mike'

- (281) Zyuu:a'll-ru' Jwaany {cah / loh} Gyeeihlly.  
tall-ER Juan than / face Mike  
'Juan is taller than Mike'

### 5.3.2 The comparative particles *-ta'* and *cah (nih)*

The sentences in (277), (278) on the one hand, and the sentence in (279), on the other hand, do not use the same comparative particle, even though the analogous sentences in Spanish do (they all use the comparative particle *de*). Therefore, it is not clear whether they can be grouped together in the same way as the corresponding Spanish comparatives are.

However, based on the presence of the relative pronoun *nih* in sentences such as (279), I conclude that that type of sentence does involve degree relatives like its counterparts in Spanish. This conclusion is supported by the fact that such constructions disallow the types of deletion operations associated with coordinate-like conjunction structures:

- (282) Zye:einy-ru' liebr b-z:i:i' Jwaany cah nih \*(b-z:i:i') Gyeeihlly.  
MUCH.sol/abs-ER book perf-buy Juan than rel perf-buy Mike  
'Juan bought more books than Mike.'

Although such sentences share the degree relative structure exhibited in Spanish *de* comparatives, it is not as straightforward to claim that *cah* is a preposition in an analogous manner to Spanish *de*, especially since I wish to liken its function to the coordinator-like function of the conjunction *que* in Spanish adversative conjunction comparatives. Nevertheless, since I showed earlier in this chapter that the distinction between coordination and subordination is not clear-cut syntactically, it follows that the distinction between elements traditionally classified as coordinators and subordinators, respectively, is not clear-cut, either. Witness the fact that although I claim Spanish *de* is a preposition, even in comparatives, it cannot be pied-piped in a question when followed by a degree relative (283)-(286), despite its normal ability to be pied-piped in a question in a non-comparative sentence (287)-(288):

comparative *de*

- (283) Juan es más alt-o de lo que piensas.  
 Juan be.3sg ER tall-m of the.n that think.2sg  
 'Juan is taller than you think'  
 → \*De qué grado es Juan más alt-o ?  
 of what degree be.3sg Juan ER tall-m  
 'What degree is Juan taller than ?'
- (284) Juan tiene más de tres libros.  
 Juan have.3sg MUCH.m.pl.ER of three books  
 'Juan has more than three books'  
 → \*De cuántos libros tiene Juan más ?  
 of how.MUCH.m.pl books have.3sg Juan MUCH.m.pl.ER  
 'How many books does Juan have more than ?'
- (285) Juan tiene más de tres libros.  
 Juan have.3sg MUCH.m.pl.ER of three books  
 'Juan has more than three books'  
 → \*De cuántos tiene Juan más libros ?  
 of how.MUCH.m.pl have.3sg Juan MUCH.m.pl.ER libros  
 'How many does Juan have more books than ?'

- (286) Juan tiene más de tres libros.  
 Juan have.3sg MUCH.m.pl.ER of three books  
 'Juan has more than three books'  
 → \*De qué cantidad / número tiene Juan más libros ?  
 of what quantity / number have.3sg Juan MUCH.m.pl.ER libros  
 'What quantity / number does Juan have more books than ?'

non-comparative de

- (287) Juan tiene miedo de serpientes.

Juan have.3sg fear of snakes

'Juan is afraid of snakes'

→ De qué tiene Juan miedo ?

of what have.3sg Juan fear

'What is Juan afraid of ?'

- (288) Juan está enamorad-o de Lucía

Juan be.3sg in.love-m of Lucia

'Juan is in love with Lucia'

→ De quién está Juan enamorad-o ?

of who be.3sg Juan in.love-m

'Who is Juan in love with ?'

As for comparatives such as (277)-(278) with *maazta'*, I would ideally like to claim that *ta'* and its various allormorphs involve prepositional complementation of an amount or measure phrase, although further research into the nature of *ta'* is needed before making any definitive conclusion. It certainly has not been found to behave as a preposition anywhere else in the language.

### 5.3.3 The particle *cah* (without subsequent *nih*)

Comparatives with the comparative particle *cah* but without a subsequent relative pronoun *nih* resemble those which do utilize the relative pronoun *nih* in that they share the same comparative particle. However, since they lack the relative pronoun *nih*, and since they obligatorily undergo stripping,<sup>96</sup> I assume that they involve adversative conjunction structures like the corresponding sentences in Spanish.

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<sup>96</sup> As mentioned in Chapter 3, SLQZ entirely disallows gapping, in both comparative and non-comparative sentences, so the non-existence of sentences similar to (280) but with two contrasts instead of just one (i.e., exhibiting gapping instead of comparative ellipsis, which I take to be a type of stripping) sheds no light on the structure of the sentence in (280).

### 5.3.4 The particle *lohoh*

Lastly, I turn to comparatives with the particle *lohoh*.<sup>97</sup> As mentioned in Chapter 2, this word, which literally means ‘face’, also serves as a native SLQZ preposition. Like other prepositions in SLQZ, if its object is questioned (or moved in some other type of A'-movement such as relativization), it must either be fronted together with its object, as in (290), or remain in situ with the anaphoric possessive clitic pronoun *-ni'* (291):

- (289) B-cwa:a:a' Jwaany pelo't loh Rrodrriegw.  
perf-throw Juan ball face Rodrigo  
'Juan threw the ball to Rodrigo'
- (290) →Tu loh b-cwa:a:a' Jwaany pelo't ?  
who face perf-throw Juan ball  
'Who did Juan throw the ball to ?'
- (291) →Tu b-cwa:a:a' Jwaany pelo't loh-ni' ?  
who perf-throw Juan ball face-3sg.anaposs  
'Who did Juan throw the ball to ?'

Just as in the non-comparative usage of *lohoh*, the comparative particle *lohoh* may also front with its object (293):

- (292) Zyuu:a'll-ru' Jwaany loh Gyeeihly.  
tall-ER Juan face Mike  
'Juan is taller than Mike'
- (293) →Tu loh zyuu:a'll-ru' Jwaany ?  
who face tall-ER Juan  
'Who is Juan taller than ?'

If it does not, it remains in situ with an anaphoric pronoun:

- (294) →Tu zyuu:a'll-ru' Jwaany loh-ni' ?  
who tall-ER Juan face-3sg.anaposs  
'Who is Juan taller than ?'

We saw above that the Spanish prepositional comparative particle *de* cannot undergo this type of pied-piping, presumably because of the nature of its complement, complex syntactically as well as semantically. I propose, therefore, that com-

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<sup>97</sup> Recall from Chapter 2 that this is a word whose phrasal form is *loh*.

parative *lohoh* is a preposition but does not take a covert clause (cf. adversative SLQZ *cah* or Spanish *que*) nor a degree relative (cf. prepositional SLQZ *cah* or Spanish *de*) as its complement, but rather, is parallel to the type of English construction seen in the Introduction and exemplified again here:

- (295) Juan is tall compared to Pedro.
- (296) Juan is tall in comparison with Pedro.
- (297) Juan is tall compared with Pedro.
- (298) Juan is tall relative to Pedro.

The exact structure involved here is not clear but appears not to involve any element representing degree in the prepositional phrase. I leave to future research the question of why the SLQZ comparative sentences with *lohoh* as the comparative particle contain the morpheme *-ru* 'ER', whereas the English sentences in (295)-(298) do not contain ER.

## Chapter 6 Conclusion

### 6.0 General Statement of Contributions

In this dissertation, I have studied comparative constructions in English, Spanish, San Lucas Quiavini Zapotec. This dissertation makes descriptive and theoretical contributions based on review of a wide variety of literature, data collection, and creative analysis and synthesis.

### 6.1 Descriptive Contributions

I provide a new terminology for describing comparatives, various paradigms relevant to the study of comparatives, and various types of new data in SLQZ both in comparatives and in other contexts.

#### 6.1.1 New terminology

In Chapter 3, I provide a new terminology for comparative constructions and synthesized my own terminology for comparative constructions. This terminology applies to comparisons whether the terms of comparison are nominals (1), adverbs (2), prepositional phrases (3), or even clauses (4):

- (1) Guillermo is taller than Pedro.
- (2) The Johnsons bought more books today than yesterday.
- (3) Elsa spends more time in France than in England.
- (4) Some people dance less elegantly when they are tired than when they are energetic.

In (1), we know something about Guillermo based on information that we have about Pedro. In (2), we know something about what happened today based on something that happened yesterday. In (3), we know something about what happens in France based on something that happens in England. Finally, in (4), we learn about what happens when people are tired in terms of what happens when they are energetic.

Other terminologies often only allow discussion of the type of comparison

in (1). For example, Stassen (1985) refers to a Comparee NP and a Standard NP, terms which are only applicable in (1).

My use of the word TERM to include not only comparisons with a single contrast in each associate but also those with more than one is helpful in discussing constructions such as comparative gapping (5) and comparative pseudogapping (6).

In (5), the first term consists of the contrasts *Rodolfo* and *con su mamá*, and the second term consists of the contrasts *Trinidad* and *con sus hermanos*:

- (5) Rodolfo pasa menos tiempo con su mamá que Trinidad con su-s hermanos.  
Rodolfo spend.3sg ER.NEG.MUCH time with 3poss mom that Trinidad with 3poss-pl brothers  
'Rodolfo spends less time with his mom than Trinidad (does) with his brothers'

Similarly, in (6), the first term consists of the contrasts *Suzie* and *in the winter*, whereas the second term consists of the contrasts *Frankie* and *in the summer*:

- (6) Suzie plays volleyball more often in the winter than Frankie does in the summer.

My terminology can also suit various types of compared properties and their syntactic manifestations (the head), such as amount of a nominal KIND (7), degree of an adjective (8), degree of an adverb (9), or extent of a verb (10):

- (7) Graciela wrote more articles than she really needed to.  
(8) Lorena is smarter than the average bear.  
(9) Last Tuesday, Todd behaved more bravely than ever before.  
(10) We work more than we should.

In contrast, other works often deal with only adjectival degree comparisons or with only amount comparisons.

An important clarification that I made was that comparisons in which the degree to which two terms hold the compared property is represented syntactically, i.e., differential comparative constructions, need to be differentiated from compar-

isons in which this degree is not represented syntactically. For example, the word *much* in the following comparison does not necessarily imply that in non-comparative contexts, the adjectival system allows for a QP slot:

- (11) Yolanda is much taller than Ruby.

### 6.1.2 Paradigms

I assembled paradigms of degree adverbials, paradigms of comparative particles, and paradigms of ellipsis type availability, for English, Spanish, and SLQZ.

#### 6.1.2.1 Degree paradigms

In Table 6.1, we see a paradigm of English degree expressions alongside the corresponding Spanish degree expressions:<sup>1</sup>

**Table 6.1 Degree expressions in English and Spanish**

<u>Degree type</u>	<u>English</u>	<u>Spanish</u>
default degree, adj. sys.....	covert [=relatively very] .....	covert [=relatively very]
default degree, nom. sys.....	covert but needs host, ..... host is MUCH: <i>many/much</i>	covert but needs host, host (MUCH) is covert/E insert <i>mucho</i> (~ <i>muy</i> )
questioned degree, adj. sys.....	.How ? .....	.¿ Qué tan ? / .¿ Cuán ?
questioned degree, nom. sys.....	.How ? .....	.¿ Qué tanto ? / .¿ Cuánto ?
anaphoric degree, adj. sys.....	so / this / that .....	.tan / así de
anaphoric degree, nom. sys.....	so / this / that .....	.tanto / así de
resultative degree, adj. sys.....	so .....	.tan
resultative degree, nom. sys.....	so .....	.tanto
sufficient degree .....	enough .....	bastante / suficientemente
high degree, adj. sys.....	.very .....	.muy
high degree, nom. sys .....	.very .....	.mucho
deictic degree, adj. sys.....	this / that .....	.tan / así de
deictic degree, nom. sys.....	this / that .....	.tanto / así de
excess degree .....	.too .....	.demasiado
equal degree, adj. sys.....	as .....	.tan
equal degree, nom. sys.....	as .....	.tanto
compared degree (+), adj. sys.....	ER as <i>more</i> or <i>-er</i> .....	ER as <i>más</i> or ER in suppl adj.
compared degree (+), nom. sys.....	ER in <i>more</i> .....	ER in <i>más</i>
compared degree (-), adj. sys.....	ER (and NEG) as <i>less</i> .....	ER (and NEG) as <i>menos</i>
compared degree (-), nom. sys.....	ER (and NEG) in <i>less, fewer</i> ..	ER (and NEG) in <i>menos</i>

The following table shows the degree expression in SLQZ that are presented

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<sup>1</sup> Of course, the way in which this paradigm is formulated involves theoretical claims that I make.

in this dissertation

**Table 6.2 Degree expressions in SLQZ**

<u>Degree type</u>	<u>SLOZ</u>
default degree, adj. sys.	covert [=relatively very]
default degree, nom. sys.	covert but needs host, host is MUCH: <i>zye:einy / zi:i'lyy</i>
questioned degree, adj. sys.	<i>Xi zë'cydya' ? / Cata'lly ?</i>
questioned degree, nom. sys.	<i>Xi zë'cydya' ? / Ba:all ?</i>
anaphoric degree, adj. sys.	<i>zë'cyégza'</i>
anaphoric degree, nom. sys.	<i>(të'ihby)zi'cydya'</i>
high degree (very)	<i>-daa:a'n</i>
because of how, adj. sys.	<i>Ta'ann (zhyë'b)</i>
because of how much, nom. sys.	<i>Ta'ann (zhyë'b) {zye:einy / *zi:i'lyy}</i>
deictic degree, adj. sys.	<i>zacrennpa'</i>
deictic degree, nom. sys.	<i>(të'ihby)zagreentya'</i>
excess degree	<i>-ta'</i>
equal degree, adj. sys.	<i>:zi'cydya'</i>
equal degree, nom. sys.	<i>:zi'cy(ëg)</i>
compared degree (+)	<i>ER as ru'</i>
compared degree (-), adj. sys.	<i>ER (and NEG) in <i>wzhi:i:eru'</i></i>
compared degree (-), nom. sys.	<i>ER (and NEG) in <i>du:u'zhru'</i> (includes MUCH)</i>

Using English examples, I exemplify the use of each of the degree adverbials mentioned in Tables 6.1 and 6.2 for both the nominal and adjectival systems:

**Table 6.3 Examples of the use of degree adverbials in English**

<u>Degree type</u>	<u>nominal system</u>	<u>adjectival system</u>
default degree	Teresa bought many books.	Teresa is tall.
questioned degree	How many books did you buy?	How tall are you?
anaphoric degree	I've never seen so many books in one place before.	I've never seen someone so tall.
resultative degree	I bought so many books that I had to buy a new bookcase.	I am so tall that I don't need a ladder.
sufficient degree	I bought enough books for everyone.	I was tall enough to reach the book.
high degree	Teresa bought very many books.	Teresa is very tall.
deictic degree	I want you to buy about this many books. [pointing]	The criminal was about this tall. [pointing]
excess degree	You brought too many books!	I'm too tall to pass through here!
equal degree	She bought as many books as everyone else.	She is as tall as everyone else.
compared degree (+)	She bought more books than me.	She is taller than me.
compared degree (-)	She bought fewer books than me.	She is less tall than me.

### 6.1.2.2 Paradigms of comparative particles

Whereas English uses only the comparative particle *than* in comparisons of inequality, Spanish uses either *de* or *que*, and SLQZ uses *cah*, *lohoh*, or *ta'*:

**Table 6.4 Comparative particles**

Type of comparison based on element following comparative particle	English	Spanish	SLOZ
a) no overt verb or tense, full comparison	than	que	cah / lohoh
b) no overt verb or tense, <sup>2</sup> partial comparison	than	que	cah
c) noun phrase in subset comparison	than	que	N/A
d) numeral or measure phrase alone	than	de	-ta'
e) NCA adjective alone	than	de lo, del, de la de los, de las	N/A
f) verb in comparative clause is embedded under NCA verb or is altogether different from main verb	than	de lo que, del que, etc. de cuanto de cuanta, etc.	cah nih cah zë'cydya' ((ra)... ...noun phrase) nih cah (ra) noun phrase nih

I exemplify the use of Spanish and SLQZ particles below:

Spanish

Type (a)

(III-180a)    Julia    canta    mejor    que    yo.  
                   Julia sing.pres.3sg well.ER    that 1sg.nom  
                   'Julia sings better than me'

Type (b)

(III-181b)    Alfredo    compró    más    manzanas  
                   Alfredo buy.pret.3sg ER.MUCH.f.pl    apples  
                   que Ignacia naranjas.  
                   that Ignacia oranges  
                   'Alfredo bought more apples than Ignacia, oranges'

---

<sup>2</sup> This is a simplification. There is a construction with *que* as the comparative particle in which the second head of the comparison is preposed, even if it is a verb. Cf. §3.4.1.1.3 for a descriptive of that construction.

- Type (c)  
(III-182) Felipe necesita más que agua y pan – también  
Felipe need.3sg ER.MUCH that water and bread also  
necesita amor y estudios.  
need.3sg love and studies  
'Felipe needs more than water and bread - he also needs love and  
studies'
- Type (d)  
(III-189) Ignacia pintó más de sesenta cuadros.  
Ignacia paint.pret.3sg ER.MUCH.m.pl of sixty pictures  
'Ignacia painted more than sixty pictures'
- Type (e)  
(III-190) Estudiamos más de lo necesario.  
study.pret.1pl ER.MUCH of the.n necessary.n  
'We studied more than necessary'
- Type (f)  
(III-196) Óscar despidió a más empleados de  
Oscar see.off.pret.3sg p.a ER.MUCH.m.pl employees of  
l-[ ]-o-s que piensas.  
the-MUCH-m-pl that think.2sg  
'Oscar fired more employees than you think'
- (III-198) Nadé más kilómetros de lo que pude.  
swim.pret.1sg ER.MUCH.m.pl kilometers of the.n that be.able.pret.1sg  
'I swam impossibly many kilometers'
- (III-193) Óscar despidió a más empleados  
Oscar see.off.pret.3sg p.a ER.MUCH.m.pl employees  
de cuant-[ ]-o-s piensas.  
of how-MUCH-m-pl think.2sg  
'Oscar fired more employees than you think'
- (III-195) Nadé más kilómetros de cuanto pude.  
swim.pret.1sg ER.MUCH.m.pl kilometers of how.MUCH be.able.pret.1sg  
'I swam impossibly many kilometers'
- SLOZ
- Type (a)  
(III-202) Maaz-ru' r-zh;u:u'nny Liieb cah (noo) Rrodriiegw.  
MAAZ-ER hab-run Felipe than (NOO) Rodrigo  
'Felipe runs more than Rodrigo'
- (III-214) Zyuu:a'll-ru' Lia Oliieb loh Rrodriiegw.  
tall-ER miss Olivia face Rodrigo  
'Olivia is taller than Rodrigo'

Type (b)  
(III-204) Zye:einy-ru' me's b-zéhnny cah (noo) studya'aannd.  
MUCH.sol/abs-ER teachers perf-arrive than (NOO) student  
'More teachers arrived than students'

[Type (c) is N/A in SLQZ]

Type (d)  
(III-200) Maaz-ta' tē'ihby gueht b-da'uhw-a'.  
MAAZ-than one tortilla perf-eat-1sg  
'I ate more than one tortilla'

[Type (e) is N/A in SLQZ]

Type (f)  
(III-206) Maaz-ru' nsehe's r-uhny Beed zë:ë:i'ny cah (noo) nih  
MAAZ-ER fast hab-do Pedro work than (NOO) rel  
r-ralloh Lia Paamm.  
hab-think miss Pam  
'Pedro works faster than Pam thinks (he does)'

(III-209) Zye:einy-ru' lai'py r-zi:i:i' Liieb cah (noo) zë'cy-dya'  
MUCH.sol/abs-ER pencil hab-buy Felipe than (NOO) thus-MUCH  
nih r-uhnnnychi:i:a' Rrodriegw.  
rel hab-makes Rodrigo  
'Felipe buys more pencils than Rodrigo makes'

(III-210) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) zë'cy-dya'  
MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) thus-MUCH  
mannsaan nih b-da'uhw-a'.  
apple rel perf-eat-1sg  
'You ate more chapulines than I ate apples'

(III-211) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) zë'cy-dya' ra  
MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) thus-MUCH pl  
mannsaan nih b-da'uhw-a'.  
apple rel perf-eat-1sg  
'You ate more chapulines than I ate apples'

(III-212) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) mannsaan nih  
MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) apple rel  
b-da'uhw-a'.  
perf-eat-1sg  
'You ate more chapulines than I ate apples'

(III-213) Zye:einy-ru' bx:aa:ady b-da'uhw-u' cah (noo) ra mannsaan  
 MUCH.sol/abs-ER chapulin perf-eat-2sg than (NOO) pl apple  
 nih b-da'uhw-a'.  
 rel perf-eat-1sg  
 'You ate more chapulines than I ate apples'

#### 6.1.2.3 Paradigms of ellipsis type availability

In Chapter 3, I also present the different types of ellipsis that occur in comparative constructions, using both terms from the literature as well as new terms (e.g., subset comparatives). I indicate which types are ellipsis in which of the languages under study here and exemplified them. The following table characterizes the various ellipsis types and indicates which of the languages under study permit which ellipsis types:

**Table 6.5 [=Table 3.2] Ellipsis typology**

<u>type of ellipsis</u>	<u>example no.'s from Chapter 3</u>	<u>covert elements in second associate/ languages in which a given type occurs</u>
comparative ellipsis (CE)	(145)-(150)	entire second associate except comparative particle and single focus (i.e., verb and inflectional material plus all adjuncts and arguments of the verb except one)  SLQZ, Spanish, English
comparative deletion (CD)	(151)-(153)	second head and degree operating over it  SLQZ, Spanish, English
comparative subdeletion (CS)	(154)-(157)	degree operating over second head  SLQZ, Spanish, English
null complement anaphora (NCA)	(163)	the most embedded clause or verb phrase  SLQZ and Spanish (but not verb phrase), English

gapping	(167)-(170)	entire second associate except comparative particle and two (or marginally three) foci (i.e., verb and inflectional material plus all adjuncts and arguments of the verb except two or possibly three)
		Spanish, English
pseudogapping	(175), (177)	verb but not tense
		English
VP-deletion	(178)	VP but not inflection
		English

I exemplify these ellipsis types below:

### **Comparative ellipsis (CE)**

#### English

- (III-145) Rodrigo read more books than Felipe.  
 (III-148) Rodrigo bought more oranges than apples.

#### Spanish

- (III-147) Rodrigo leyó más libros que Felipe.  
 Rodrigo read.pret.3sg ER.MUCH.m.pl books than Felipe  
 'Rodrigo read more books than Felipe.'
- (III-149) Rodrigo compró más naranjas que manzanas.  
 Rodrigo buy.pret.3sg ER.MUCH.f.pl oranges that apples  
 'Rodrigo bought more oranges than apples'

#### SLQZ

- (III-146) Zye:einy-ru' liebr b-i:i'ly Rrodrriegw cah Liieb.  
 MUCH.sol/abs-ER book perf-read Rodrigo than Felipe  
 'Rodrigo read more books than Felipe'

- (III-150) Zye:einy-ru' nraazh b-zii:i' Rrodrriegw cah mannsaan.  
 MUCH.sol/abs-ER orange perf-buy Rodrigo than apple  
 'Rodrigo bought more oranges than apples'

### **Comparative deletion (CD)<sup>3</sup>**

#### English

- (III-153) Felipe washed more cars than Rodrigo washed.

<sup>3</sup> In Chapter 3, I explained that the traditional distinction between cases of CD and CS gets somewhat blurred from the point of view of my analysis of what constitutes the head of the comparison. Nevertheless, I present here English sentences traditionally classified as CD, with similar sentences in Spanish and SLQZ, and below, I present English sentences traditionally classified as comparative subdeletion, with similar sentences in Spanish and SLQZ.

- Spanish**  
 (III-152) Felipe lavó más coches de l-[ ]-o-s  
           Felipe wash.pret.3sg ER.MUCH.m.pl cars of the-MUCH-m-pl  
           que lavó Rodrigo.  
           that wash.pret.3sg Rodrigo  
           ‘Felipe washed more cars than Rodrigo washed’
- SLOZ**  
 (III-151) Zyeeginny-ru' ca'rr b-di:i'by Liieb cah nih b-di:i'by  
           MUCH.sol/abs-ER car perf-wash Felipe than rel perf-wash  
           Rrodriiegw.  
           Rodrigo  
           ‘Felipe washed more cars than Rodrigo washed’
- Comparative subdeletion (CS)**
- English**  
 (III-154) Felipe sold more cars than Rodrigo bought pick-up trucks.
- Spanish**  
 (III-155) Felipe lavó más coches  
           Felipe wash.pret.3sg ER.MUCH.m.pl cars  
           que camionetas lavó Rodrigo.  
           that pick.up.trucks wash.pret.3sg Rodrigo  
           ‘Felipe washed more cars than Rodrigo washed pick-up trucks’
- (III-156) Felipe lavó más coches de lo que  
           Felipe wash.pret.3sg ER.MUCH.m.pl cars of the.n that  
           Rodrigo lavó de camionetas.  
           Rodrigo wash.pret.3sg of pick.up.trucks.  
           ‘Felipe washed more cars than Rodrigo washed pick-up trucks’
- SLOZ**  
 (III-158) Zye:einy-ru' ca'rr b-di:i'by Liieb. Du:u'zh-ru' camione't  
           MUCH.sol/abs-ER car perf-wash Felipe NEG.MUCH-ER pick.up.truck  
           b-di:i'by Rrodriiegw.  
           perf-wash Rodrigo  
           ‘Felipe washed more cars. Rodrigo washed fewer pick-up trucks’
- (III-159) Zye:einy-ru' ca'rr b-di:i'by Liieb cah zë'cy nih  
           MUCH.sol/abs-ER car perf-wash Felipe than thus rel  
           b-di:i'by Rrodriiegw camione't.  
           perf-wash Rodrigo pick.up.truck  
           ‘Felipe washed more cars than Rodrigo washed pick-up trucks’
- (III-160) Zye:einy-ru' ca'rr b-di:i'by Liieb cah zë'cy-dya' camione't  
           MUCH.sol/abs-ER car perf-wash Felipe than thus-MUCH pick.up.truck  
           nih b-di:i'by Rrodriiegw  
           rel perf-wash Rodrigo  
           ‘Felipe washed more cars than Rodrigo washed trucks’

### Null complement anaphora (NCA)

#### English

(III-163c) Felipe washed more cars than Rodrigo asked him to ( wash [ ] cars).

#### Spanish

(III-163a) Felipe lavó más coches de lo que Rodrigo  
Felipe wash.pret.3sg ER.MUCH.m.pl cars of the.n that Rodrigo  
le pidió (que lavara [ ] de coches)  
3sg.dat ask.pret.3sg that wash.imp.subj.3sg [ ] of cars  
'Felipe washed more cars than Rodrigo asked him to (wash X-many cars)'

#### SLQZ

(III-163b) Zye:einy-ru' ca'rr b-di:i'by Liieb cah nih r-zilla:a:a'z-u'  
MUCH.sol/abs-ER car perf-wash Felipe than rel hab-think-2sg  
(b-di:i'by-ëng [ ] ra ca'rr).<sup>4</sup>  
perf-wash-3sg. [ ] pl car  
'Felipe washed more cars than you think (that he washed X-many cars)'

### Comparative gapping

#### English

(III-170) Felipe spent more time in San Lucas than Rodrigo in Oaxaca.

(III-168) ?Felipe washed more cars than Rodrigo, pick-up trucks.

#### Spanish

(III-169) Felipe pasó más tiempo en San Lucas que  
Felipe pass.pret.3sg ER.MUCH.m time in San Lucas that  
Rodrigo en Oaxaca.  
Rodrigo in Oaxaca.  
'Felipe spent more time in San Lucas than Rodrigo (spent) in  
Oaxaca'

(III-167) Felipe lavó más coches que Rodrigo  
Felipe wash.pret.3sg ER.MUCH.m.pl cars that Rodrigo  
camionetas.  
pick.up.trucks  
'Felipe washed more cars than Rodrigo pick-up trucks'

[Gapping (including comparative gapping gapping is disallowed altogether in  
SLQZ]

<sup>4</sup> There is also a variant of this example in which the element representing abstract amount discussed above – zë'cydya' – is also present:

(i) Zye:einy-ru' ca'rr b-di:i'by Liieb cah zë'cy-dya' nih r-zilla:a:a'z-u'  
MUCH.sol/abs-ER car perf-wash Felipe than thus-MUCH rel hab-think-2sg  
(b-di:i'by-ëng [ ] ra ca'rr).  
perf-wash-3sg. [ ] pl car  
'Felipe washed more cars than you think (that he washed X-many cars)'.

### **Comparative pseudogapping**

#### English

(III-175a) Juan dates more girls than I do guys.

(III-175b) Frank stays out later in New York, than I would [stay out late] in Iowa.

[Pseudogapping (comparative or otherwise) is disallowed altogether in Spanish and SLQZ]

### **Comparative VP-deletion**

#### English

(III-178) Felipe **dances** more wildly than Rodrigo does [dance wildly].

[VP-deletion (comparative or otherwise) is disallowed altogether in Spanish and SLQZ]

### 6.1.3 Descriptive contributions particular to SLQZ

#### 6.1.3.1 Functional morphemes: ER and other Deg's and degree expressions

In addition to certain lexical items, I presented many SLQZ functional morphemes along with their syntax. The most important is *-ru'*, which is the comparative Deg ER. This surfaces in all SLQZ comparative types, such as (III-209), except those in which the standard of comparison is explicit – either a numeral or a measure phrase, as in (III-200) and (V-278), respectively:

(III-209) Zye:einy-ru' lai'py r-zi:i:i' Liieb cah (noo) zë'cy-dya'  
MUCH.sol/abs-ER pencil hab-buy Felipe than (NOO) thus-MUCH  
nih r-uhnnnychi:i:a' Rrodriiegw.  
rel hab-makes Rodrigo  
'Felipe buys more pencils than Rodrigo makes'

(III-200) Maaz-ta' të'ihby gueht b-da'uhw-a'.  
MAAZ-than one tortilla perf-eat-1sg  
'I ate more than one tortilla'

(V-278) Maaz-ta' të'ihby mii b-zh:u:u'nny Jwaany.  
MAAZ-than one mile perf-run Juan  
'Juan ran more than one mile'

Other functional morphemes that I presented were various Deg's and degree expressions as noted above in §6.1.2.1. These are exemplified in the following

sentences:

default degree

- (12) Zyuu:a'll Gyeeihlly.  
tall Mike  
'Mike is tall'

- (13) Zye:einy liebr b-zi:i:i' Gyeeihlly.  
MUCH.sol/abs book perf-buy Mike  
'Mike bought many books'

questioned degree

- (IV-170) Cata'lly nsinni'cy Jwaany ?  
how intelligent Juan  
'How intelligent is Juan ?'

- (IV-171) Xi zë'cy-dya' zyuu:a'll Jwaany ?  
what thus-MUCH tall Juan  
'How tall is Juan'

- (IV-172) Xi zë'cy-dya' gyu'uhzh b-te:e'ch-u' ?  
what thus-MUCH sand perf-drop-2sg  
'How much sand did you drop ?'

- (IV-173) Xi zë'cy-dya' nnyi'ihs gwe:e'eh Jwaany ?  
what thus-MUCH water perf.drink Juan  
'How much water did Juan drink ?'

- (IV-175) Ba:all liebr b-zi:i:i' Jwaany ?  
how.MUCH.pl book perf-buy Juan  
'How many books did Juan buy ?'

anaphoric degree

- (IV-195) Të'ihby-zë'cy-dya' gyu'uhzh: b-e:e:i'ny Gyeeihlly ua's.  
one-thus-MUCH sand perf-do Mike use  
'Mike used that much sand'

- (IV-196) La:a:a' Jwaany b-zi:i:i' të'ihby-zë'cy-dya' liebr.  
focus Juan perf-buy one-thus-MUCH book  
'JUAN bought that many books'

- (IV-197a) (Të'ihby)-zë'cy-dya' zyuu:a'll Gyeeihlly.  
one-thus-MUCH tall Mike  
'Mike is also that tall'

- (IV-197c) Zë'cy-ëg-za' zyuu:a'll Gyeeihlly.  
thus-emph-also tall Mike  
'Mike is also that tall'

(IV-198b) Zé'cy-ëg-za' zagru:u n-a:a x:-nna:aan-a'.  
thus-emph-also pretty neut-be poss-mother-1sg  
'My mom's also that pretty'

high degree  
(IV-159a) Zyuu:a'll-daa:a'n Wsee.  
tall-very José  
'José is very tall'

(IV-161b) Zye:einy-daa:a'n liebr b-zi:i:i' Wsee.  
many-very book perf-buy José  
'José bought very many books'

(IV-162b) Zi:i'lly-daa:a'n nnyi'lhs gwe:e'eh Wsee.  
MUCH.liq/gas-very water perf.drink José  
'José drank very much water'

(IV-165a) Zyuu:a'll-x:a't Wsee.  
tall-very José  
'José is very tall'

(IV-166a) Zye:einy-x:a't liebr b-zi:i:i' Wsee.  
MUCH.sol/abs-very book perf-buy José  
'José bought very many books'

(IV-167a) Zi:i'lly-x:a't nnyi'lhs gwe:e'eh Wsee.  
MUCH.liq/gas-very water perf.drink José  
'José drank very much water'

#### because of how (much)

(IV-157)Q: Zhini' r-yu'la:a:a'z-daa:a'n-u' UCLA ?  
why hab-like-very-2sg UCLA  
'Why do you like UCLA so much ?'

A: Ta'ann (zhyë'b) (\*zye:einy / \*zi:i'lly) zagru:u  
so excl MUCH.sol/abs / MUCH.liq/gas beautiful  
n-a:a ra yu'uh.  
neut-be pl house  
'Because the buildings are so beautiful'

A: Ta'ann (zhyë'b) \*(zye:einy) studya'aannd n-u' rë'cy.  
so excl MUCH.sol/abs student neut-be there  
'Because there are so many students there'

deictic degree

- (IV-180) (Të'ihby)-zagreen-tya' liebr b-zi::i' Jwaany.  
                  one-this-MUCH book perf-buy Juan  
                  'Juan bought this many books'  
                  [said pointing to a written amount of books or indicating a physically present amount of books]
- (IV-181) Të'ihby-zagreen-tya' gyu'uhzh: r-ca:a'z-a'.  
                  one-this-MUCH sand hab-want-1sg  
                  'I want this much sand'  
                  [said pointing to an amount of sand (either written down or physically present)]
- (IV-182) (Të'ihby)-zagreen-tya' zyuu:a'll Jwaany.  
                  one-this-MUCH tall Juan  
                  'Juan is this tall'  
                  [said while gesturing how tall Juan is]
- (IV-183) (Të'ihby)-zagreen-tya' wro:o'oh paste'l (nih) r-ca:a'z-a'  
                  one-this-MUCH big cake rel hab-want-1sg  
                  si-a'.  
                  irr.buy-1sg  
                  'I want to buy a cake about this big'  
                  [said gesturing how big a cake speaker wants to buy or pointing to physically present cake]
- (IV-185) Za'crenn-pa' n-a:a x:-ye:e'cw-a'.  
                  this-emph neut-be poss-dog-1sg  
                  'My dog is just like that'  
                  [second dog must be present]

excess degree

- (160) a. Zyuu:a'll-ta' Wsee.  
                  tall-too José  
                  'José is too tall'
- b. \*{Zye:einy-ta' / Zi:i'lyy-ta' } zyuu:a'll Wsee.  
       MUCH.sol/abs-too / MUCH.liq/gas-too tall José  
                  'José is too tall'
- (163) a. \*Liebr-ta' b-zi::i' Wsee.  
                  book-too perf-buy José  
                  'José bought too many books'
- b. Zye:einy-ta' liebr b-zi::i' Wsee.  
       MUCH.sol/abs-too book perf-buy José  
                  'José bought too many books'

- (164) a. \*Nnyi'ihs-ta' gwe:e'eh Wsee.  
           water-too perf.drink José  
           ‘José drank too much water’
- b. Zi:i'lly-ta' nnyi'ihs gwe:e'eh Wsee.  
   MUCH.liq/gas-too water perf.drink José  
           ‘José drank too much water’
- equal degree (comparisons of equality)
- (IV-186) (Të'ihby)-zë'cy-dya' liebr nih b-zi:i:i' Liieb, b-zi:i:i'  
           one-thus-MUCH book rel perf-buy Felipe perf-buy  
           Rodriiegw.  
           Rodrigo  
           ‘Rodrigo bought as many books as Felipe bought’
- (IV-187) (Të'ihby)-zë'cy-dya' biien nih gwe:e'eh Wsee, gwe:e'eh  
           one-thus-MUCH wine rel perf.drink José perf.drink  
           Jwaany.  
           Juan  
           ‘Juan drank as much wine as José drank’
- (IV-188a) (Të'ihby)-zë'cy-dya' nih zyuu:a'll Lia Paamm, zyuu:a'll  
           one-thus-MUCH rel tall miss Pam tall  
           Gyeeihlly.  
           Mike  
           ‘Mike is as tall as Pam’
- (IV-189a) Zë'cy-(ëg) nih zyuu:a'll Lia Paamm, zyuu:a'll Gyeeihlly.  
           thus-emph rel tall miss Pam tall Mike  
           ‘Mike is as tall as Pam’
- compared degree (+)
- (III-209) Zye:einy-ru' lai'py r-zi:i:i' Liieb cah (noo) zë'cy-dya'  
           MUCH.sol/abs-ER pencil hab-buy Felipe than (NOO) thus-MUCH  
           nih r-uhnnnychi:i:a' Rrodrriegw.  
           rel hab-makes Rodrigo  
           ‘Felipe buys more pencils than Rodrigo makes’
- (III-82a) Connte'enn-ru' n-u' Jwaany cah Wsee.  
           content-ER neut-be Juan than José  
           ‘Juan is more content than José’
- compared degree (-)
- (IV-228) Du:u'zh-ru' nnyi'ihs b-e:e:i'ny-ënn ua's loh iihahz re:e'  
           NEG.MUCH-ER water perf-do-1pl use face year this  
           cah u-duhb-iihahz  
           than perf-one-year  
           ‘We used less water this year than last year’

- (IV-229)      Wzhi:i:e-ru'      nza'c liihaz Wsee cah liihaz Jwaany.  
 NEG.very-ER pretty house José than house Juan  
 'Jose's house is less pretty than Juan's house'

#### 6.1.3.2 Fronting of second head and ER

In SLQZ, the second head and ER, and the nominal complement of the second head of the second head is *zye:einy* or *zi:i'lly*, are fronted to clause-initial position, as in (III-247):

- (III-247)      Zye:einy-ru' liebr b-zi:i:i' Liieb cah Rrodrriegw.  
 MUCH.sol/abs-ER book perf-buy Felipe than Rodrigo  
 'Felipe bought more books than Rodrigo.'

This raising is probably linked to other cases in SLQZ of elements raising to clause-initial position by Spellout in SLQZ that would remain in situ until LF in languages like English and Spanish, such as quantifiers. Although I do not offer a rigorous theoretical explanation for this phenomenon, it is an interesting empirical observation and calls attention to an area of needed research.

## 6.2 Theoretical Contributions

### 6.2.1 ER and other Deg's: morphology, semantics, and syntax

In Chapter 4, I claimed that amount comparisons are merely a special case of adjectival degree comparisons – the relevant adjective in amount comparisons is the abstract quantifier MUCH contained within expressions such as *much* and *many* in English, *mucho* in Spanish, and *zye:einy* and *zi:i'lly* in SLQZ. Verbal extent comparisons also involve the abstract quantifier MUCH. To my knowledge, unifying amount comparisons and degree comparisons is a novel idea.

I supported my unification of amount comparisons and adjectival comparisons by exploring the identity of ER vis-à-vis other Deg's and degree expressions in the context of the nominal system and the adjectival system, as shown above in §6.1.2.1. In the process, I reviewed the literature and synthesized my own conclusion that the adjectival system does not ordinarily contain a QP projection, the only

exceptions being certain special adjectives which either are inherently comparative, such as *different* and *alike*, or allow modification by a measure phrase, such as *tall* or *old*.

I was able to support my claim that the adjectival system generally lacks a QP projection that the nominal system has by analyzing paradigms of degree expressions and finding systematic differences between the two systems.

English nominal expressions are usually immediately preceded by the word *much* or the word *many* if they are preceded by a Deg such as *very*, *too*, etc.

English adjectives are usually not preceded by *much* when they are preceded by a Deg.

Spanish nominal expressions are not preceded by the word *mucho* (which I show is a Deg) if there is another Deg present – instead, the Deg surfaces with number and gender agreement, revealing the presence of covert MUCH. When a Deg precedes a Spanish adjective, however, the Deg shows no number or gender agreement, and hence, MUCH is not present.

SLQZ nominal expressions are preceded by the word *zye:einy* or *zi:i'ly* suffixed by a bound Deg or are preceded by a noun-bound Deg which is suffixed by *-dya'* or *tya'*. Non-exceptional SLQZ adjectives, in contrast, are either suffixed directly by a bound Deg or preceded by a non-bound Deg, never with the intervention of MUCH (in the form of *zye:einy*, *zi:i'ly*, or *-dya'/-tya'*).

The comparative degree ER is expressed as the suffix *-ru'* in SLQZ, and it is the fact that it shows up suffixed to *zye:einy* or *zi:i'ly* that lends further credibility to the proposal made by some in one shape or form (e.g., Bresnan (1973)) that English *more* is made up of MUCH plus ER. The fact that neither *zye:einy* nor *zi:i'ly* shows up suffixed by *-ru'* in an adjectival comparison lends support to my claim that there are two instances of *more* in English and *más* in Spanish, since one instance of each corresponds to SLQZ *zye:einyru'* or *zi:i'lyru'* and the other corresponds simply to SLQZ *-ru'*.

An extension of the existence of two instances of *more* in English and *más* in Spanish is the conclusion that there must be two instances of *less* in English and two instances of *menos* in Spanish. The instance of *less* and *menos* that is used in adjectival comparisons contains only ER and some negative element NEG, whereas the instance of each used in nominal comparisons contains not only ER and NEG but also MUCH (plus agreement morphemes).

### 6.2.2 Syntax of the second associate

In Chapter 5, I claimed that the syntactic differences between various types of second associates in comparative constructions cannot be reduced to a difference between coordination and subordination since coordination and subordination are not reliably distinguishable on syntactic criteria. I designated them merely extremes in the spectrum of types of conjunction constructions.

I claimed that *de* comparatives and *que* comparatives do not underlying have the same structure. Instead, I claimed that *de* comparatives are prepositional complements to ER, containing either a simple amount or measure phrase standard of comparison or a degree relative denoting the standard of comparison. *Que* comparatives, on the other hand, involve adversative conjunction, of the same type surfacing in many world languages. SLQZ's comparative particle *cah* behaves as a prepositional-like element in a construction parallel to the degree relatives in Spanish, but it behaves more like a coordinator-type element in a construction parallel to bare clause comparatives in Spanish. It would convenient if one could claim that the comparative particle *ta'* is a preposition since its analog in Spanish is *de*, but *ta'* does not function as a preposition anywhere (else) in the English.

Lastly, *lohoh* is a preposition whose complement is syntactically less complex than degree relatives or bare clause comparatives. I conclude this since prepositional phrases headed by *lohoh* can undergo raising in the same way as other prepositional phrases can in SLQZ. This is in contrast to the behavior of the prepo-

sition *de* in Spanish, which can ordinarily behave as other prepositions but cannot when it functions as a comparative particle.

### 6.3 Conclusion

A wide variety of comparative constructions and functional morphemes involved in both comparatives and other degree expressions that might seem unrelated on the surface can actually be classified into a smaller sets of constructions and morphemes, respectively. English, Spanish, and SLQZ comparative constructions are complex, but the analysis contained in this dissertation is an important step in understanding them and provides a direction for areas of related future research.

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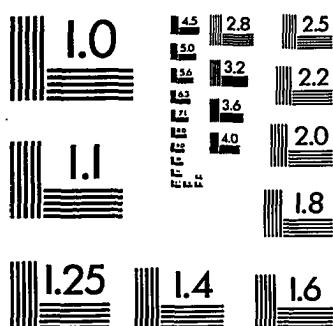
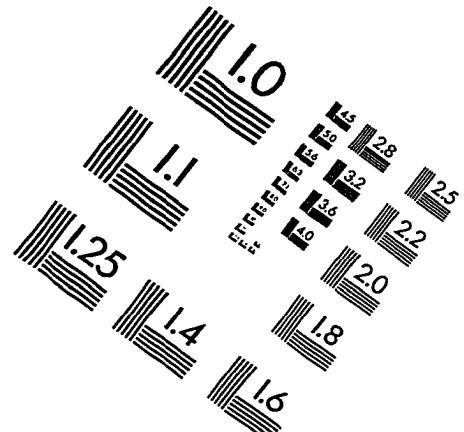
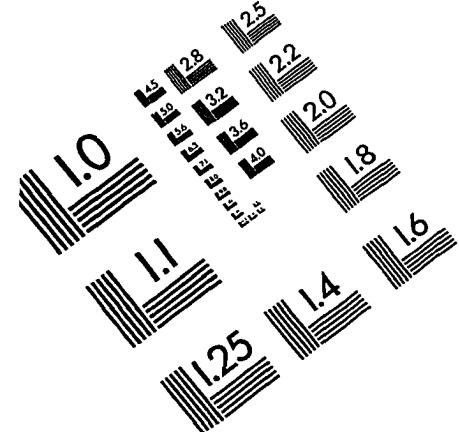
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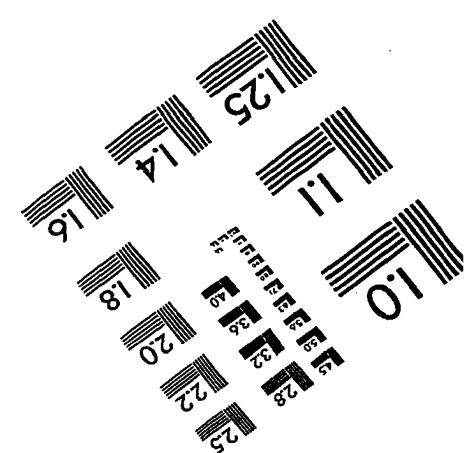
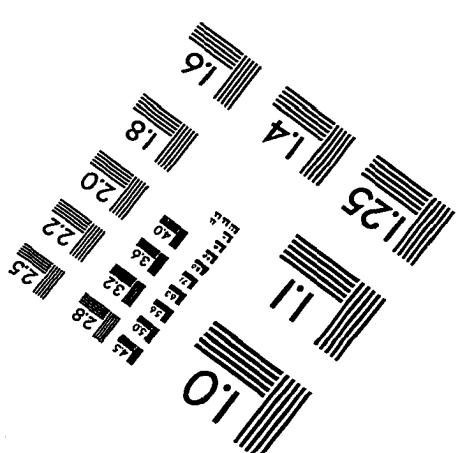
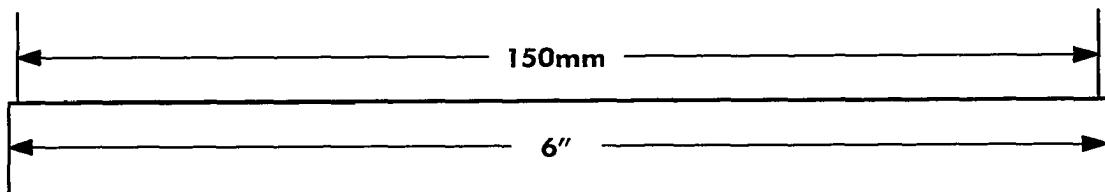
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