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## Introduction

Chapter 1 presents a summary of the book (see §1.1) and details the data and methods used (§1.2). It also addresses the theoretical framework that underlies the research (§1.3).

### 1.1 Overview of the book

This book sheds light on language variation and change from a generative syntactic perspective, based on a case study of relative clauses in Portuguese and other languages. Concretely, it offers a comparative account of three linguistic phenomena documented in the synchrony and diachrony of Portuguese: remnant-internal relativization; extraposition of restrictive relative clauses (RRCs); and appositive relativization.

The research methodology adopted involves comparative syntax (see Cinque and Kayne 2005, among others), both in the diachronic and the synchronic dimensions: Contemporary European Portuguese (CEP) is systematically compared with earlier stages of Portuguese; moreover, Portuguese is compared with other languages, in particular Latin, English, Dutch, and Italian.

Some interesting results emerge out of these comparisons. As far the diachrony of Portuguese is concerned, I propose that the loss of IP-scrambling after the sixteenth century (Martins 2002) gives rise to a series of changes in the syntax of extraposition and relativization, which ultimately lead to the reduction of the patterns of nominal discontinuity available in the language. The raising analysis of relative clauses, the stranding analysis of extraposition (Kayne 1994), and the specifying coordination analysis (De Vries 2002, 2006b) proved to be central to the understanding of these phenomena. Against this theoretical background, I propose that the loss of IP-scrambling, interpreted as the loss of the Attract-all-F EPP feature optionally associated with the I head (Martins 2002), gives rise to the loss of extraposition generated by the specifying coordination plus ellipsis structure. In turn, these two earlier changes originate the loss of *o qual*-ARCs generated by the specifying coordination structure.

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Moreover, I provide evidence that a change parallel to that found at the clausal level (i.e. the loss of IP-scrambling) might also have affected the DP-level. In line with Poletto (2014), I hypothesize that PP-complements/modifiers of the noun cease to target a higher specifier position within the DP, which prevents them from undergoing other potential movements out of the DP.

The present research also contributes to the theoretical debate on the structural analysis of relativization and extraposition. Two important findings are (1) that competing theoretical analyses need not be either false or true universally, but can be instrumental in explaining language variation (both diachronically and synchronically), and (2) that languages (and different stages of the same language) vary according to whether they allow extraposition and relativization to be derived from specifying coordination.

The book is organized around the three linguistic phenomena aforementioned: remnant-internal relativization (Ch. 2); extraposition of RRCs (Ch. 3); and appositive relativization (Ch. 4).

Chapter 2 provides a comprehensive analysis of RRCs involving noun phrase discontinuity. In this configuration (referred to as *remnant-internal relativization*), an element that is thematically dependent on the head noun (either as a complement or as a modifier) does not appear adjacent to it but rather in a position internal to the relative clause, as illustrated in (1)–(4), from earlier stages of Portuguese.

- (1) Casos que Adamastor contou futuros  
cases.MASC.PL that A. told future.MASC.PL  
'future events that Adamastor foresaw' (16th c., from Lausberg 1967/1972: §331)
- (2) os livros que eu compus da philosophia  
the books that I wrote of.the philosophy  
'the books of philosophy that I wrote' (15th c., from Martins 2004: 503)
- (3) que muyto conforto tomava com os tres paos do  
because much comfort had with the three sticks of.the  
leito, por a senificança que deles lhe dissera  
bed for the meaning that of.them him.CL told  
o bom homem da barca.  
the good man of.the boat  
'because he felt very good about the three sticks of the bed because of the meaning that the good man of the boat said they had' (13th c. [transmitted by a 16th-c. MS], Martins, Pereira, and Cardoso 2013–15)
- (4) e qualquer que de nos primeiro morer  
and any that of us first die.SBJV  
'and whoever of us first die' (13th c., Martins 2001: 344)

In (1) and (2) the modifier/complement surfaces in the rightmost position of the noun phrase. For this reason, it can be structurally analyzed as occurring either in a position internal to the relative clause or in an external position as a second modifier following the relative clause. However, the fact that the modifier/complement may occur in other positions than the rightmost one (see (3)–(4)) indicates that it is internally merged.

Based on this evidence, I argue that the analysis of remnant-internal relativization is of particular interest from the theoretical and diachronic point of view. Theoretically I submit that it can illuminate the long-standing debate between the right adjunction analysis of RRCs (originally proposed by Ross 1967, Chomsky 1977, and Jackendoff 1977) and the raising analysis of RRCs (originally proposed by Schachter 1973 and Vergnaud 1974, 1985, and more recently revived by Kayne 1994, Bianchi 1999, and De Vries 2002), providing evidence in favor of the latter. There are two main theoretical reasons that support this claim: First, if the head and its modifier/complement were base-generated together in an relative clause external position (as proposed by the right adjunction analysis), the pattern in (3)–(4) could not be derived as it would require lowering the modifier/complement to a non-*c*-commanding position (Fiengo 1977). Secondly, if the head and its modifier/complement were generated separately (the head being CP-external—as proposed by the adjunction analysis—and the modifier/complement being CP-internal), the semantic dependency between the head and its modifier/complement (requiring that these elements be in a structural relation at some point of the derivation) would not be satisfied.

By contrast, there is a natural explanation for remnant-internal relativization if the head noun and its modifier/complement are merged together in the relativization site, as proposed by the raising analysis. The fact that the modifier/complement enters into a local relation with the head noun at some point of the derivation suffices to explain why, under certain circumstances, the modifier/complement is not adjacent to the head noun and instead shows up in a more embedded position.

From a diachronic point of view, I show that remnant-internal relativization is possible in CEP, but only with the modifier/complement in the rightmost position of the noun phrase (as in (2)); the pattern with the modifier/complement in the left periphery of the RRC (as in (3)–(4)) is excluded. The tentative hypothesis I put forward to explain this contrast is that there was an independent syntactic change in the history of Portuguese that affected the movement operations available within the DP domain and, as a consequence, the word order patterns allowed in remnant-internal relativization.

In Chapter 3 I investigate a specific change that took place in the history of Portuguese involving the extraposition of RRCs. Although this phenomenon has

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been a neglected domain in the literature on Portuguese (in both the synchronic and the diachronic dimensions), I show that it raises some challenging questions for linguistic theory in general and for the study of syntactic change in particular.

From a descriptive stance, I identify three contrasting properties of RRC-extraposition: (1) the definiteness effect; (2) extraposition from pre-verbal positions; and (3) extraposition from prepositional phrases. On the basis of comparative evidence, I show that earlier stages of Portuguese contrast with CEP in respect of the properties of RRC-extraposition, being to a large extent Germanic-like.

Based on the contrasts identified, I claim that the variation found in extraposition is not compatible with a uniform approach to the phenomenon. In particular, I propose that RRC-extraposition may involve two different structures: specifying coordination plus ellipsis (De Vries 2002) and VP-internal stranding (Kayne 1994), and that languages and different stages of the same language may diverge with respect to the structures they display.

In the diachronic dimension, I claim that RRC-extraposition in earlier stages of Portuguese is generated by the specifying coordination plus ellipsis structure (and possibly also by VP-internal stranding), whereas in CEP it only involves VP-internal stranding.

In a cross-linguistic perspective, I suggest that there are at least two types of language. Type-I languages do not generate RRC-extraposition by specifying coordination plus ellipsis (e.g. CEP and possibly Italian, Spanish, and French). Type-II languages generate extraposition by specifying coordination plus ellipsis (e.g. English and Dutch). Type-I languages do not have extraposition derived from specifying coordination plus ellipsis and generate RRC-extraposition by stranding, whereas Type-II languages allow for extraposition derived from specifying coordination plus ellipsis and might also make use of the stranding structure to derive extraposition.

Chapter 4 deals with the syntax of appositive relative clauses (ARCs). In line with Cinque (1982, 2008) and Smits (1988), I argue that ARCs do not constitute a uniform syntactic type. This claim is supported by the study of a syntactic change that took place within the history of Portuguese, involving ARCs introduced by the complex relative pronoun *o qual* ‘the which’ (lit.). The investigation of this micro-variation demonstrates that the syntactic properties of *o qual*-appositives have changed over time, namely with respect to: (1) the possibility of having an additional internal head; (2) restrictions on extraposition; (3) restrictions on pied-piping; (4) the possibility of taking clausal antecedents and (5) split antecedents; (6) coordination of the wh-pronoun with another DP; (7) illocutionary force; and (8) the presence of a spelled-out coordinator. To account for these contrasts, I propose that *o qual*-ARCs in CEP involve the head raising analysis (Kayne 1994, Bianchi 1999), whereas in earlier stages of Portuguese they involve the specifying coordination analysis (De Vries 2006b). The dual approach to the phenomenon straightforwardly derives the variation in the syntax

of appositive relativization found within a language and across languages, both in the synchronic and diachronic dimensions.

## 1.2 Data and methods

Broadly, the research presented in the book involved two main steps: data collection (see §1.2.1) and formal analysis (see §1.2.2.). The conventions adopted for data presentation are described in §1.2.3.

### 1.2.1 Data collection

In the studies offered in the book, I adopt a comparative perspective, contrasting the behavior of different languages and different stages of the same language with respect to some aspects of the syntax of relativization. Such an approach required the collection of data from different languages and periods, namely from historical Portuguese, CEP, and other languages.

For earlier stages of Portuguese, given the limitations of the resources available,<sup>1</sup> a small corpus of texts was selected for systematic syntactic analysis. This corpus has approximately 140,000 words and contains 218 notarial documents edited by Martins (2001), produced mostly between the second half of the thirteenth century and the second half of the sixteenth century. Following a corpus-driven methodology, without predefined search structures (Tognini-Bonelli 2001), I manually extracted all the relative clauses in the corpus. This process resulted in a sample of c.4,000 relative clauses, which were stored in a database and qualitatively analyzed.

On the basis of this analysis, the phenomena to be studied were selected according to three main principles: (1) the contrasting properties of the relevant structures in earlier stages of Portuguese with respect to CEP; (2) the novelty of the phenomena (i.e. phenomena not yet reported/explored in the literature); and (3) the theoretical relevance of the phenomena. The adoption of a corpus-driven methodology was rewarding in this first phase; a variety of constructions (or properties of the constructions) were found that have not been reported in the grammars and studies of the history of Portuguese.

Once the study topics were selected, a corpus-based methodology was adopted, which involves the selection of particular examples for specific and predetermined purposes (Tognini-Bonelli 2001). Hence, besides the collection of data from

<sup>1</sup> At the time the research was conducted (2006–10), there were three important digital corpora available for the study of earlier stages of Portuguese: *Tycho Brahe Parsed Corpus of Historical Portuguese* (Galves and Faria, 2010); *Digital Corpus of Medieval Portuguese* (Xavier, coord., 1993–); and *Unknown Letters*, which later gave rise to the *P.S. Post Scriptum: A Digital Archive of Ordinary Writing (Early Modern Portugal and Spain)* project (CLUL, ed., 2014). However, with the exception of the *Tycho Brahe Parsed Corpus of Historical Portuguese*, which contained eleven syntactically annotated texts, no other texts were available for syntactic search.

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grammars and studies on the history of Portuguese, I inspected other sources in order to: (1) document specific phenomena unattested in Martins (2001); (2) broaden the variety of text-types documenting a specific phenomenon; and (3) cover the period from the second half of the sixteenth century to the nineteenth century. Table 1.1 provides a list of the additional sources considered for earlier stages of Portuguese. The texts correspond to different genres and registers and they date from different periods.

TABLE 1.1 Additional primary sources for earlier stages of Portuguese

	Corpus/Edition	Reference
13th–16th (1st half) c.	<i>Tycho Brahe Parsed Corpus of Historical Portuguese</i>	Galves and Faria (2010)
	<i>Digital Corpus of Medieval Portuguese (DCMP)</i>	Xavier (coord., 1993–)
	<i>Crónica do Conde D. Pedro de Meneses</i>	Brocardo (1997)
	<i>Livro de Linhagens do Conde D. Pedro</i>	Brocardo (2006)
	<i>Demanda do Santo Graal</i>	Piel and Nunes (1988)
	<i>Livro de José de Arimateia</i> <sup>2</sup>	Castro (1984)
	<i>Livro dos Ofícios</i>	Piel (1948)
16th (2nd half)–19th c.	<i>Crónica de D. Fernando</i>	Macchi (1975)
	<i>Gil Vicente: todas as obras</i>	Camões (1999)
	<i>Tycho Brahe Parsed Corpus of Historical Portuguese (TYC)</i>	Galves and Faria (2010)
	<i>P.S. Post Scriptum: A Digital Archive of Ordinary Writing (Early Modern Portugal and Spain) (P.S.)</i>	CLUL (ed., 2014)
	<i>Corpus do Português (CP)</i>	Davies and Ferreira (2006–)
	<i>Os Autos do Processo de Vieira na Inquisição</i>	Muhana (1995)
	<i>Documentos para a História da Inquisição em Portugal</i>	Pereira (1987)
<i>Inquisição de Évora: dos Primórdios a 1668</i>	Coelho (1987)	

<sup>2</sup> *Demanda do Santo Graal* is a 15th-century copy of a lost Portuguese translation, from the 13th century, of the last section of the Post-Vulgate *Roman du Graal* (see Castro 1993; Martins 2013). *Livro de José de Arimateia* is a 16th-century copy of a lost Portuguese translation, also from the 13th century, of the first section (see Castro 1983; Neto 2001). Parsed versions of *Demanda do Santo Graal* in the edition of Neto (2012–15), and *José de Arimateia* in the edition of Castro (1984), have in the meantime been developed by Martins, Pereira, and Cardoso (2014–15, 2013–15 respectively). Because these versions are available online, I will use them for reference purposes.

**TABLE 1.2 Additional sources for Contemporary European Portuguese**

Corpus/Edition	Reference
<i>CETEMPúblico</i> : A large corpus of Portuguese newspaper language ( <i>CETEMP</i> )	Rocha and Santos (2000)
<i>Reference Corpus of Contemporary Portuguese (CRPC)</i>	Bacelar do Nascimento (2000)
<i>Corpus of Spoken Portuguese (C-ORAL-ROM)</i>	B. do Nascimento et al. (2005)
<i>Syntax-oriented Corpus of Portuguese Dialects (CORDIAL-SIN)</i>	Martins (coord. [2000– ] 2010)

**TABLE 1.3 Additional sources for contemporary and historical English**

Corpus/Edition	Reference
<i>Corpus of Contemporary American English (COCA)</i>	Davies (2008– )
<i>Penn Parsed Corpus of Modern British English (PPCMBE)</i>	Kroch, Santorini, and Diertani (2010)
<i>Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME)</i>	Kroch, Santorini, and Delfs (2004)

As the present research adopts a comparative perspective (Cinque and Kayne 2005, among others), additional evidence was collected to show how different languages (or different stages of the same language) behave with respect to the phenomena under analysis. Therefore, I systematically compared earlier stages of Portuguese with CEP as regards the study topics. The empirical evidence for CEP is based on my own linguistic intuitions, intuitions from other speakers, corpora, and data available in grammars and studies on Portuguese syntax. In addition, following a corpus-based methodology, I searched for specific aspects related to the syntax of relativization in corpora of oral and written texts (Table 1.2).

Moreover, I systematically compared Portuguese with other languages, in particular Latin, English, Dutch, and Italian. To that end, I collected empirical data from grammars and studies on the syntax of relativization. As for contemporary and historical English, I additionally inspected the corpora listed in Table 1.3.

### 1.2.2 Formal analysis

On the basis of the data collected, the relevant inter- and intra-linguistic contrasts were identified and a formal account was developed, which is built on generative syntax and on the theories that combine language change with language acquisition. See §1.3 for an introduction to the relevant framework.

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### 1.2.3 *Transcription and reference conventions*

For ease of reading, the conventions adopted by some editors in text transcription have been simplified, that is: (1) parentheses and italics that indicate the expansion of abbreviations are eliminated; (2) the indication of line breaks and the *hyphen* sign (which indicates the division of a word at the end of a line) are removed; and (3) the tildes and the superscript marks (similar to an acute accent) that editors transcribe after a letter appear above the letter.

The data excerpts are drawn from primary and secondary sources. Primary sources are referenced by the corpus abbreviation or by the author–date system (in the case of individual editions), and the full reference is provided in the reference list at the end of the book (“Primary sources”). In the case of manuscripts, the source is referenced by the place-name and by the name of the archive. If other primary sources are used, the specific kind of source is identified (e.g. TV-show, newspaper) and no reference is provided in the reference list. Secondary sources (e.g. grammars and other studies) are referenced by the author–date system and the full reference is provided in the reference list (“Secondary sources”).

The examples provided in the book may be complemented with further information: (1) historical data have indication of the century of the text; and (2) non-English examples are followed by a word-for-word gloss with the relevant morphological information and by the English translation.

## 1.3 **Theoretical framework**

This section outlines the theoretical framework that underlies the studies presented in the book, considering: (1) the theory of grammar (§1.3.1); (2) the syntax of relative clauses (§1.3.2); (3) information structure (§1.3.3); and (4) the theory of language change (§1.3.4). Emphasis is given to the aspects that directly concern the study topics. More specific implementations are presented in later chapters as they become relevant for a particular phenomenon.

### 1.3.1 *Theory of grammar*

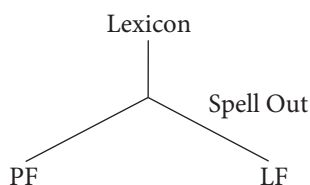
The theory of grammar adopted in the book broadly falls within the premises of the generative Principles-and-Parameters approach to the study of human language (Chomsky 1981), under its Minimalist version (Chomsky 1993, 1995, and subsequent work). It is also inspired by the new insights deriving from Kayne’s (1994) antisymmetry theory.

**1.3.1.1 *The architecture of grammar*** The general trend in generative grammar is to adopt a model of grammar represented by the shape of an inverted-Y: the so-called Y- or T-model (see (5)). Under this view, the computational system accesses the



lexical items<sup>3</sup> and builds the syntactic structures through the operation Merge.<sup>4</sup> At the point at which the system employs the operation Spell Out, the computation is split into two parts—Phonological Form (PF) and Logical Form (LF)—which correspond to interface levels that provide instructions to the phonological module and to the interpretative system, respectively.

(5) Architecture of grammar (Y/T-model)



Some authors argue that the classical Y/T-model in (5) needs to be changed in order to account for some interface phenomena, such as the relationship between focus, word order, and nuclear stress.<sup>5</sup> However, despite the prolific research in this field, to date there is still much debate on the way that syntax relates to PF and LF. Moreover, it is still not clear how to integrate information structure in the classical Y/T-model.

*1.3.1.2 Phrase structure* In the book the hierarchical phrasal organization is represented either by tree diagrams (as in (6)) or by labeled brackets (as in (7)). The crucial relations are stated in the simple terms of the  $X'$  (or X-bar) notation. Structures of the form in (6)–(7) are composed of a head (X), which takes ZP as its complement and YP as its specifier. Besides the head X, the structure involves three maximal projections (or phrases)—XP, YP, and ZP—and an intermediate projection— $X'$ .

<sup>3</sup> The lexical items may correspond to words, morphemes, or submorphemic units, depending on the theory adopted.

<sup>4</sup> Chomsky (2001) distinguishes between External and Internal Merge. External Merge takes two distinct objects and combines them, whereas in Internal Merge one of the objects is a subpart of the other. The latter operation is more frequently called Move.

<sup>5</sup> For alternative models, see Jackendoff (1997) and Zubizarreta (1998), among others. Broadly, Jackendoff (1997) proposes a radical change in the architecture of grammar, postulating a “parallel” model of grammar where all the modules create their own derivations in a parallel fashion, the articulation between the modules being established by some correspondence rules. Zubizarreta (1998), in turn, proposes a change in the classic Y/T-model, including an earlier point in the derivation where the structure involves a single phrase marker ( $\Sigma$ -structure) and a post-LF level (Assertion Structure) where the focus-presupposition partitioning is encoded.

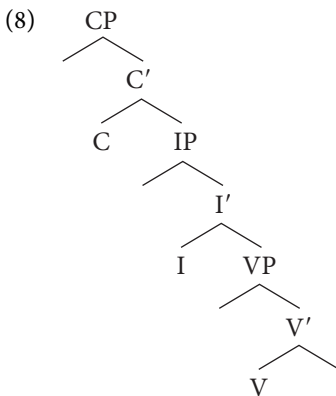


1.3.1.3 *Linear order* The most famous algorithm to derive linear order from the hierarchical structures is the Kayne's (1994) *Linear Correspondence Axiom* (LCA), which states that asymmetric c-command imposes a linear ordering of terminal elements.

The LCA imposes severe restrictions on the syntactic structure, in particular, (1) the impossibility of right-hand adjunction; (2) the impossibility of rightward movement; (3) strict binary branching; and (4) the specifier-head-complement universal order.

I adopt the restrictions in (1)–(4) in the comparative analysis developed for relative clauses. However, given that no systematic LCA-compatible analysis has been developed for scrambling in CEP, I will have to stick to the specifier/adjunct distinction along with the possibility of multiple specifiers and adjuncts (Chomsky 1995: 340) in order to accommodate the analyses developed for middle/short scrambling (J. Costa 1998, 2004a; Martins 2002; Costa and Martins 2009) and VP-modifiers (J. Costa 2004a,b) in CEP—at least until an analysis consistent with LCA is developed for these phenomena.

1.3.1.4 *Clause structure* The structure of the clause is represented with a tripartite structure, including a Verb Phrase (VP), an Inflection Phrase (IP), and a Complementizer Phrase (CP), as in (8).



The VP is headed by a verb. For ease of exposition, I represent it by default with a single shell, as in (8); I make use of the so-called double VP shell<sup>6</sup> only to represent the double complement construction.

The IP is headed by inflection, a cover term that encompasses functional categories associated with the verb (e.g. tense, agreement, aspect). Although the IP space has been claimed to involve more than one functional projection (Pollock 1989; Belletti 1990; Cinque 1999; among others), I represent it by default with a single inflection projection (IP),<sup>7</sup> except when considering analyses developed by other authors: for example, in order to adopt Martins' (1994a,b) account of clitic placement in Old Portuguese, I resort to the functional category Sigma ( $\Sigma$ ), which codifies polarity (see, among others, Laka 1990; in this case, the IP space includes the  $\Sigma$ P projection, which immediately dominates TP).

Following Rizzi (1997), the CP level is taken to involve several functional projections (see the template in (9), where the asterisk means that the projection is recursive). It is delimited by a Force Phrase (ForceP), which encodes the illocutionary force of the clause, and a Finiteness Phrase (FinP), which defines the finite/non-finite status of the clause; in between FinP and ForceP there are some functional projections—a Topic Phrase (TopP) and a Focus Phrase (FocP)—which host wh-elements, topics, and foci.

(9) [ForceP [TopP\* [FocP [TopP\* [FinP [TP]]]]]]

In the book I adopt the single CP projection by default; a split representation of the CP level is used only when a topic and/or a focalized element is involved in the structure.

*1.3.1.5 Movement and features* An important property of human languages is that linguistic expressions may surface in a position distinct from their first merged position, that is, they appear to have been moved. Under Minimalist assumptions, movement (or Internal Merge) is driven by features (i.e. linguistic properties).

Features can be classified according to different criteria. Cut one way, there are phonological, semantic, and formal features (Chomsky 1995: 230).<sup>8</sup> Phonological and semantic features are relevant for the articulatory-phonetic system and for the conceptual-intentional system, respectively; formal features correspond to the set of

<sup>6</sup> According to the double VP shell approach, the verb phrase consists of a lower lexical verb phrase (VP) and a higher light verb phrase (*v*P) (Larson 1988, 1990, among others).

<sup>7</sup> In the spirit of Chomsky (1995), Bošković (1999), and Martins (2002), I assume that the inflection head can attract multiple specifiers.

<sup>8</sup> Taking an example from Chomsky (1995: 230), the lexical entry for *airplane* contains three collections of features: phonological features (e.g. begins with a vowel); semantic features (e.g. artifact); and formal features (e.g. nominal).

features that function in the computation, excluding the phonological and purely semantic features.

In earlier Minimalism, movement takes place when a formal feature needs to enter into a checking relation with a feature of the same sort. Two options are available, depending on feature's strength: weak features involve pure feature movement, whereas strong features involve movement of a full category. More recently, Chomsky (1999, 2000) adopts a different approach, according to which movement is triggered by a specific feature (EPP). If a head is associated with the EPP-feature, its specifier position needs to be overtly filled.

Another important distinction among formal features concerns their interpretability in LF: interpretable features (e.g. categorial features, phi-features of nouns) have effect on the interpretation and therefore remain accessible to the computation and visible in LF; uninterpretable features (e.g. Case, agreement features of the verb) have no effect on the interpretation and therefore must be eliminated for convergence in LF (Chomsky 1995: 277).

### 1.3.2 *Syntax of relative clauses*

After some preliminaries (§1.3.2.1), I present the definition of *relative clause* adopted in the book (§1.3.2.2) and the restrictive/appositive dichotomy (§1.3.2.3). Then I briefly outline the core competing analyses proposed in the literature to account for the syntax of RRCs (§1.3.2.4) and ARCs (§1.3.2.5), placing emphasis on the approaches implemented in the book (i.e. the *raising analysis* and the *specifying coordination analysis*).

**1.3.2.1 Preliminaries** Perhaps one of the most relevant contributions of the Principles and Parameters model (Chomsky 1981) has been the rejection of the view that a language consists of rules for forming grammatical constructions (e.g. relative clauses and passives). As Chomsky (1995: 5–6) states:

The P&P [Principles and Parameters] approach held that languages have no rules in anything like the familiar sense, and no theoretically significant grammatical constructions except as taxonomic artifacts. There are universal principles and a finite array of options as to how they apply (parameters), but no language-particular rules and no grammatical constructions of the traditional sort within or across languages.

This move is crucial for the development of generative syntax. It asserts that the notion of *construction*,<sup>9</sup> which is used in traditional grammar (and in earlier periods

<sup>9</sup> See Schönefeld (2006), where the notion of “construction” is examined from a number of different theoretical perspectives. In this respect, it is worth mentioning that there are many theories that diverge radically from the generative view presented here. This is, for instance, the case as regards the Construction

of the generative grammar) to refer to clause types (among other syntactic patterns), can be used non-technically to refer to a variety of apparently related structures but has no theoretical relevance.

In view of the new paradigm, the term *relative clause* is used in this book as a mere descriptive label with no explanatory force. Similarly, the view that relative clauses (and other “constructions”) involve uniform underlying structure and movement is rejected. Indeed this ideal, which is still pursued in many generative studies, can rather be taken as a revival of the traditional concept of *construction*.

*1.3.2.2 Definition of relative clause* The concept of *relative clause* is difficult to characterize, given the diversity of structures traditionally grouped under this label. As a working definition, I adopt De Vries’ (2002: 14) proposal, which defines relative clauses as having the properties in (10).

- (10) Defining properties of relative clauses
- a. A relative clause is subordinated.
  - b. A relative clause is connected to surrounding material by a pivot constituent.

In the context of (10b), the term *pivot* refers to a constituent that is semantically shared by the matrix clause and the relative clause.

*1.3.2.3 The restrictive/appositive dichotomy* Much of the traditional and generative literature has assumed that relative clauses can be semantically classified as *restrictives* or *appositives*. RRCs are interpreted intersectively, that is, as restricting the denotation of the antecedent. ARCs are interpreted as providing additional information about the antecedent. This is illustrated in (11). In the RRC in (11a), there is another potential group of students that did not participate in the research, whereas in the ARC in (11b), there is only one group of students in the domain of discourse and no contrast with other students.<sup>10</sup>

- (11) a. The students who participated in the research showed improvement in this area.
- b. The students, who participated in the research, showed improvement in this area.

Grammar model, pursued by a growing number of researchers (Ivan Sag, Charles Fillmore, and William Croft, among others).

<sup>10</sup> In recent studies, there seems to be a growing consensus that not all relative clauses fit the traditional restrictive/appositive dichotomy. Some authors (Carlson 1977; Heim 1987; Grosu and Landman 1998; among others) have identified a “third type” of relative clause: the so-called *degree* (or *amount*) *relative*. For more details on degree relatives, see §1.3.2.4B(e).

1.3.2.4 *Syntax of restrictive relative clauses* Much of the debate on the syntax of RRCs has centered on the contrast between the *adjunction analysis* and the *raising analysis*, which are schematically represented in (12).

- (12) a. The book [ $\emptyset_i$  I read  $t_i$ ] (*adjunction analysis*)  
b. The [book $_i$  I read  $t_i$ ] (*raising analysis*)

The major difference is that the head noun *book* is generated in the matrix clause in the adjunction analysis (see (12a)), but it is raised from ~~with~~-in the relative in the raising analysis (see (12b)). This is why these approaches are often referred to as, respectively, *head external analysis* and *head internal analysis* (or *promotion analysis*).<sup>11</sup>

### A. Adjunction analysis

The development of the adjunction analysis goes back to Ross (1967), Chomsky (1977), and Jackendoff (1977). For the current exposition, I consider the version of the adjunction analysis proposed by Demirdache (1991), according to which the RRCs are right-adjoined to the Noun Phrase (NP) projection (see (13)).<sup>12</sup> The head noun originates outside of the RRC, and the relative CP involves the  $A'$ -movement of a relative operator, which is linked to the head-NP via predication, semantically interpreted as intersective modification.

- (13) [ $DP$  the [ $NP$  [ $NP$  book] $_i$  [ $CP$  Op $_i$  I read  $t_i$ ]]]

Two aspects of the adjunction analysis are worth emphasizing: (1) the head is not directly represented in the relative clause; and (2) the relative clause is c-commanded by the D head.

<sup>11</sup> An alternative approach to the syntax of RRCs is the so-called *matching analysis*, which is originally proposed by Lees (1960, 1961), and Chomsky (1965), and, more recently, extended in Sauerland (1998, 2003), Cresti (2000), and Citko (2001), among others. In the matching analysis, two heads are involved in an RRC: (1) one head is generated in the matrix (external head); and (2) the other is generated in a position internal to the relative clause (internal head). The internal head is deleted under identity with the external head, as sketched below:

the [book] [ $CP$  [Op/which ~~book~~] $_i$  I read  $t_i$ ]

The matching analysis can be taken as a compromise between the adjunction and the raising analyses and, as a consequence, it involves some pros and cons of both approaches (see Bhatt 2002 for a detailed criticism). For this reason, and to keep the discussion simpler, I limit the treatment in this book to the adjunction analysis and raising analysis.

<sup>12</sup> The adjunction analysis is also proposed for ARCs (see §1.3.2.5). The difference concerns the level of attachment: in present-day syntax, RRCs may be viewed as adjoined to the NP level, whereas ARCs are attached to the Determiner Phrase (DP) level.

## B. Raising analysis

The raising analysis was originally proposed by Schachter (1973) and Vergnaud (1974, 1985). It was later revived by Kayne (1994), who combines head raising with the D-complement hypothesis, according to which the relative clause is the complement of the outer determiner.<sup>13</sup>

In this book I adopt the version of the raising analysis proposed by Kayne (1994) with some of the implementations developed by Bianchi (1999) and De Vries (2002). Concretely, I assume that the head NP (i.e. the antecedent) of an RRC originates at the relativization site inside the subordinate clause and then raises to the left edge. The relative clause itself is generated as the complement of the so-called external determiner, with which the head NP may associate after raising. A relative pronoun or operator is then analyzed as a *relative determiner* originally belonging to the internal head NP. As represented in (14), there are normally two movement steps: movement of the operator phrase  $DP_{rel}$  to the CP domain, and subsequent movement of the head NP to the left of  $D_{rel}$ .

- (14)  $[DP\ D\ [CP\ [DP_{rel}\ NP_j\ [D_{rel}\ t_j]]_i\ C\ [IP\ \dots t_i]]]$   
 e.g.    the            book which            I read

If no relative pronoun is present, I take the relative clause to involve the same structure as (14). In this case, however,  $D_{rel}$  is not spelled out and the complementizer *que* ‘that’, if present, occupies the C position (see (15)).

- (15)  $[DP\ D\ [CP\ [DP_{rel}\ NP_j\ [D_{rel}\ t_j]]_i\ C\ [IP\ \dots t_i]]]$   
 e.g.    the            book            that I read  
           the            book            I read

For the subsequent movement of the head NP to the left of  $D_{rel}$ , I adopt Bianchi’s (1999) proposal, according to which the external D bears a strong N-feature that needs to be checked by a [+N] category. Because the CP category itself (the complement of D) has no such feature, the head NP inside CP must be moved to a position governed by (or in the minimal domain of) the external D.

For the landing site of this movement, I take the head NP to be moved to [Spec,  $DP_{rel}$ ] in sentences such as (14). However, when  $DP_{rel}$  is embedded in another constituent and this constituent is dragged along with  $D_{rel}$  to the CP domain (i.e. when pied-piping is involved), I assume that the head NP moves to the highest

<sup>13</sup> It is worth noting that Kayne (1994) works within an antisymmetric framework of syntax that does not permit right-adjunction; hence, the adjunction analysis of relative clauses is not an option in his framework (see §1.3.1.3).

specifier position within the pied-piped constituent (Kayne 1994, De Vries 2006a). See, for instance, (16), which involves pied-piping of a PP to the CP domain.

- (16)  $[_{DP} D [_{CP} [_{PP} NP_i [_{P'} P [_{DP_{rel}} D_{rel} t_i]]]_k C [_{IP} t_k]]]$   
           the           bed       in       which       he sleeps

The strongest arguments adduced in the literature in favor of the raising analysis are summarized in (a) to (g) below. For further discussion of arguments and counter-arguments regarding this approach, see Bianchi (1999), Alexiadou, Law, Meinunger, and Wilder (2000), De Vries (2002), Bhatt (2002), Salzmann (2006), and discussions in Borsley (1997) and Bianchi (2000).

(a) **Binding theory**

Reconstruction is originally proposed in the Government and Binding Theory as a process that occurs in the mapping from S-structure to LF, moving some constituents back to their D-structure positions.<sup>14</sup> It has been considered as a reliable diagnosis for movement because a constituent that has undergone movement behaves as if it were in the position occupied before movement at the level of computation at which binding principles apply. These facts can be observed, for example, in interrogative wh-movement. In (17a) the anaphor *himself* has to be c-commanded by its antecedent *John*, and consequently it behaves as if it were in its base position. In (17b) *John* is interpreted in its base position, the sentence being ruled out as a violation of Principle C of the binding theory.

- (17) a. Which picture of himself<sub>i</sub> did John<sub>i</sub> buy t?  
       b. \*Which picture of John<sub>i</sub> did he<sub>i</sub> buy t?

Based on the idea that reconstruction effects can be a diagnosis for movement, the reconstruction of the relative head has been widely discussed by proponents and opponents of the raising analysis. One traditional argument in favor of this approach is the presence of reconstruction effects in sentences like (18).

- (18) [The portrait of himself<sub>i</sub> that John<sub>i</sub> painted t] was extremely flattering.

The adjunction analysis makes the wrong predictions about (18): if the head is base-generated in a relative clause external position, the anaphor *himself* cannot be bound by *John*; hence (18) should be ungrammatical, in violation of Principle A of the binding theory.

<sup>14</sup> In the terms *D-structure* and *S-structure*, the letters *D* and *S* are originally associated with 'Deep' and 'Surface'.



In contrast, the pattern of grammaticality of (18) is explained under the raising analysis. Because the head is base-generated in a position internal to the relative clause, the anaphor embedded in the head can be reconstructed in its base position and, consequently, be bound by the subject of the relative clause.<sup>15</sup>

**(b) Quantifier binding**

Quantifier binding requires that a quantificational noun phrase c-commands a bound pronominal. To test quantifier binding in relative clauses, the relevant configuration involves a pronoun embedded in the head bound by a quantifier inside the relative clause, as in (19), from English, and (20), from Italian.

(19) The picture of his<sub>i</sub> mother that every soldier<sub>i</sub> kept t wrapped in a sock was not much use to him. (Salzmann 2006: 22)

(20) La parte del suo<sub>i</sub> stipendio che ho anticipato t ad ogni  
the part of his salary that have.1SG advanced to every  
impiegato<sub>i</sub> verrà sottratta dalla busta paga  
clerk come.FUT deducted from.the payslip  
'The part of his salary that I paid in advance to every clerk will be deducted from the pay-sheet.' (Bianchi 1999: 124)

On the assumption that a pronoun cannot incidentally co-refer with a quantified expression, quantifier binding in (19)–(20) requires that the pronouns *his* and *suo* 'his' be in the gap position of the relative clause at the relevant level.

The appropriate configuration is obtained by the raising analysis: the head is base-generated inside the relative clause and, as a result, can be interpreted in its trace position in LF. Such an explanation is not, however, available for the adjunction

<sup>15</sup> According to Cecchetto (2005), when a transitive noun such as *picture* is used in these tests, the anaphor can be bound by an NP-internal PRO that sits in the subject position of the NP (Giorgi and Longobardi 1991). Therefore in sentences like (i), the absence of Principle A violation is not a case of reconstruction because the position in which *himself* occurs is c-commanded by a suitable antecedent for *himself* (PRO).

(i) [<sub>DP</sub> the [<sub>NP</sub> PRO<sub>i</sub> picture of himself<sub>i</sub>] [that John<sub>i</sub> likes *e* most]] (was never on display) (Cecchetto 2005: 16)

However, Cecchetto (2005) notes that the same effect appears if, as in (ii), from Italian, an unaccusative noun like *naufragio* 'shipwreck' is involved. Because in this case no internal PRO is available, the absence of Principle A violation indicates that reconstruction is at stake.

(ii) Il [naufragio della propria<sub>i</sub> nave] [che Gianni<sub>i</sub> teme è<sub>i</sub> quello che  
the shipwreck of.the own ship that G. fears is that that  
può avvenire durante la regata principale  
can happen.INF during the regatta main  
'The shipwreck of his own ship that Gianni fears is the one that can happen during the main regatta.'  
(Cecchetto 2005: 18; gloss and translation mine)

analysis; in this case, the head cannot be interpreted in a position inside the relative clause because it is externally generated.

**(c) Scope assignment**

The head of a relative clause can be reconstructed for the purposes of scope assignment (Salzmann 2006, among others). Consider, for instance, the sentence in (21), which can have a distributive reading or a wide-scope reading. In the distributive reading, each doctor will examine a different set of two patients that every doctor examines; in the wide-scope reading, all doctors examine the same two patients. Crucially, the distributive reading is only possible if the numeral is reconstructed under the scope of the universal quantifier.

- (21) I called the two patients that every doctor will examine tomorrow (Salzmann 2006: 22)

In the raising analysis, this requirement is fulfilled because the head can be reconstructed in its base position, under the scope of the subject of the relative clause. This is not possible under the adjunction analysis: the head originates outside the relative clause and therefore cannot reconstruct to a relative clause internal position.

**(d) Idioms**

The argument from idiom chunks (or collocations) is based on configurations like (22), where the direct object of an idiom (i.e. *headway*) is relativized.

- (22) The headway that we made was satisfactory. (attributed to Brame 1968 MS, cited in Schachter 1973: 31)

The basic idea is that the verb and the object form a fixed expression with a special meaning, which can be derived only if the verb and the object are merged together (Schachter 1973; Vergnaud 1974; Chomsky 1993; Bianchi 1999; Bhatt 2002; among others).

In the raising analysis, the conditions on the adjacency of the parts of the idiom are met in LF: *headway* is generated as the complement of *made* within the relative clause; hence it can be reconstructed in its base position. In the adjunction analysis, the grammaticality of (22) is unexpected: the verb and the head are not merged together and therefore cannot become adjacent in LF via reconstruction.

**(e) Degree relatives**

It has been argued in the literature that some relative clauses do not fit in the traditional appositive/restrictive dichotomy. A case in point concerns the so-called *degree* (or *amount*) *relatives*, which differ from the traditional types in a number of ways, including their semantics (Carlson 1977; Grosu and Landman 1998; among others). In (23), for instance, the relative clause refers to the amount of wine, rather

than to the fact that there was wine in the bottle; in fact it can be paraphrased as (*Mary drank*) *all the wine in the bottle*.

(23) Mary drank the wine that there was in the bottle.

To derive the amount reading of degree relatives, Grosu and Landman (1998) assume that: (1) the head of the relative clause is interpreted in a CP internal position; and (2) an operation of maximalization takes place within the relative clause.

The raising analysis derives straightforwardly the amount reading, because the head is reconstructed inside the relative clause and the abstraction is over a degree variable. The same effect cannot, however, be obtained under the adjunction analysis because the head is merged CP-externally.

#### (f) The interpretation of adjectival modifiers

Bhatt (2002) argues that certain adjectival modifiers associated with the head noun can be interpreted in a CP internal position. Sentence (24), for instance, is ambiguous between a high and a low reading of the adjective *first*. In the high reading, the order in which the books were actually written is irrelevant; what matters is the order in which John names the books. In the low reading, the order of John's naming it is irrelevant and what matters is the order in which the books were written.

(24) The first book that John said that Tolstoy had written. (Bhatt 2002: 57)

Bhatt (2002) shows that the low reading<sup>16</sup> of the adjective can be derived if the head and its modifier are reconstructed inside the relative clause. This is possible under the raising analysis because the head and its modifier originate inside the relative clause and undergo leftward movement. This not, however, an option in the adjunction analysis because the head is not directly represented inside the relative clause.

#### (g) Head-internal relatives

From a cross-linguistic perspective, there is wide variation in the relative position of the head with respect to the relative clause. On the basis of this criterion, three main syntactic types are identified: (1) post-nominal or head-initial relative clauses (see (25), from English); (2) pre-nominal or head-final relative clause (see (26), from Mandarin Chinese); and (3) circum-nominal or head-internal relative clauses (see (27), from Dagbani, a Gur language spoken in Ghana).<sup>17</sup>

(25) The book that you gave me was very interesting.

<sup>16</sup> The high reading is not crucial for Bhatt's argument because it can also be derived by a non-raising structure (namely by merging the adjectival modifier outside the relative CP).

<sup>17</sup> Post-nominal and pre-nominal relative clauses are sometimes grouped together under the label *head-external relative clauses* (as opposed to *head-internal relative clauses*).

- (26) Wǒ bǎ nǐ gěi wǒ de shū diūdiào-le.  
I ACC you give I NR book loose-PERF  
'I have lost the book that you gave me.' (Lehmann 1984, cited in De Vries 2002: 16)
- (27) A mi [o nǎ ti saan-so lǎgri] la.  
you know he SR give stranger-SPC/LIV money PTL  
'You know the stranger to whom he gave the money.' (Lehmann 1984, cited in De Vries 2002: 16)

The existence of head-internal relative clauses has been taken as a strong argument in favor of the raising analysis (Bianchi 1999: 61ff.; De Vries 2002: 77, 135ff.). The head-internal relatives involve a nominalized sentence that modifies a nominal (overt or not) internal to the sentence (Culy 1990), as depicted in (28) (the head noun and the determiner are in bold face).

- (28) [<sub>DP</sub> [<sub>CP</sub>...**N**...] (**D**)] (De Vries 2002: 136)

The fact that in (28) the head surfaces in the argument position inside the relative clause has led some proponents of the raising analysis to postulate the same base position for the head in head-external relative clauses. In accordance with the principle that derivations are uniform, head-external and head-internal relative clauses would then involve the same derivation. The only extra assumption would be that head-internal relative clauses involve covert (and not overt) movement of the head in LF.

This hypothesis is not, however, available in the adjunction analysis because the head is generated outside the relative clause. Under this approach, head-internal and head-external relatives must involve two completely different derivational stories.

*1.3.2.5 Syntax of appositive relative clauses* Syntactic analyses of ARCs differ in the relationship established between the antecedent and the relative clause, being classified as *orphanage analysis* or *constituency analysis*<sup>18</sup> (see De Vries 2006b and Arnold 2007 for an overview).

For the sake of concreteness, Table 1.4 shows how the main analyses of ARCs proposed in the literature fall within this bipartite classification.

#### A. Orphanage analyses vs. constituency analyses

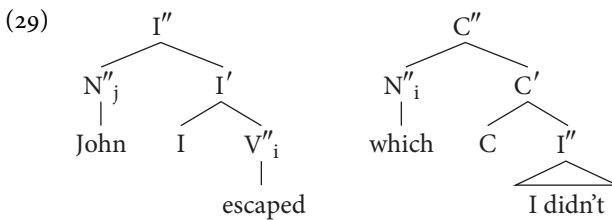
The central plank of the orphanage analyses is that the ARC and the antecedent are generated separately. Two variants of this approach can be identified: *radical orphanage analyses* and *non-radical orphanage analyses*.

<sup>18</sup> The orphanage/constituency dichotomy corresponds to what Emonds (1979) calls the *Main Clause Hypothesis* and the *Subordinate Clause Hypothesis*.

TABLE 1.4 Appositive relatives: Orphanage analyses vs constituency analyses

Type	Subtype	Authors (e.g.)
Orphanage analyses	Radical orphanage analyses	Safir (1986) Fabb (1990) Espinal (1991)
	Non-radical orphanage analyses	Ross (1967) Emonds (1979) Demirdache (1991)
Constituency analyses	Adjunction analyses	Jackendoff (1977) Perzanowski (1980)
	Head raising analyses	Vergnaud (1974) Kayne (1994) Bianchi (1999)
	Coordination analyses	Koster (1995, 2000) De Vries (2002, 2006b)

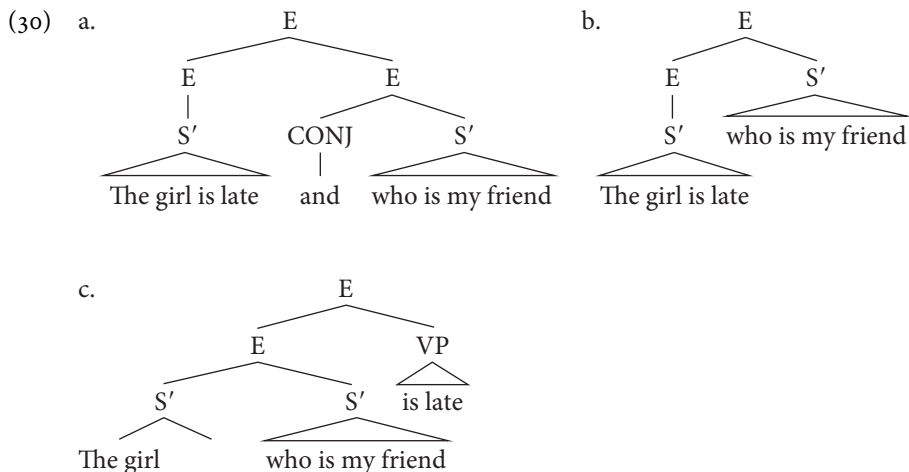
Radical orphanage analyses propose that there is no syntactic link between the relative clause and the sentence containing the antecedent at any level of syntactic representation. For instance, Fabb (1990), one of the proponents of this approach, claims that ARCs do not enter any syntactic relation with the matrix (such as modification, specification, or theta-assignment). This fact is illustrated in (29), from Fabb (1990: 61).



According to this approach, there is no syntactic link between the relative CP and the sentence *John escaped*. Other than some pragmatic notion of *aboutness*, the only relation established is between the antecedent and the relative pronoun. This relationship involves the sharing of the same referential index (see index<sub>i</sub> in (29)), a condition that is satisfied at the level of discourse structure rather than in the syntax. The adjacency between the ARC and the antecedent is then derived only at the discourse level.

In contrast, non-radical orphanage analyses propose that the antecedent and the ARC are generated separately in the syntax; the appositive relative, however, is part

of the syntactic structure of the matrix clause at some syntactic level. Emonds (1979), one of the proponents of this approach, suggests that ARCs are derived from underlying conjoined clauses. The adjacency between the antecedent and the relative clause is derived from extraposition (interpreted as rightward movement) of the intervening material. The derivation of a sentence such as *The girl, who is my friend, is late* can then be represented as in (30).<sup>19</sup>

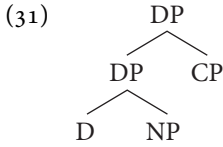


Under this account, the derivation involves three main steps: (1) at D-Structure, two main clauses are conjoined (see (30a)); (2) the conjunction *and* is deleted, and the relative is directly attached to E (see (30b)); (3) finally, the constituent that intervenes between the antecedent and the ARC (a VP in (30)) undergoes rightward movement, right-adjointing to the main clause (see (30c)).

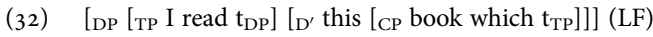
At the opposite extreme, constituency analyses claim that the antecedent and the ARC form a constituent. The standard account corresponds to the *adjunction analysis*, which takes the ARC to be adjoined to the antecedent (Ross 1967; Chomsky 1977; Jackendoff 1977). In present-day syntax it is assumed that ARCs are attached to the DP-level, as depicted in (31) (Demirdache 1991: 109, among others).<sup>20</sup>

<sup>19</sup> For ease of exposition, I present the representation of Emonds' analysis given in Demirdache (1991: 104). In this representation, the symbol E(xpression) stands for the highest category in a sentence, which cannot be subordinated.

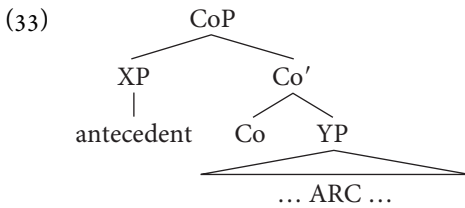
<sup>20</sup> The adjunction analysis is also proposed to account for the syntax of RRCs. See §1.3.2.4A for more details.



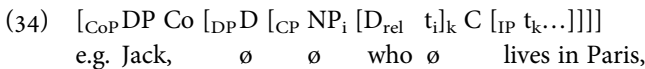
Another structure that qualifies as constituency analysis is the *raising analysis*. Kayne (1994) and Bianchi (1999) propose that ARCs are derived via the head raising, just like RRCs (see §1.3.2.4B). To account for the scope-related contrasts between RRCs and ARCs, they hypothesize that ARCs involve covert remnant movement (at LF) of the relative TP (originally IP) to the specifier position of the external determiner D, where it is no longer in the scope of either D or the head NP (see (32)).



The *coordination analysis*, proposed by Koster (1995, 2000) and De Vries (2002, 2006b), also falls under the umbrella of the constituency analyses. The basic assumption is that the ARC is coordinated to the antecedent, as schematically represented in (33).



The scheme in (33) is implemented in different ways. For Koster (1995, 2000), YP=CP; consequently, ARCs usually involve unbalanced coordination (because XP can correspond to DP, AP, PP, VP, TP). For De Vries (2002, 2006b), YP=DP; therefore ARCs with nominal antecedents always involve balanced coordination. Interestingly, the *specifying coordination analysis* proposed by De Vries also involves raising, as an abstract D in the second conjunct takes the relative clause as its complement; this corresponds to a raising style configuration of a full relative construction (i.e. a DP containing a relative clause), as shown in (34). The most interesting aspect of De Vries's analysis is that an ARC is in fact an RRC in apposition to the overt antecedent.



Given that the specifying coordination and the raising analyses of ARCs are crucial for the developments in this book, §§1.3.2.5B and 1.3.2.5C detail the specific implementations of these approaches.

## B. Specifying coordination analysis

### (a) A coordination account of apposition

De Vries (2006b) argues that appositional constructions involve a coordinating relationship between the anchor and the apposition. More recently, Heringa (2007, 2012) makes the same claim.<sup>21</sup>

There are at least three arguments that support this view.<sup>22</sup> First, a coordinator may occasionally show up in appositions. This is illustrated in (35), from Heringa (2007: 69).

- (35) a. The United States of America, or America for short...  
b. You could cut the atmosphere with a knife, and a blunt knife at that.  
c. John is interested in science, but especially linguistics.

The connection between the anchor and the apposition can also be made explicit by apposition markers such as *that is (to say)*, *namely*, or *for example*. What these elements have in common is that they are specifying phrases, that is, elements that introduce a DP that adds information to the anchor.

Second, similarly to coordinate structures, appositions may combine more than two elements, as shown in (36).

- (36) a. John, Mary's boyfriend, a doctor, is a linguistic celebrity.  
b. John, Mary and Peter went to the store.  
(Heringa 2007: 70)

Finally, coordination may operate at the sentence level or at a lower level, and there are clear indications that apposition operates at the two different levels at once. According to Potts (2007), appositions consist of two separate propositions, with independent truth values. Under this view, the propositions corresponding to (37) can be described as in (38).

- (37) John, a nice guy, lives in Portugal.

- (38) a. John lives in Portugal.  
b. John is a nice guy.

The independence of truth values of each proposition becomes intuitively clear from two possible reactions to (37), which are given at (39).

- (39) a. No, he does not.  
b. Well yes, but he is not a nice person. (adapted from Heringa 2007: 70)

<sup>21</sup> Other authors have highlighted the parallel between coordination and appositive constructions. For example, Quirk, Greenbaum, Leech, and Svartvik (1985: 1301–2) state that, "Apposition resembles coordination in that not only do coordinate constructions also involve the linking of units of the same rank, but the central coordinators *and* and *or* may themselves occasionally be used as explicit markers of apposition."

<sup>22</sup> These arguments are from Heringa (2007).



But appositions also operate at a lower constituent level. Evidence for this claim comes, for instance, from case marking in Latin.<sup>23</sup> Just as conjuncts exhibit the same case marking, appositions typically get the same case as the anchor, as illustrated in (40).

- (40) uoluptates, blandissimae dominae, maiores partes animi  
pleasures.NOM most.alluring.NOM mistresses.NOM greater parts of.soul  
a uirtute detorquent  
from virtue divert  
'pleasures, most alluring mistresses, divert the greater parts of the soul from  
virtue' (1st c. BC, from Cardoso and De Vries 2010: 24)

For more arguments on treating appositional constructions in terms of coordination, see De Vries (2006b) and Heringa (2007, 2012). For now, it is sufficient to point out that appositions can be analyzed as a special type of coordination. Such a hypothesis implies that there are (at least) four semantic types of coordination, which are illustrated in (41).

- (41) a. the Netherlands and Belgium (additive)  
b. the Netherlands or Belgium (disjunctive)  
c. not the Netherlands, but Belgium (adversative)  
d. the Netherlands, or Holland (specifying)  
(Heringa 2012: 556)

The main difference between the traditional types of coordination and the type involved in appositional constructions is semantic. Whereas the conjuncts denote two different entities in (41a) to (41c), they refer to one and the same entity in (41d). In the latter case, the second conjunct specifies (i.e. gives more information about) the anchor. It is precisely this relationship that is dubbed *specifying coordination*.

In syntactic terms, however, the different types of coordination involve the same structure. Following Kayne (1994) and Johannessen (1998), De Vries (2006b) represents coordination as [<sub>CoP</sub>XP [<sub>Co</sub>YP]]. Concretely, the author assumes that appositions involve a coordination phrase (CoP), with a coordinator as the head and with the two conjuncts as the specifier and complement of this head, as demonstrated in (42).<sup>24</sup>

<sup>23</sup> It is worth noting that in specific configurations some languages resort to a default case in appositions. For more details on this topic, see Cardoso and De Vries (2010).

<sup>24</sup> The structure in (42) involves a semantically specialized abstract head that establishes an asymmetric relationship of specification between the two conjuncts. De Vries (2006b) symbolically represents this relator by an ampersand plus a colon (&:). In this book, I simply make use of the more general notation Co for coordinating head.

- (42) [<sub>CoP</sub> [<sub>DP</sub> anchor] [<sub>Co</sub> [<sub>DP</sub> apposition]]]  
 e.g. John, a nice guy

The coordinating head is often phonologically null, but, as already mentioned, it can also be made overt by a specifying phrase.

**(b) A coordination account of appositive relatives**

According to De Vries (2006b), the ARC also involves specifying coordination. Concretely, the ARC is taken as a complex apposition that is coordinated with the antecedent, as depicted in (43):

- (43) [<sub>CoP</sub> [<sub>DP</sub> antecedent] [<sub>Co</sub> [<sub>DP</sub> D [<sub>CP</sub> ARC]]]]

The abstract coordinator involved is semantically specialized; it constitutes a relationship of specification between the two DP conjuncts. Within the second conjunct, the relative clause is the complement of D; this corresponds to a raising-style configuration of a full relative construction (i.e. a DP containing a relative clause). Given that the second conjunct normally does not contain an overt antecedent itself, the relative clause behaves as a semi-free relative clause in apposition to the visible antecedent. Thus, (44a) is analyzed roughly in the same manner as (44b).

- (44) a. Jack, who lives in Paris  
 b. Jack: person who lives in Paris

The structural representation of (44a) is displayed in (45).

- (45) [<sub>CoP</sub> DP Co [<sub>DP</sub> D [<sub>CP</sub> NP<sub>i</sub> [<sub>D<sub>rel</sub></sub> t<sub>i</sub>] C [<sub>IP</sub> t<sub>k</sub>...]]]]  
 e.g. Jack,  $\emptyset$   $\emptyset$  who  $\emptyset$  lives in Paris

Regular ARCs as in (45) involve balanced coordination because the conjuncts have equal category (i.e. both are DPs). The determiner heading the second conjunct (possibly together with the raised abstract head NP) can be considered a pronoun that behaves in a similar way to an E-type pronoun requiring co-reference with some objects (Evans 1980).<sup>25</sup> Therefore, the null pronoun is able to pick up an appropriate antecedent without requiring any particular syntactic configuration, similarly to how definite anaphoric or demonstrative pronouns refer to a phrase across discourse. The range of possibilities is constrained, however, by the semantics of the specifying coordination, which requires that the second conjunct give additional information to the phrase in the first conjunct. This is why the null pronoun cannot take as its antecedent a phrase outside the first conjunct.<sup>26</sup>

<sup>25</sup> For the E-type character of the referential link between (regular) ARCs and the antecedent, see also Del Gobbo (2008).

<sup>26</sup> In §4.5.3, I introduce a minor change in the structure in (45) with respect to the position of the abstract NP head in the second conjunct. Until then, I will make use of the structure in (45).

However, if the first conjunct is not a DP (as in the case of ARCs with a clausal antecedent), the coordination is syntactically unbalanced. De Vries (2006b) argues that in these cases the external D heading the second conjunct (possibly together with the raised abstract head NP) refers to the XP in the first conjunct, so that the two conjuncts are functionally equivalent. According to De Vries, this is possible because a pronoun, in principle, can refer to any syntactic category. He additionally notes that ARCs with a non-DP antecedent are less common than those ARCs with DP antecedent (Lehmann 1984: 277), which is in line with his proposal given that syntactically unbalanced coordination is more marked than balanced coordination in general.

**(c) Some properties of appositive relatives derived**

The coordinate-style account offers a natural explanation for the interpretative properties of ARCs. For the sake of illustration, I will consider three of these properties in some detail: (1) the scope of the determiner; (2) the lack of reconstruction effects; and (3) the opacity for binding. For a detailed presentation of how the specifying coordination analysis derives other properties of ARCs, see De Vries (2006b).

**(i) Scope of the determiner**

ARCs, in contrast to RRCs, are not within the scope of the determiner/quantifier that belongs to the antecedent; see (46).

- (46) a. the students that passed the exam [RRCs]  
b. the students, who passed the exam [ARCs]

In (46a), the determiner *the* takes scope over the noun and the relative clause; from the interpretative point of view, it implies that there is a group of students that did not pass the exam. In contrast, in (46b), the determiner *the* takes scope over only the noun; consequently, it refers to all the students regardless of whether they passed the exam.

Now compare the representations in (47a) and (47b), which involve the raising analysis and the specifying coordination analysis, respectively. For the sake of clarity, the visible antecedent is underlined in both structures.

- (47) a. [<sub>DP</sub> D [<sub>CP</sub> NP...relative IP]] [RRC]  
b. [<sub>CoP</sub> [<sub>DP</sub> D NP] [Co [<sub>DP</sub>...relative IP]]] [ARC]

Clearly, the relevant D in (47a) c-commands the head NP and the relative clause, but the antecedent D (and also N) in (47b) does not c-command the relative clause because of the coordination structure; both elements are embedded inside the first conjunct. Following the standard assumption that scope is dependent on c-command, the scopal difference between RRCs and ARCs is derived.

(ii) Reconstruction effects

RRCs and ARCs behave differently with respect to reconstruction effects. For instance, some idiomatic expressions allow the relativization of the idiomatic object in RRCs but not in ARCs, as shown in (48).

- (48) a. The horrible face that Harry made at Peter scared him. [RRC]  
b. \*The horrible face, which Harry made at Peter, scared him. [ARC]  
(Emonds 1979: 233)

In the raising analysis, the head is base-generated inside the relative clause; hence, it can be reconstructed in that position. Following the assumption that the constituents of the idiomatic expression must be adjacent in the LF representation, the grammaticality of (48a) follows. In the specifying coordination analysis, although there is raising of the (abstract, pronominal) head NP within the second conjunct, the visible antecedent is base-generated in the first conjunct. There is no movement chain between the antecedent and the position of the gap inside the relative CP; thus, the constituents of the idiomatic expression cannot reconstruct in a position internal to the relative clause.

(iii) Opacity for binding

Pronoun-binding by a quantifier is possible if the pronoun surfaces in an RRC but not in an ARC; see (49).

- (49) a. I gave every assistant<sub>i</sub> who loved his<sub>i</sub> uniform a new one. [RRC]  
b. \*I gave every assistant<sub>i</sub> who loved his<sub>i</sub> uniform a new one. [ARC] (Emonds 1979: 236)

In the raising analysis, the grammaticality of (49a) is derived from the fact that the antecedent *c*-commands the pronoun inside the relative clause. In the specifying coordination analysis, such a relationship cannot be established because second conjuncts are *invisible* for the higher context in terms of *c*-command (De Vries 2005).<sup>27</sup>

(d) The expansion of the specifying coordination analysis

One of the most promising aspects of the specifying coordination analysis is that it accounts not only for the syntax of ARCs but also for a wide range of appositive

<sup>27</sup> In the contexts involving a pronoun that might potentially be bound by material higher up in the matrix (as in (ii)), the same reasoning applies, i.e. the pronoun cannot be bound because second conjuncts are shielded from *c*-command relationships.

- (i) Everyone<sub>i</sub> spoke about the museum that he<sub>i</sub> had visited. [RRC]  
(ii) \*Everyone<sub>i</sub> spoke about the Millennium Dome, which he<sub>i</sub> had visited. [ARC] (De Vries 2006b: 256)

structures. According to Cardoso and De Vries (2010), differences lie primarily in the choice of which elements are spelled out and in their respective positions. In this section, I summarize the main findings of this proposal, showing that the specifying coordination analysis straightforwardly derives a wide range of appositive structures.

(i) Predictions of the specifying coordination analysis

It is uncontroversially accepted that RRCs exhibit variation in the choice of elements that can be spelled out in the CP domain. As shown in (50), the sources of variation include the presence/absence of an overt relative pronoun  $D_{rel}$  and the presence/absence of an overt complementizer  $C$ .

- (50) a. the girl whom I saw  
b. the girl that I saw  
c. the girl I saw

According to Cardoso and De Vries (2010), additional sources of variation in RRCs include the presence/absence of an overt head noun, the presence/absence of an overt external determiner, and the position of the head NP. This yields the difference between fully headed, semi-free, free, and internally headed free relative clauses (see (51)).

- (51) a. the pirate who Jack admires [headed relative]  
b. he/those/someone/the one who Jack admires [semi-free relative]  
c. who Jack admires; what Jack did [free relative]  
d. whichever man Jack admires [internally headed free relative]  
(Cardoso and De Vries 2010: 7)

If the specifying coordination analysis of ARCs involves a complete RRC in the second conjunct, the same type of variation is expected to occur in appositive constructions. More precisely, variation is expected to be found with respect to the items listed in (52).

- (52) Sources of variation in appositive constructions  
a. the presence/absence of an overt relative pronoun  $D_{rel}$   
b. the presence/absence of an overt complementizer  $C$   
c. the presence/absence of an overt (additional) external  $D$   
d. the presence/absence of an overt (additional) head NP  
e. the position of the additional head NP, if present

As will become clear, these predictions are confirmed by the existence of various appositive construction types.

(ii) Overview of the construction types

Cardoso and De Vries (2010) show that the predicted patterns are attested in the synchronic and diachronic dimensions. Example (53) outlines some of the relevant possibilities; for ease of exposition, they are illustrated with English words, and only overt elements are indicated.

- (53) a. DP, C... Jack, that is my best friend  
 b. DP, D<sub>rel</sub>... Jack, who is my best friend  
 c. DP, D C... Jack, he that is my best friend  
 d. DP, D D<sub>rel</sub>... Jack, he who is my best friend  
 e. DP, NP D<sub>rel</sub>... Jack, man who is my best friend  
 f. DP, NP C... Jack, man that is my best friend  
 g. DP, D NP C... Jack, the man that is my best friend  
 h. DP, D NP D<sub>rel</sub>... Jack, the man who is my best friend  
 i. DP, D<sub>rel</sub> NP... Jack, which man is my best friend  
 j. DP,... Jack, my best friend  
 (Cardoso and De Vries 2010: 7)

The patterns in (53) can be grouped together into five categories: regular appositive relatives (see (53a–b)); semi-free appositive relatives (see (53c–d)); appositive relatives with an additional external head (see (53e–h)); appositive relatives with an additional internal head (see (53i)); and regular apposition (see (53j)). Each of these patterns is briefly presented in turn.

In the *regular appositive relatives*, the D and NP remain silent, but D<sub>rel</sub> or C can be spelled out. The choice between D<sub>rel</sub> and C seems to be subject to minor parametric choices. For instance, in Italian, the appositive relative can be introduced by a complementizer (see (54a)); whereas in English, this option is not available: appositive relatives must be introduced by a relative pronoun D<sub>rel</sub> (see (54b)). The two different possibilities are represented in (55).

- (54) a. Inviterò anche Giorgio, che abita qui vicino.  
 invite.FUT.1SG also G. that lives here close  
 ‘I will invite also Giorgio, who lives nearby.’  
 b. Jack, who is my best friend...(Cinque 2008: 100)

- (55) [CoP DP Co [DP D [CP NP<sub>i</sub> [D<sub>rel</sub> t<sub>i</sub>]<sub>k</sub> C [IP t<sub>k</sub>...]]]]  
 e.g. Giorgio, ø ø ø che abita qui vicino  
 Jack, ø ø who ø is my best friend

The *semi-free appositive relatives*<sup>28</sup> exhibit an additional D element (possibly combined with a light noun) that can be spelled out as an article or pronoun. There is

<sup>28</sup> Semi-free relatives (also called light-headed or false free relatives) are a variant of regular RRCs. The main difference concerns the nature of the head NP. Regular RRCs have an overt, full nominal head. In contrast,

cross-linguistic variation with respect to the light elements that can introduce semi-free relatives (Lehmann 1984; Smits 1988; Rebuschi 2001). For instance, CEP allows for a definite article, as in (56a), but not for a personal pronoun. In English, however, the light element can be a personal pronoun, as in (56b), but not a definite article. Notice additionally that Portuguese uses a complementizer<sup>29</sup> and English a relative pronoun.

- (56) a. A Ana e a Maria, as que ganharam uma bolsa de estudo,  
 the A. and the M. the that won a grant of study  
 acabaram de entrar na sala.  
 have.just DE.PREP enter.INF in.the room  
 ‘Ana and Maria, the ones who won the grant, have just entered the room.’  
 (Alexandre 2000: 30)

- b. Jack, he who is my best friend

The structural representation of the sentences in (56) is given in (57).

- (57) [<sub>CoP</sub> DP Co [<sub>DP</sub> D [<sub>CP</sub> NP<sub>i</sub> [<sub>DP<sub>rel</sub></sub> D<sub>rel</sub> t<sub>i</sub>]<sub>k</sub> C [<sub>IP</sub>...t<sub>k</sub>...]]]]  
 e.g. A A. e a M., as ø ø que ganharam uma bolsa  
 Jack, he ø who ø is my best friend

The *appositive relative clauses* have an additional full NP (the additional external head) that is left peripheral within the embedded clause. The additional external head may be preceded by an external D and/or followed by an internal D<sub>rel</sub> and/or C. Two of the possible combinations are illustrated in (58a), from CEP, and (58b), from English. In these examples the additional external head corresponds to the NP *viagem* ‘trip’ and *man*, respectively.

in semi-free relatives, the external determiner is spelled out in the form of a pronoun or article, and the nominal head remains abstract or can be considered to be part of the pronoun or pronominal complex. The result is a semantically (and often morphologically) light antecedent. This is different from true free relatives, where there is no external element whatsoever (Cardoso and De Vries 2010).

<sup>29</sup> There is no consensus in the literature regarding the status of the Portuguese *que* ‘that’ in relative clauses. Traditional grammar analyzes the *que* as a relative pronoun comparable to *quem* ‘who’. However, it has been claimed that there are good reasons for identifying this *que* with the complementizer that introduces other subordinate clauses (Brito 1991; Brito 1995; Brito and Duarte 2003). This analysis has, however, been recently challenged by Kato and Nunes (2009), who claim that when introducing relative clauses, *que* is always a relative pronoun and that the *que/quem* alternation can be derived in the morphological component.

I will not go into this discussion here. Following Brito (1991, 1995), and Brito and Duarte (2003), I simply assume that *que* can be analyzed as a complementizer when introducing subject and object relative clauses.

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- (58) a. Vinhamos de viagem, viagem que acabava na Avenida da  
 were.1PL DE.PREP trip trip that finished in.the A. d.  
 Liberdade.  
 L.  
 ‘We were coming on a trip, a trip that would finish in Avenida da  
 Liberdade.’  
 b. Jack, the man who is my best friend

Again, notice that Portuguese uses a complementizer, and English uses a relative pronoun. These two options are illustrated in (59).

- (59) [<sub>CoP</sub> DP Co [<sub>DP</sub> D [<sub>CP</sub> NP<sub>i</sub> [<sub>D<sub>rel</sub></sub> t<sub>i</sub>]<sub>k</sub> C [<sub>IP</sub>...t<sub>k</sub>...]]]  
 e.g. viagem, ø viagem ø que acabava na Avenida  
 Jack, the man who ø is my best friend

The *appositive relative clauses with an additional internal head* involves an additional full NP (the internal head) c-commanded by a dependent relative pronoun D<sub>rel</sub>. See, for instance, example (60), where the additional internal head corresponds to the NP *faithful animal*, with its structural representation *is* displayed in (61).

- (60) My dog, which faithful animal has guarded me for years, died last week. (Smits 1988: 287)

- (61) [<sub>CoP</sub> DP [<sub>Co</sub> [<sub>DP</sub> D [<sub>CP</sub> [<sub>D<sub>rel</sub></sub> NP ]<sub>k</sub> C [<sub>IP</sub>...t<sub>k</sub>...]]]  
 e.g. My dog, ø which faithful animal ø has guarded me...

The *regular apposition*<sup>30</sup> might be a simple DP that is linked to the antecedent (i.e. the anchor) by means of specifying coordination. However, there are indications that there is an (implicit) clausal structure in appositional constructions as well.

Cardoso and De Vries (2010), in line with O’Connor (2008) and Heringa (2007, 2012), show that this hypothesis is corroborated by several facts. First, all types of adverbs, including sentential and even speech act adverbs, can be used in appositions; see (62), from English, and (63), from CEP.

- (62) a. Norman Jones, *then* a student, wrote several bestsellers. (Quirk, Greenbaum, Leech, and Svartvik 1985: 1314)  
 b. Keith, *once* a drug addict, now leads a rehabilitation centre. (Heringa 2012: 558)  
 c. Racial profiling, *unfortunately* a frequent occurrence in American society, must be stopped. (O’Connor 2008: 97)  
 d. This book, *frankly* not my favourite, won a prize. (Heringa 2012: 559)

<sup>30</sup> Here, I focus the discussion on attributive appositions. For more details on the analysis of identifying appositions, see Cardoso and De Vries (2010).



- (63) George W. Bush, *então* o ‘homem mais poderoso da terra’  
G. W. B. then the man more powerful of.the earth  
‘George W. Bush, then the most powerful man on the earth’ (Official site of  
Mário Soares foundation)

Second, the tense, modality, and illocutionary force of the secondary proposition may differ from that of the primary one, as can be observed in (64).

- (64) Should Jane, once the best doctor in town, marry John?  
a. Should Jane marry John?  
b. Jane was once the best doctor in town. (Cardoso and De Vries 2010: 16)

Third, a subordinator may show up in appositions; see (65) in English and (66) in CEP.

- (65) a. John, *though* no longer a coward, was still a weakling. (Wulf Sachs, *Black Hamlet*, 1937)  
b. The victim, *whether* a nice person or not, has to be helped. (Heringa 2012: 561)
- (66) O Belenenses, *embora* vencedor da jornada anterior, não está  
the B. although winner of.the round preceding not is  
no melhor da sua forma individual e colectiva.  
in.the best of.the its form individual and collective  
‘Belenenses, although winner of the preceding round, is not in its best indi-  
vidual and collective form.’ (CETEMP)

Finally, regular appositions may apparently involve wh-movement. Consider, for instance, (67) from CEP. Here, the DP *quatro das quais* lit. ‘four of.the which’, a partitive construction, is apparently pied-piped along with the relative pronoun to the CP domain.

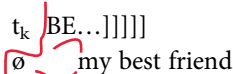
- (67) Com a sua prisão já são cinco as pessoas detidas no  
with the his imprisonment already are five the people arrested in.the  
âmbito do processo Lasa e Zabala, [DP quatro das quais]  
context of.the process L. and Z. four of.the which  
comandos e militares da guarda.  
commandos and military.men of.the guard  
‘With his detention, there are already five people arrested in the Lasa and  
Zabala case, four of whom (are) commandos and men of the military guard.’  
(CRPC)

This evidence points to the conclusion that regular appositions contain a more extensive functional structure than has hitherto been assumed. As Cardoso and De Vries (2010) suggest, the fact that regular appositions have their own tense, possibly

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modified by adverbs, suggests that at least IP is projected in the structure. Moreover, the eventual presence of a subordinator, the independent illocutionary force, and the movement of a *wh*-constituent indicate that CP is also projected.

In this line, the main idea of Cardoso and De Vries's (2010) approach is that regular appositions (e.g. *Frank, a nice guy*) and regular appositive relatives (e.g. *Frank, who is a nice guy*) involve the structure in (68).<sup>31</sup> The difference is that, in the regular apposition, not only the CP domain but also the verbal part of the predicate, which corresponds to an abstract copula, is silent.

- (68) [<sub>CoP</sub> DP [<sub>Co</sub> [<sub>DP<sub>2</sub></sub> D [<sub>CP</sub> NP<sub>i</sub> [ D<sub>rel</sub> t<sub>i</sub>]<sub>k</sub> C [<sub>IP</sub> t<sub>k</sub> BE...]]]]]  
 e.g. John,                      ø              ø              ø              ø               my best friend

The existence of such a null copula (or zero copula) in this structure is not particularly surprising because it has been observed in many languages that copulas can be omitted (for a cross-linguistic overview, see Stassen 2008). In CEP, for instance, the omission of the copula is allowed for at least some syntactic environments. Matos (2003) reports that the copula can be omitted from some dependent clauses, as in (69) and (70).<sup>32</sup>

- (69) O cargo pode-lhe ser atribuído desde que [-] compatível  
 the position can-him.CL be.INF given as.long.as compatible  
 com as funções que actualmente exerce.  
 with the duties that currently carries.out  
 ‘The position may be given to him, as long as it is compatible with the duties that he currently performs.’ (Matos 2003: 875)
- (70) Embora [-] cansada, a Maria dispunha-se a acabar o trabalho  
 although tired the M. was.willing-SE.CL to finish.INF the assignment  
 antes de se ir deitar.  
 before DE.PREP SE.CL go.INF lay.INF  
 ‘Although Maria was tired, she was available to finish the assignment before going to bed.’ (Matos 2003: 875)

The omission of the copula also occurs in non-standard varieties of Portuguese: see (71)–(73), which involve, respectively, a passive, a cleft, and a modal auxiliary.

<sup>31</sup> Other authors have suggested a relationship between appositions and appositive relatives; for earlier ideas, see Smith (1964); Delorme and Dougherty (1972); Halitsky (1974); Klein (1977). Quirk, Greenbaum, Leech, and Svartvik (1985: 1314), for instance, suggest that a regular appositionals, such as that in *The two men, one a Norwegian and the other a Dane*, may involve a reduced relative clause: *The two men, one (of whom was) a Norwegian and the other (of whom was) a Dane*.

<sup>32</sup> The null copula is represented by the symbol [-].

- (71) INQ Às vezes até é assim de tijolo, não é?  
'Interviewer: Sometimes they are made out of brick, aren't they?'  
INF Pois. Muitas [-] feitas de tijolo; e outras são feitas só  
± Yes. Many made of brick and others are made only  
no summer  
in.the verão  
'Informant: Yes. Many are made out of brick; others are made only in the summer.' (CORDIAL-SIN)
- (72) E depois essa água que ficava dessa cera escaudada [-] que  
and then that water that remained of.that wax heated that  
fazia-se os rebolos  
made-SE.CL the ±balls  
'And then it was from the remaining water of the heated wax that the balls were made.' (CORDIAL-SIN)
- (73) Pode [-] que eu esteja enganado!  
can.3SG that I be.SBJV wrong  
'It can be that I am wrong!' (CORDIAL-SIN)

The same is true of earlier stages of Portuguese. Examples (74)–(75) illustrate contexts in which the copula is omitted in clefts (see (74)) and dependent clauses (see (75)).

- (74) o q lhe pouco diser [-] q nunca em minha vida não  
the that to.you-CL can say-INF that never in my life not  
vi nem ovi o q aqui te visto e ovisto  
saw-1SG nor heard the that here have-1SG seen and heard  
'What I can tell you is that I have never seen nor heard in my life what I have been seeing and hearing here.' (19th c., P.S.)
- (75) e que peço a VSa [-]que faça a ismola de  
what ask.1SG to Your.Excellency that make.SBJV the favor DE.PREP  
pedir ao Senhor Intendente que me mande na segunda feira  
ask-INF to.the Superintendent that me.CL send.SBVJ on.the Monday  
para baixo  
to downwards  
'what I ask you, Your Excellency, is that you do me a favor and ask the Superintendent to send me to the south on Monday.' (19th c., P.S.)

As for the representation of the anchor in the copular sentence, Cardoso and De Vries (2010) propose that the subject of the embedded clause is the additional external D in (68) (possibly with an incorporated N). Recall that these elements are also silent in some of the appositional structures already discussed, for instance, in regular ARCs.

To conclude, Cardoso and De Vries (2010) show that (attributive) appositions involve an implicit relative copular clause. Given the similarities between regular appositions and the complex appositional constructions already analyzed, they claim that the same structure can be realized in a number of ways; see (76). The differences lie primarily in the choice of which elements are spelled out and in the respective positions of these elements.

- (76) [<sub>CoP</sub> [<sub>DP<sub>1</sub></sub> anchor] [<sub>Co</sub> [<sub>DP<sub>2</sub></sub> D [<sub>CP</sub> NP<sub>i</sub> [<sub>D<sub>rel</sub></sub> t<sub>i</sub>]<sub>k</sub> C [<sub>IP</sub> t<sub>k</sub> BE predicate]]]]]]  
 Jack a nice guy  
 Jack who is a nice guy  
 Jack he who is a nice guy  
 Jack the one who is a nice guy  
 Jack some one who is a nice guy

(Cardoso and De Vries 2010: 17)

### C. The raising analysis

Kayne (1994) extends the raising analysis to ARCs and proposes that ARCs differ from RRCs only at the level of LF. In his view, the non-restrictive interpretation results from LF-movement of the relative TP to the specifier position of the determiner, where it is no longer in the scope of the external D (see (77)).<sup>33</sup>

- (77) a. [<sub>DP</sub> D [<sub>CP</sub> [<sub>DP<sub>rel</sub></sub> NP<sub>j</sub>[<sub>D<sub>rel</sub></sub> t<sub>j</sub>]<sub>i</sub>] C [<sub>IP</sub>...t<sub>i</sub>]]] (pre-LF)  
 b. [<sub>DP</sub> IP [<sub>DP</sub> D [<sub>CP</sub> [<sub>DP<sub>rel</sub></sub> NP [<sub>D<sub>rel</sub></sub> t<sub>NP</sub>]] C t<sub>TP</sub>]]] (LF)

From this approach, it follows that all differences found between RRCs and ARCs generated by the raising analysis are determined by the different derivation in LF.

#### (a) Some properties of appositive relatives derived

In this section, I demonstrate how the raising analysis derives some interpretative properties of ARCs, namely the scope of the determiner and the lack of reconstruction effects. For more arguments, see Kayne (1994) and Bianchi (1999).

##### (i) Scope of the determiner

RRCs differ from ARCs in that only the former are in the scope of the external D (see (47)). This contrast can be easily derived under the raising analysis. Clearly, the external D in the configuration in (77a) c-commands the relative clause. The same does not hold, however, for the appositive configuration in (77b); after LF movement, the IP of the ARC is no longer c-commanded by the external D.

<sup>33</sup> According to Kayne (1994), the movement of IP to the specifier position of D is overt in pre-nominal (or head-final) relatives (see §1.3.2.4B(g)).

(ii) Idioms

ARCs differ from RRCs in that they do not allow reconstruction of the head. This property can explain the impossibility of having the object of an idiom chunk relativized in (see (78)),<sup>34</sup> under the assumption that the interpretation of idiomatic expressions requires the adjacency of its syntactic constituents in LF.<sup>35</sup>

- (78) \*That headway, which the students made last week, was phenomenal. (Bianchi 1999: 125).

The lack of reconstruction effects in ARCs is initially unexpected under an analysis that combines head raising with covert IP movement; the head, being generated inside the relative clause, should in principle be able to reconstruct in a position internal to the relative clause. However, as Alexiadou, Law, Meinunger, and Wilder (2000: 32) note, head raising only opens the possibility for the reconstruction from the head; it does not force it. The lack of reconstruction effects can be consistent with head raising if independent principles ensure that the head cannot reconstruct in ARCs.

An analysis along these lines is put forth by Bianchi (1999), who suggests that the relativization of the idiomatic object in ARCs involves a structure like (79).

- (79) LF: [<sub>DP</sub> [<sub>IP</sub> we made  $t_i$ ] [<sub>DP</sub> the [<sub>CP</sub> [<sub>DP</sub> [<sub>NP</sub> headway] [<sub>DP</sub> which  $t_{NP}$ ]]]<sub>i</sub> [<sub>CP</sub> C  $t_{IP}$ ]]]] (adapted from Bianchi 1999: 148)

Bianchi argues that if the head were reconstructed within IP, the c-command domain of the external determiner would be empty in LF because it would not contain any variable to be bound by it. This would be an instance of vacuous quantification, and it would be ruled out by the Full Interpretation Principle.

(iii) Opacity for binding

Pronoun-binding by a quantifier is possible if the pronoun surfaces in an RRC but not in an ARC; see (80) (repeated from (49)).

- (80) a. I gave every assistant<sub>i</sub> who loved his<sub>i</sub> uniform a new one. [RRC]  
 b. \*I gave every assistant<sub>i</sub>, who loved his<sub>i</sub> uniform, a new one. [ARC] (Emonds 1979: 236)

The opacity for binding in ARCs can be explained by assuming that, after LF movement, the IP of the ARC (where the pronoun is placed) is no longer c-commanded by the quantifier.

<sup>34</sup> See also example (48b).

<sup>35</sup> For an alternative explanation of the ungrammaticality in (78), see Cinque (1990).

For the contexts involving a pronoun that might potentially be bound by material higher up in the matrix (as in (81b), repeated from n. 27), Kayne (1994: 163–4 n. 69) and Bianchi (1999: 152–3) suggest that IP is moved further out of DP<sub>rel</sub>, “to a topic-like position of matrix clause, where it is not c-commanded by any matrix binder” (Bianchi 1999: 152).

- (81) a. Everyone<sub>i</sub> spoke about the museum that he<sub>i</sub> had visited. [RRC]  
b. \*Everyone<sub>i</sub> spoke about the Millennium Dome, which he<sub>i</sub> had visited.  
[ARC] (De Vries 2006b: 256)

### 1.3.3 Information structure

Information structure can be regarded as a phenomenon of information packaging that responds to the immediate communicative needs of interlocutors (Chafe 1976, cited in Krifka 2007). It is generally taken to interact not only with syntax but also with other grammatical domains, such as interpretation, intonation, and morphology (Erteschik-Shir 2007).

According to Lambrecht (1994: 5–6), information structure involves the analysis of four major categories: propositional information; identifiability and activation; topic; and focus. The present book only explicitly addresses two of these categories: topic and focus. Because the terminology associated with these two concepts is notoriously varied, in the present section I clarify the use of these terms, introducing some theoretical details that are crucial for the argument developed in the book.

**1.3.3.1 Focus** The term *focus* has been used in the literature with many different meanings and labels (e.g. information focus, presentational focus, contrastive focus, restrictive focus, exhaustive focus, identification focus) (see Cruschina 2011 for an overview). Although it can be classified in different ways, this book only deals with two main distinctions: (1) broad focus vs. narrow focus and (2) information focus vs. contrastive focus.

The distinction between broad and narrow focus is based on the scope of focus. Broad information focus (also known as sentential focus or unmarked focus) is used to refer to contexts in which the focus is assigned to the whole sentence. Narrow information focus refers to contexts in which only part of the sentence is assigned focus.

Another important distinction concerns the contrast between information focus and contrastive focus. Information focus (also known as semantic focus or presentational focus) signals distinctions between shared and new information (Enkvist 1980). It represents new information related to what has been called a topic, presupposition, background, or common ground. A typical test used to identify information focus is a question–answer pair, where the focused constituent of the answer replaces the *wh*-word in the question (J. Costa 1998, 2004a, among others).

For illustrations, see examples (82)–(83), from CEP (the *wh*-expression in the question and the focused constituent in the answer are marked in bold).

(82) Sentence-focus (broad focus)

A: a. **O que** é que aconteceu?  
'What happened?'

B: b. **O João** partiu a **janela**.  
the J. broke the window  
'João broke the window.' (J. Costa 2004a: 79)

(83) Object focused (narrow focus)

A: a. **O que** é que o Paulo partiu?  
'What did Paulo break?'

B: b. **O Paulo** partiu a **janela**.  
the P. broke the window  
'Paulo broke the window.' (J. Costa 2004a: 79)

Contrastive focus (also known as identificational focus) is commonly defined as evoking a suitable set of alternatives from which a subset is chosen (Chafe 1976; Rooth 1985, 1992). Some authors also define it on the basis of semantic features, such as exhaustiveness (É. Kiss 1998, among others). In this book and in Zimmermann (2007), contrastive focus is taken as a discourse-pragmatic phenomenon related to "the speaker's assumptions about what the hearer considers to be likely or unlikely, introducing a certain degree of subjectivity" (Zimmermann 2007: 148). This definition has a broader scope because it includes not only the concepts of contrast and exhaustivity but also the more general concept of emphasis.<sup>36</sup> In order to highlight the different values covered by the label, I henceforth adopt the term *emphatic/contrastive focus*.

Languages may resort to different strategies of emphatic/contrastive focus marking, namely intonation contour, syntactic movement, particular syntactic structures (e.g. clefts), focus-sensitive particles, and morphological markers. In CEP, I assume that emphatic/contrastive focus can be expressed by:<sup>37</sup> (1) prosodic prominence alone (see (84)); (2) contrastive focus movement (see (85)); (3) specific syntactic constructions (e.g. clefts); and (4) focus-sensitive particles (e.g. *só* 'only') (see (86)). Note that both syntactic (see (85)–(86)) and lexical (see (87)) strategies co-occur with prosodic marking.

<sup>36</sup> For an overview of the different values that can be associated to the concept of contrastive focus, see Cruschina (2011).

<sup>37</sup> In examples (84)–(94) the emphatic/contrastive focus is indicated by small caps.

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- (84) Partimos DIA VINTE de abril.  
leave.1PL day twenty of April  
'We leave on April 20 (and not on April 21).'
- (85) COM ESTAS PALAVRAS me despeço.  
with these words me.CL say.goodbye.1SG  
'It is with these words that I say goodbye.'
- (86) É COM ESTAS PALAVRAS que me despeço.  
is with these words that me.CL say.goodbye.1SG  
'It is with these words that I say goodbye.'
- (87) só OS MEUS AMIGOS percebem o que quero dizer.  
only the my friends understand the that want.1SG say.INF  
'Only my friends understand what I mean.'

Note, however, that there is no consensus in the literature as to the availability of contrastive focus movement in CEP (see (85)). Martins (1994 and forthcoming) contends that focus movement is available in present-day Portuguese, while J. Costa (1998) argues that focus movement is ungrammatical (see also Ambar 1992, 1999; Barbosa 1995; Duarte 1987, 1997).

More recently, Costa and Martins (2011) propose a conciliatory approach by claiming that the lack of consensus in this matter is a consequence of the variation across speakers. Concretely, they suggest that two different grammars coexist in CEP: "One grammar is less restrictive regarding the array of constituents that can be fronted. The other grammar only allows fronting of deictics or constituents containing them" (Costa and Martins 2011: 217).

Examples (88)[B] and (89) are provided in Costa and Martins (2011) to illustrate the emphatic/contrastive fronted focus in main clauses; note that these examples are allowed in both grammars.

- (88) [A] Estás cansada. Vai passar uns dias na praia.  
are.2SG tired. go.2SG spend.INF some days in.the beach  
'You're tired! Go spend some days at the beach.'
- [B] isso queria eu.  
that wanted I  
'That's what I wanted.' (Costa and Martins 2011: 232)
- (89) A retórica é a maior arma dos políticos.  
the rhetoric is the biggest weapon of.the politicians  
COM ELA se elevam, COM ELA se desgraçam.  
with it SE.CL raise.3PL with it SE.CL disgrace.3PL  
'Rhetoric is the politicians' greatest weapon. It is with it they elevate themselves, it is with it they fall in disgrace.' (Costa and Martins 2011: 233)



Evidence for contrastive focus fronting comes from the syntactic and interpretational tests provided by Costa and Martins (2011) to distinguish contrastive focus fronting from topicalization.<sup>38</sup> Under this proposal, *isso* ‘that’ in (88)[B] is contrastively focused; evidence for this analysis comes from (1) the cleft-like interpretation, which is made visible in the relevant paraphrase; (2) the subject–verb inversion (*queria eu* ‘wanted I’); and (3) the incompatibility with quantifier floating (*Isso tudo queria eu*/\**Isso queria eu tudo*, lit. ‘It’s all this what I wanted’). The example (89), in turn, displays contrastive focus fronting of the PP *com ela* ‘with it’, which is confirmed by (1) the cleft-like interpretation in the relevant paraphrase; (2) the proclisis configuration (*se elevam*, lit. ‘SE-CL raise-3PL’) and the impossibility of having the PP topicalized (\**Com ela, elevam-se*, lit. ‘With it, they elevate themselves’; \**Com ela, desgraçam-se*, lit. ‘With it, they fall in disgrace’).

The same fronting phenomenon holds true for embedded clauses in CEP. Costa and Martins (2011) provide a few examples of contrastive focus-fronting in embedded clauses, namely in an embedded declarative clause (see (90)) and in a relative clause (see (91)).

- (90) Digo-te que ISSO queria eu.  
 say.1SG-you.CL that that wanted I  
 ‘I tell you: that’s what I wanted.’ (Costa and Martins 2011: 234)
- (91) um discurso redutor e pessimista que NADA tem contribuído  
 a discourse reductive and pessimistic that nothing has contributed  
 para a melhoria do clima escolar  
 to the improvement of.the atmosphere of.schools  
 ‘They launch in the media a reductive and pessimistic a reductive and pessimistic  
 rhetoric that has contributed nothing to the improvement of the atmosphere in  
 schools.’ (Costa and Martins 2011: 222; glosses and translation mine)

More examples of focus fronting are provided in (92)–(94), which involve an embedded declarative clause (see (92)), an adverbial clause (see (93)), and a relative clause (see (94)).

- (92) A continuar assim, é certo que NOVOS HORIZONTES se  
 A.PREP continue.INF as.such is certain that new horizons SE.CL  
 lhe vão abrir.  
 him.CL go open.INF  
 ‘If things continue this way, it is certain that new horizons will open up to  
 him.’ (CETEMP)

<sup>38</sup> Costa and Martins (2011) suggest seven syntactic and interpretational tests to distinguish contrastive focus fronting from topicalization, namely: (1) cleft-like interpretation; (2) clitic placement; (3) sensitivity to referential properties of fronted constituents; (4) subject–verb inversion; (5) PP-preposing (when the PP is the complement of certain existential and light verbs); (6) quantifier floating; and (7) relative clause extraposition.

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- (93) Mas, se DE ALGUMA COISA nos serve a experiência e a  
but if of some thing us.CL bring the experience and the  
história, é justamente para não repetir os mesmos erros.  
history is precisely to not repeat.INF the same mistakes  
'But if experience and history can teach us anything, it is precisely not to repeat  
the same mistakes.' (from a political speech, *Jornal i* newspaper)
- (94) pode 'escolher' o clube que MELHORES CONDIÇÕES lhe  
can.3SG choose.INF the club that better conditions him.CL  
ofereça  
offer.SBJV  
'he can choose the club that offers him better terms' (from the news website  
*Notícias ao Minuto*)

Evidence for contrastive focus fronting in the embedded declarative clause provided in (92) comes from: (1) the proclisis configuration displayed both in (92) and in a corresponding main clause (*Neste cenário, novos horizontes se (lhe) vão abrir*, lit. 'In this scenario, new horizons SE.CL to.him.CL will open.');

and (2) the compatibility with relative clause extraposition (*É certo que novos horizontes se (lhe) vão abrir que podem contribuir para a resolução do problema*, lit. 'It is certain that new horizons will open up to him which may contribute to solving the problem').<sup>39</sup>

As for the conditional clause in (93), the evidence for PP fronting is found in (1) the proclisis configuration displayed both in (93) and in a corresponding main clause (*De alguma coisa nos serve a experiência e a história*, lit. 'something us.CL serve the experience and the history'); (2) the subject inversion; and (3) the impossibility of having the PP *de alguma coisa* 'of something' topicalized (\**se de alguma coisa, serve-nos a experiência e a história*, lit. 'if something, serve us the experience and the history').

Finally, in the relative clause in (94), *melhores condições* 'better conditions' is contrastively focused, which can be confirmed by the proclisis configuration displayed in a corresponding main clause (*Melhores condições lhe oferecem os clubes portugueses*, lit. 'Better conditions him.CL offer the Portuguese clubs').

*1.3.3.2 Focus and prosody* Several authors have proposed that prosody plays an important role in the identification of focus in CEP (J. Costa 1998, 2004a; Frota 1998, 2002; among others). In this book I adopt Zubizarreta's (1998, 1999) view of the

<sup>39</sup> Note that in (92) *novos horizontes* 'new horizons' is the subject of the verb *abrir* 'open'; however, it does not occupy the subject position, because relative clause extraposition from a pre-verbal subject is not allowed in CEP (see Ch. 3 for more details).

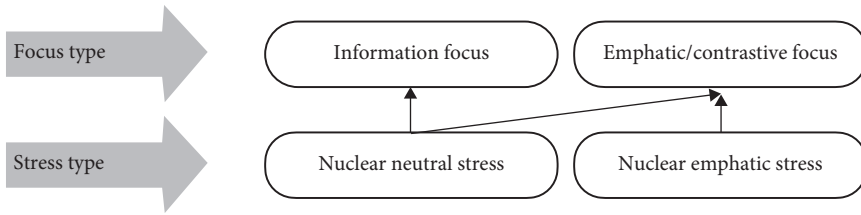


FIGURE 1.1 Relationship between focus and prosody. Diagram based on Zubizarreta (1998, 1999).

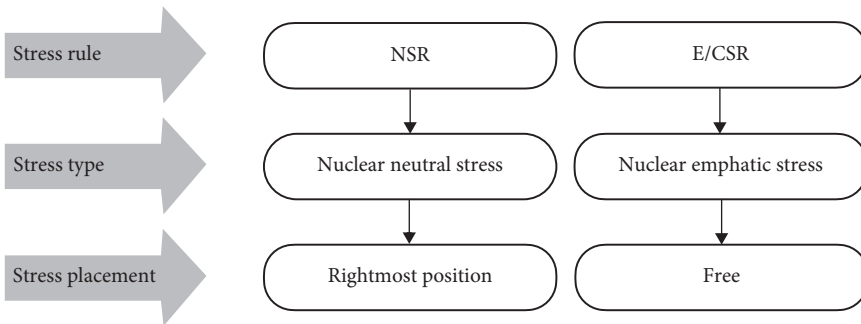


FIGURE 1.2 Effects of stress rules on stress placement. Diagram based on Zubizarreta (1999).

relationship between prosodic prominence and focus, which can be schematically represented as in Figure 1.1.

Starting with a slightly impressionistic generalization, the crucial factor seems to be that a focused constituent always carries the nuclear stress. However, there is no one-to-one correlation between the subtypes of focus and the subtypes of stress: information focus is identified by neutral stress, whereas emphatic/contrastive focus may be identified by either emphatic or neutral stress (Zubizarreta 1999: 4229 n. 16 and 4242 n. 27).<sup>40</sup>

Neutral and emphatic stresses are, in turn, assigned by different rules, which impact on stress placement. As shown in Figure 1.2, the Nuclear Stress Rule (NSR) (see (95)), assigns prominence to the rightmost/lowest sentential constituent, whereas the Emphatic/Contrastive Stress Rule (E/CSR) (see (96)) assigns prominence to any position.<sup>41</sup>

<sup>40</sup> In CEP the ambiguity between information focus and emphatic/contrastive focus can only arise if the focused constituent is rightmost. Following Frota (1998, 2002, and other related work), I propose that the aforementioned ambiguity is eliminated by differences in peak alignment (or choice of pitch accent) (see §2.4.2.2A for further details).

<sup>41</sup> In Ch. 2, I show that this generalization only applies to corrective contexts, i.e. contexts which aim to set right a poorly transmitted or wrongly received part of a message. In this case, the emphatic stress can fall on any item: a phrase (as in (ib)), a word (as in (iib)), or even an individual syllable of a word, as in

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(95) Nuclear stress rule (NSR)<sup>42</sup>

Given two sisters  $C_i$  and  $C_j$ , the one lower in the asymmetric c-command ordering is more prominent. (Zubizarreta 1998: 19)

(96) Emphatic/contrastive stress rule (E/CSR)

A word with contrastive stress must be dominated by every F[ocus]-marked constituent in the phrase. (Zubizarreta 1998: 45)

In addition, Zubizarreta (1998) proposes the *focus prominence rule* in (97), which aims to capture the relationship between the focus-structure of a sentence and its prosody. The idea is that the focused elements in a sentence are marked with a feature [+F], whereas the presupposed ones are marked with a feature [-F]. The rule in (97) dictates that the nuclear stress must target an [+F]-element.

(97) Focus prominence rule (FPR)

Given two sister nodes  $C_i$  (marked [+F]) and  $C_j$  (marked [-F]),  $C_i$  is more prominent than  $C_j$ . (Zubizarreta 1998: 21)

The coexistence of the FPR and E/CSR in the grammar does not produce any conflict: because the E/CSR assigns emphatic/contrastive stress to any element, no principle prevents an [+F]-element from receiving it.

Some conflicts may arise, however, between the FPR and the NSR. The FPR may force the stress on a non-final position, whereas the NSR requires the stress to fall on the rightmost clausal position. According to Zubizarreta (1998), languages seem to vary in the way they resolve this conflict. In languages such as English and French,

*I said DEfensive, not OFfensive* (example from Enkvist 1980: 135). For details on non-corrective contexts see §2.4.2.2.

(i) [A] a. O rapaz de olhos azuis é bonito.

the boy of eyes blue is handsome  
'The boy with blue eyes is handsome.'

[B] b. O rapaz DE OLHOS VERDES é bonito.

the boy of eyes green is handsome  
'The boy with green eyes is handsome (the one with blue eyes is absolutely stunning!).'

(ii) [A] a. Vamos para Paris.

go.1PL to P.  
'We are going to Paris (± and staying there for a while).'

[B] b. Vamos A Paris.

go.1PL to P.  
'We are going to Paris (± and coming back soon).'

<sup>42</sup> Actually, this rule consists of two parts: one sensitive to asymmetric c-command relations (C-NSR) and the other sensitive to selectional ordering (S-NSR). Languages differ in the way in which the NSR applies; both C-NSR and S-NSR are active in German and English, but only C-NSR is active in languages such as Spanish, Italian, and Portuguese. In (95) I transcribe only the part of the NSR that is relevant to CEP.

defocalized [-F] elements are treated as extrametrical in the sense that they are skipped by the NSR. Other languages (such as Spanish and Italian) employ prosodically motivated movement (p-movement), which moves the post-focal [-F] elements out of the rightmost clausal position. Then, the NSR applies and puts the stress on the sentence-final position.

1.3.3.3 *Topic* Most authors define the concept of topic in relation to the concept of comment; the topic is what the sentence is about, whereas the comment is what is said about the topic. However, there seems to be no consensus in the literature as to what topic really is. Kuroda (2005) identifies three main views on this concept in the literature, according to which topic is taken as (1) a syntactic concept, referring to a constituent that is placed at the sentential left periphery; (2) a discourse-theoretical concept, referring to a constituent that expresses old information in the organization of the discourse; (3) a semantic concept, referring to a constituent that expresses an aboutness relation; it can be familiar or recognizable or presupposed or part of the common ground, but need not be old information.

These views on topic do not correspond to actual theories, but rather to different dimensions of the concept. What usually happens is that linguists have a preferred dimension that they focus on, without denying the relevance of the other dimensions (Henk 2010).

In the literature, a distinction is also made between a marked topic and a non-marked topic (Duarte 1987, 1997, and subsequent work, among others). In subject-prominent languages such as CEP, a topic is non-marked if it has the grammatical function of the subject (as in (98b)). A topic is marked if it does not have the grammatical function of the subject (as in (99)), where the topic is the complement of the verb).

(98) A: a. Porque é que estás tão bem-disposto?  
'Why are you in such a good mood?'

B: b. A Cristina já chegou.  
the C. already arrived  
'Cristina has arrived already.'

(99) Na Cristina, eu nunca mais confio.  
in.the C. I never more trust.1SG  
'I will never trust Cristina again.'

In the present book, a semantic definition of topic is adopted as a way of rejecting the traditional idea that topic expresses old information (see Reinhart 1982; Kuroda 2005; Krifka 2007; among others). Evidence in support of rejecting this idea comes

from sentences such as (98b), where the subject *a Cristina* is contained in the focus domain (because the whole sentence is assigned broad information focus). Nevertheless, *a Cristina* is interpreted as the topic of the sentence because it expresses an aboutness relation (i.e., what the sentence is about).<sup>43</sup> In this sense, a topic must be familiar, recognizable, or presupposed, but does not need to be old information.

Another tendency in the literature has been to emphasize the logical function of topic (Duarte 1987, 1997; Kuroda 2005; Martins 1994 and forthcoming). According to this view, a topic is taken to foreground an individual or class as the subject of the predication, occurring in sentences that express categorical/predicational judgments.<sup>44</sup> A sentence without a topic expresses athetic/descriptive judgment.

The logical view on topics is of particular relevance to the present book, as it seems to play an important role in explaining some word-order facts in CEP. For instance, broad information-focus sentences with a post-verbal subject always express athetic/descriptive judgment (i.e. the subject is always non-topic).

- (100) Chegou o João.  
arrived the J.  
'João arrived.'

Broad information-focus sentences with a pre-verbal subject are ambiguous (Martins forthcoming), as they can express either a categorical or athetic judgment<sup>45</sup> (see (101)). The idea underlying this proposal is that when stage-level predicates (such as *chegar* 'arrive') are involved, the "apprehension" of a situation is rooted in visual, auditory, or sensorial perception. Therefore, athetic/descriptive judgment is available only if the speaker is able to perceptually observe the situation.

- (101) O teu pai já chegou.  
the your father already arrived  
'Your father has arrived.'  
√ Reading 1: (*thetic*) Your father has arrived already (here, at ours, for dinner).  
√ Reading 2: (*categorical*) Your father has arrived already (back at his home).  
(Martins forthcoming)

<sup>43</sup> In characterizing discourse contexts similar to (98), Gécseg (2006, cited in Henk 2010: 7) proposes that a sentence like (98b) pragmatically asserts something about the speaker by means of a proposition that logically or semantically asserts something about the subject.

<sup>44</sup> In what might be called a *theory of judgments*, a judgment can be considered a cognitive act expressed by the utterance of a sentence (Kuroda 1992: 20). There are two types of judgment: categorical judgment andthetic judgment (as proposed by F. Brentano and A. Marty). Following Kuroda (2005), a categorical judgment can be defined as "a cognitive act of attributing a predicate to a subject, a predication of the form conforming to the classical Aristotelian logic" (Kuroda 2005: 25). In turn, athetic judgment is grounded on perception: "Athetic judgment is a representation of a perceptually apprehended real, recalled, or imagined situation" (Kuroda 2005: 29–30).

<sup>45</sup> Note that previous studies on CEP (see Duarte 1997; Martins 1994; among others) generally assume that broad information-focus sentences with pre-verbal subjects always express categorical judgments.

As Readings 1 and 2 show, a broad information-focus sentence involving a pre-verbal subject may express two different types of judgment: a categorical judgment, if the arrival stays outside the visual, auditory, or sensorial reach of the speaker (Reading 2) or athetic judgment, if the speaker perceptually observes the situation (Reading 1).

Therefore, it is possible to conclude that the pre-verbal subject position in CEP (i.e. [Spec, IP])<sup>46</sup> is an ambiguous one: it can be filled by topic elements (i.e. the subject of predication in sentences expressing categorical judgments), but it can also be filled by non-topic elements (i.e. the subject of a sentence expressing thetic/descriptive judgments). On the other hand, the post-verbal position of the subject is non-ambiguous, as it is occupied by non-topic elements (occurring in sentences that express thetic judgments).

*1.3.3.4 Topicalization and focalization* A last terminological note is in order regarding the use of the terms *topicalization* and *focalization*. *Topicalization* has been traditionally used in the generative literature to refer to the movement of a constituent to the left periphery of the sentence. According to this view, topicalization occurs in sentences expressing a topic-comment articulation or a focus-presupposition articulation. For an illustration, see the contrast in (102), from Rizzi (1997: 285).

- (102) a. Your book, you should give t to Paul (not to Bill) (*topic-comment articulation*)  
b. YOUR BOOK you should give t to Paul (not mine) (*focus-presupposition articulation*)

In the late 1990s, a terminological shift occurred that reflects the emergence of the cartographic analysis proposed by Rizzi (1997). Within this approach, a clear distinction is made between sentences such as (102a) and (102b), because preposed topics and preposed foci are taken to occupy different positions in the split-CP. As a consequence, *topicalization* starts to designate topic-comment structures alone, whereas *focalization* refers to focus-presupposition structures.

This terminological shift also clarifies the status of preposed constituents in Romance languages. Generally, Romance languages express the topic-comment articulation with the construction that Cinque (1990) has called *clitic left dislocation*,

<sup>46</sup> There are two competing proposals for the syntactic analysis of pre-verbal subjects in CEP: J. Costa (2001, 2004a) and Costa and Duarte (2002) claim that pre-verbal subjects A-move to the specifier of IP (previously IP), whereas Barbosa (1995, 2000, 2009) claims that subjects are base-generated in a left-dislocated position (as adjuncts to CP/IP). The two hypotheses are sketched in (i) and (ii), respectively. In this book, I assume that pre-verbal subjects in CEP are in [Spec, IP].

(i) [IP S V [VP t<sub>S</sub> t<sub>V</sub>]]  
(ii) [IP/CP S [IP/CP V [VP pro t<sub>V</sub>]]]

involving a resumptive clitic co-referential to the topic. As Duarte (1987, 1997, and subsequent work) shows, CEP has a special behavior in this respect because the topic-comment articulation may also involve a topic that is syntactically connected with an empty category inside the comment (as in the English example in (102a)). Hence, in CEP, clitic left dislocation coexists with topicalization,<sup>47</sup> as illustrated in (103a) and (103b).

- (103) a. Esse livro, ainda não li t. (topicalization)  
that book yet not read  
'I have not read that book yet.'
- b. Esse livro, ainda não o li (clitic left dislocation)  
that book yet not it-CL read  
'I have not read that book yet.'

The focus-presupposition articulation is expressed in some Romance languages by a preposed contrastive focus in a construction called focalization (which was also called topicalization before the terminological split). Such a construction has been reported for Italian (Cinque 1990), Spanish (Zubizarreta 1999), Catalan (Sòla 1992), and for CEP (see §1.3.3.1). A case in point is provided in (104) (repeated from (85)).

- (104) COM ESTAS PALAVRAS me despeço. (focalization)  
with these words me.CL say.goodbye.1SG  
'It is with these words that I say goodbye.'

Interestingly, contemporary languages seem to feature a correlation between punctuation and the two constructions under consideration. In particular, the use of a comma after the preposed constituent usually acts as a signal of the topic-comment structure and, concomitantly, as an orthographic means of excluding the focus-presupposition reading.

The present book adopts the terminology used in the cartographic approach. The term *topicalization* is used to refer to the construction in (103a), in which a topic is syntactically connected with an empty category inside the comment. The term *focalization* (also referred to as *contrastive focus fronting*) is used to refer to constructions such as (104), where the preposed constituent is a contrastive focus.

#### 1.3.4 Language change

The interpretation and explanation of grammatical changes is developed within the model proposed by Lightfoot (Lightfoot 1991, 1999, and subsequent work), but it also benefits from insights of the competing grammars hypothesis developed by Kroch (1989, 1994, 2001), Pintzuk (1991), and Santorini (1992).

<sup>47</sup> The construction in (103a) is also referred to in the literature as *English-type topicalization*.



Lightfoot's model associates diachronic change with language acquisition. Grammars are regarded as mental organs (represented in the mind of the speaker) and not as social entities (codifying the data presented in a particular period). Following the Chomskian view of language acquisition, it is assumed that children are born with a universal grammar (a set of linguistic principles common to all languages) and that, when exposed to primary linguistic data (crucial experiences, what the children hear), they develop a specific grammar. Grammatical change consists of an abrupt grammatical reanalysis by new generation of speakers. That is, a language learner, on the basis of primary linguistic data, abduces a grammar that differs in one or more respects from that of previous generations. Lightfoot's model can therefore be seen as a synchronic approach to language change, according to which changes have local causes, and are not driven by diachronic generalizations about language change.

A different view on grammatical change is offered by the synchronic grammatical competition hypothesis developed by Kroch (1989, 1994, 2001), Pintzuk (1991), and Santorini (1992). This approach shares the view that language acquisition and language change are closely connected, but it proposes that the process of change begins in the learner's grammar and not with gradual changes in the frequency of different linguistic forms. Under this hypothesis, a grammatical change is caused by an inaccuracy in language transmission and it progresses gradually by means of grammatical competition within the grammars of individual speakers until one of the alternatives is driven out of language. Working within a quantitative model of variation and change, Kroch (1989) formulates the *Constant Rate Effect*, according to which "when one grammatical option replaces another with which it is in competition across a set of linguistic contexts, the rate of replacement, properly measured, is the same in all of them" (Kroch 1989: 200). This proposal has been crucial to the development of quantitative approaches to language variation and change.

Finally, the parametric theory of variation (see Holmberg and Roberts 2010; Biberauer, Holmberg, Roberts and Sheehan 2010, among others), although not formally implemented in this book, provided an important conceptual background to the comparative view adopted here.