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*On the left periphery of Latin
embedded clauses*

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Preface

In this thesis, I will be concerned with word order in Latin embedded clauses, and more specifically with adverbial clauses. I will mainly concentrate on a specific word order pattern in which one or more constituents from an embedded clause are fronted to a position to the left of a subordinating conjunction. Chapters 1 to 3 provide the necessary background about the framework that I adopt, about the syntax of adverbial clauses and about the corpus study that I have conducted. In chapters 4 to 7, I will present my own analyses.

The material in this thesis is meant to be relevant for both classical philologists and for formal syntacticians. Therefore, I have provided a rather lengthy introduction, mainly for the reader who is not well versed in formal syntactic theory (chapter 1). Moreover, for the reader not familiar with Latin, all Latin examples are translated and accompanied by a word-for-word gloss.

The Latin examples mainly come from the corpus described in chapter 3, but where this corpus did not immediately furnish the data that I needed, I felt free to look at other texts, mainly from Livy or from the prose texts on the CD-ROM Hyperbase (Brunet & Mellet n.d., see ch. 3) which were not already included in the regular corpus. I have used a very limited number of examples from poetry, but only in cases where I was confident that the phenomenon to be illustrated is the same in poetry as in prose.

Since all the Latin sentences are attested corpus examples, I chose to represent them in italics: this has the advantage that it clearly sets apart the Latin text from the English glosses and translations. In order to obtain some typographic homogeneity, I put all examples from old and modern languages in italics, irrespective of whether they are attested 'real life' examples or sentences made up by myself or by other linguists.

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Chapter 1.

Introduction

This chapter is meant to provide some background concerning the theoretical framework that will be assumed in this thesis. This introduction is organized as follows. In section 1, I will spell out what my assumptions are about the 'architecture' of the grammar and which notational conventions I will use to represent syntactic structures. In section 2, I will give an overview of the basic structure of the clause. Section 3 is devoted to syntactic movement and the constraints that Universal Grammar imposes on it. I will then turn to the syntax of so called 'free word order languages', in which syntactic movement seems to be especially pervasive (section 4). I will characterize those languages as 'discourse configurational', which will lead me to elaborate briefly on the pragmatics of discourse related notions like Topic and Focus. I will conclude by applying the 'discourse configurationality' approach to Latin, in line with recent work on Latin word order (Devine & Stephens 2006).

1 Generative grammar: some basic assumptions

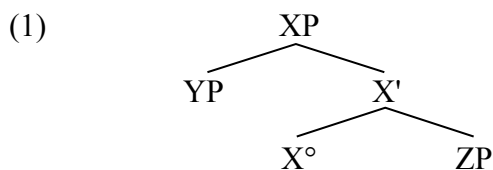
In this thesis, I will subscribe to the Chomskyan idea that the human species is genetically endowed with a certain 'knowledge of language', which enables young children to acquire their mother tongue quickly and with great accuracy: despite the fact that the child has been exposed to only a limited set of data, a six year old child can produce an infinite number of grammatical sentences in the language that he or she has acquired (see Friedemann & Rizzi 2000 or Eisenbeiß 2009 for an introduction to this topic). In the generative tradition, the property that enables a child to achieve this is called 'Universal Grammar', henceforth UG.

One of the goals of generative syntax is to formally represent the linguistic knowledge that is available to the human species. I will adopt the idea that UG contains a (presumably small) set of syntactic rules that can be applied to language-specific lexical items, stored in the lexicon. Lexical items can be defined as the Aristotelian/Saussurean pairs of tokens and meanings, which are the result of convention and hence not part of UG (see also section 1.4 below). Generative syntacticians are interested in discovering the syntactic rules that allow human beings to build grammatical sentences out of lexical items, as well as in identifying the constraints that exclude ungrammatical sentences. In order to do so, they seek to analyse the formal properties of specific languages, in as much detail as possible.

In the last decades, this has given rise to the elaboration of a fairly large technical apparatus, part of which I will adopt for analyzing some aspects of Latin syntax. In this introduction, I will provide the background which is necessary for a good understanding of the upcoming chapters. I will only deal with some basic concepts and terminology: for a more detailed introduction, the reader is referred, for instance, to Haegeman (1994², 1997) and Carnie (2007²) or any other introduction to generative syntax.

1.1 Phrase structure

I will adopt the standard assumption that syntactic structures are intrinsically hierarchically organized. The notational device that most syntacticians use to graphically represent the hierarchical relations between the different elements in a sentence is called a phrase marker, or more commonly a tree (diagram). I will use the so called X' (X-bar) notation, the basic template of which is represented in (1).



I will first introduce some basic terminology. The little tree in (1) is said to be a projection of X°, its 'head'. The projections of X° are X' (an 'intermediate projection') and XP (a 'maximal projection' or 'phrase'). (1) contains in total three phrases (or maximal projections), namely XP, YP and ZP. The latter two as well as the non-maximal projections X° and X' are properly contained in XP: they are said to be dominated by XP¹. ZP is called the complement of the head X°: this head selects the phrase ZP. On the other hand, YP is said to be in the specifier-

¹ 'Dominance' is a (by definition asymmetric) relation between two nodes in a phrase marker. To put it simple, a node X dominates a node Y iff one go from X to Y by only going down in the tree.

position of XP. The usual idiom is to say that 'YP is located in Spec,XP'. The syntactic object XP can alternatively be represented with a 'labelled brackets' notation, as in (2). (1) and (2) are fully equivalent.

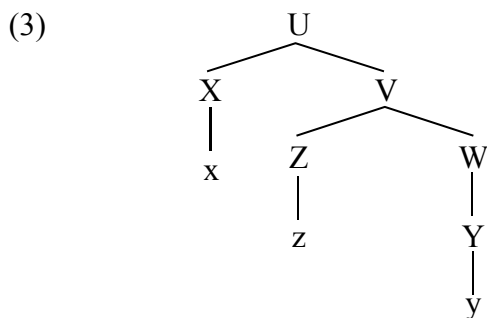
(2) [XP YP [X' X° ZP]]

One can make a distinction between lexical heads and functional heads. The former belong to an open class. For example, (most) nouns, like *whale*, *spaghetti* and *Rumpelstilkin* contain a lexical head: even within a single language, their number is potentially unlimited.

Functional heads on the other are part of a closed class. For instance, determiners like *the*, *this*, *every* and *are* are typical functional items. In most languages, the set of determiners only has a limited number of members (see Alexiadou, Haegeman & Stavrou 2007). Other functional heads are (bound) inflectional morphemes, like tense, aspect or agreement marks: these as well belong to a closed class.

1.2 Antisymmetry and linearization

Throughout this thesis, I will assume the Linear Correspondence Axiom (henceforth LCA), and by extension the whole antisymmetric program, as proposed by Kayne (1994). The major concern of the LCA is to derive linear order (to be understood as left to right precedence) directly from hierarchy, and more specifically from c-command (see immediately below for a definition) relations between non-terminal nodes, i.e. nodes which themselves dominate at least one other node. Terminal nodes are not dominated by any other nodes. Consider the little dummy phrase marker in (3), where the terminal nodes (i.e. the nodes that need to be linearized) are x, z and y:



The LCA can informally be stated as in (4) (from López 2009b: 239, his (1)):

(4) Linear Correspondence Axiom

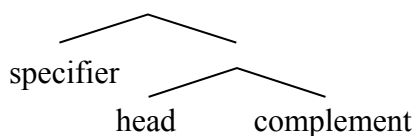
Take X, Y, nonterminal nodes that dominate the terminals x,y, respectively. Assume that X c-commands Y, while Y does not c-command X (asymmetric c-command). Then x precedes y.

An important notion to be explained first is 'c-command'. A node X is said to c-command (with 'c' for 'constituent') a node Y iff X does not dominate Y and every node that dominates X also dominates Y. For instance, in the tree in (4), X c-commands z, Z, V, W, Y and y, whereas Z c-commands only w, Y and y.

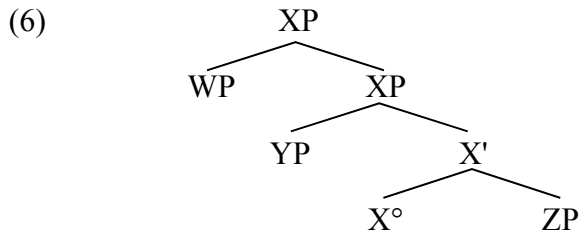
One can make a distinction between symmetric (or mutual) and asymmetric c-command. In (4), a symmetric c-command relation holds between the nodes Z and W, since these two mutually c-command each other. However, this is not a problem for the LCA, because ZP is not a terminal node. On the other hand, asymmetric c-command holds between X and Z, and between Z and Y, which under the LCA means that x will linearly precede z, which in turn will precede y.

For simplicity's sake, I will use representations as in (1), which should be understood as shorthand for really antisymmetric representations as in (4). Without going into the technical details, Kayne (1994) claims that a very restrictive version of the classical X'-template, basically as in (5), with a universal specifier-head-complement order, can be derived from the LCA. The basic consequences of this claim are that each projection has only one head, and that there is one and only one specifier per head, and one and only one complement per head. Moreover, specifiers are universally linearized to the left of the head, and complements are universally to the right of their selecting heads. This yields the universal left-to-right order 'specifier-head-complement', as represented in (5):

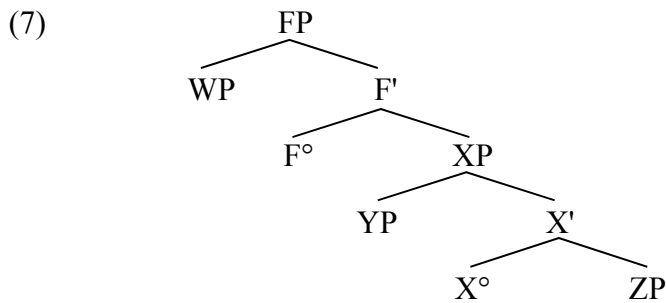
(5)



The LCA thus entails a ban on structures like (6), which were assumed to exist in the Government and Binding paradigm of the '80s. In such a structure the maximal projection XP contains an additional phrase, namely WP, which said to be adjoined to XP and semantically functions as a modifier of XP.



Under the LCA, all adjuncts are considered to be specifiers of dedicated functional projections. For instance, WP in (7) is an adjunct that modifies XP, but WP itself is not adjoined to XP as in (6), but it sits in the specifier of FP, a functional projection. In a structure like (7), FP mediates between WP and XP: the head of FP encodes the semantic relation that WP bears with respect to XP.



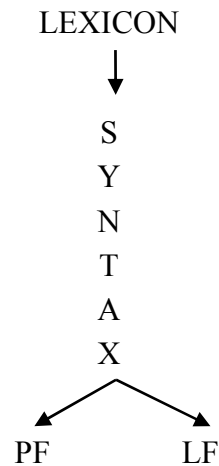
1.3 The architecture of the grammar

I will assume some version of the (inverted) Y- or T-model, which is fairly close to the one that was commonly accepted in the Principles and Parameters paradigm (cf. Carnie 2007²: 360). It contains a (language-specific) lexicon, a syntactic module and two specialized levels of representation which I will call interfaces², namely Phonological Form (PF) and Logical Form (LF)³. It is (very schematically) represented in (8):

² In any event, the interfaces PF and LF assumed here should not be confused with the sensorimotor (SM) and conceptual-intentional (C-I) interfaces from Chomsky's (later) minimalist writings (cf. Chomsky 2008: 158 n. 11).

³ Alternatively, (part of) syntax is done before the lexicon is entered ('Nanosyntax', see Svenonius, Ramchand, Starke & Taraldsen (2009)).

(8)



I will assume that a syntactic derivation proceeds bottom-up, from V(P) to CP. In the syntactic module, complex structures are built out of lexical atoms⁴. The basic structure building operation is called 'Merge': this mechanism takes two syntactic objects and forms one complex object out of them. The meaning (or 'denotation') of this complex object can be derived from its parts by means of functional application: this is referred to as 'semantic compositionality' and goes back to the work of Frege (see Heim & Kratzer 1998: ch. 1 for discussion).

With Chomsky (2001), we can make a distinction between external Merge and internal Merge. With the former we either refer to the merger of two items from the lexicon or one item from the lexicon and a syntactic object that has already been built. For the latter case, I will adopt the fairly standard assumption that lexical elements can only be merged with the highest node of an already existing phrase marker. In other words, Merge is always 'tree extending'. Internal Merge on the other hand is the re-merger of an already merged constituent: this operation is more frequently called 'Move' (cf. section 3).

The point at which the output of syntax branches off to the two interfaces is sometimes called 'spell-out': this is the point until which external Merge and overt movement operations can take place. I will adopt the view that covert syntactic movement operations, like Quantifier Raising and movement of in-situ wh-words to the left periphery take place on the way from spell-out to LF and hence have no visible effect on the string. Finally, I will take PF and LF to be the interfaces with the module of phonology (which takes care of the sounds of a language) and the interpretive system (where meaning is attributed to syntactic structures) respectively.

⁴ There is no consensus about the size of the atoms. Grossly oversimplifying, there are three views: either they are full words (lexicalism, most works of Chomsky), morphemes (Distributed Morphology, Halle & Marantz 1993 and subsequent literature) or submorphemes (features: Nanosyntax, Svenonius, Ramchand, Starke & Taraldsen 2009).

In this thesis, I will be mainly concerned with syntax proper: in the next sections, I will have a closer look at some of its core properties, namely the (by assumption universal) basic structure of the (finite) clause (section 2), and possible movement operations that can take place inside and outside a clause (section 3).

2 Structure of the clause

2.1 The Universal Base and the cartographic project

Recent work on the relative position of functional elements across languages (esp. Cinque 1999, 2004) has lent strong support to the hypothesis that in UG, a universal template that underlies all clauses in all natural languages is encoded. This hypothesis goes back to the work of Kayne (esp. Kayne 1994), and is usually referred as the Universal Base Hypothesis (Kayne 1994). The basic idea is that lexical items like nouns and verbs always project a series of functional projections on top of them, sometimes called an 'extended projection' (Grimshaw 2005). Under the Universal Base Hypothesis, these functional items always come in the same order, together forming a functional sequence (or 'fseq', cf. Starke 2001).

The enterprise known as the 'cartography of syntactic structures' seeks to draw as detailed as possible a map of the functional elements that constitute the spine of clauses and noun phrases (Rizzi 1997; Cinque 1999, 2004 and contributions to Cinque (ed.) (2002), Belletti (ed.) (2004) and Benincà & Munaro (eds.) (2011)). Characteristic for the work in this field is the strong emphasis on cross-linguistic comparison (cf. Cinque & Kayne (eds.) 2005). An overview of the goals and methods of the cartographic program can be found in Rizzi & Cinque (2010) and Shlonsky (2010). The remainder of this section is devoted to a presentation of the different layers of which clauses consist.

2.2 Tripartition vs. bipartition

There is a general consensus that the entire series of functional projections that constitutes the backbone of the clause can be subdivided into smaller units or layers. However, there is discussion as to whether three (Stowell 1981; Chomsky 1981, 1982; Haegeman 1997; Grohmann 2003) or two (Chomsky 1998, 2001, 2008) such domains should be distinguished.

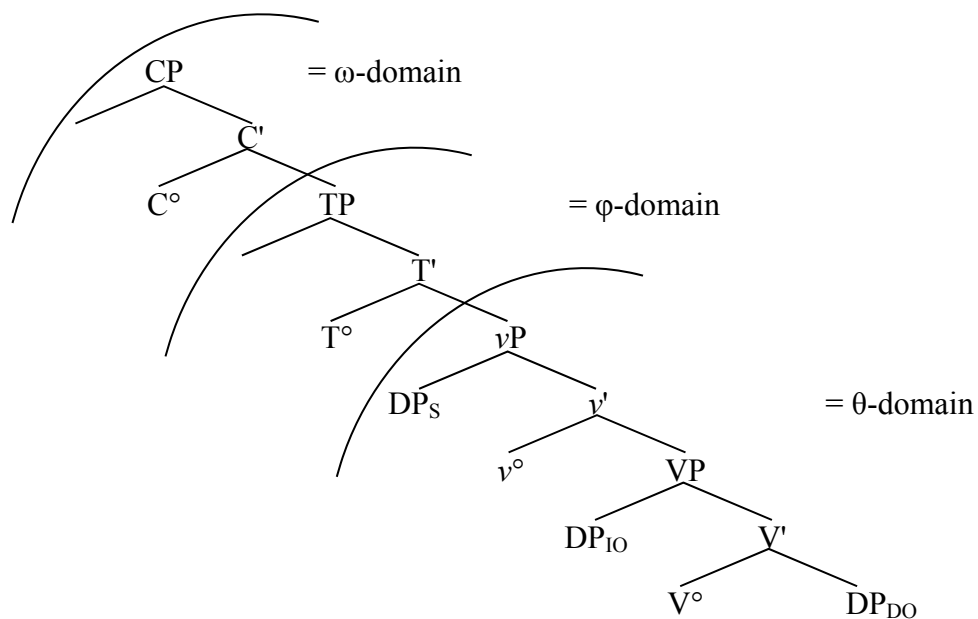
I will adopt the view that clause have a tripartite structure. The three domains of which clauses consist can be characterized as in (9) (slightly adapted from Grohmann (2003: 74, his (30), where the three layers of the clause are called 'prolific domains').

(9) Clausal tripartition:

- a. Θ -domain: part of derivation where thematic relations are created (ν P/VP)
- b. Φ -domain: part of derivation where agreement properties are licensed (TP)
- c. Ω -domain: part of derivation where discourse information is established (CP)

These three domains correspond to the ν P/VP, TP and CP-layer respectively:

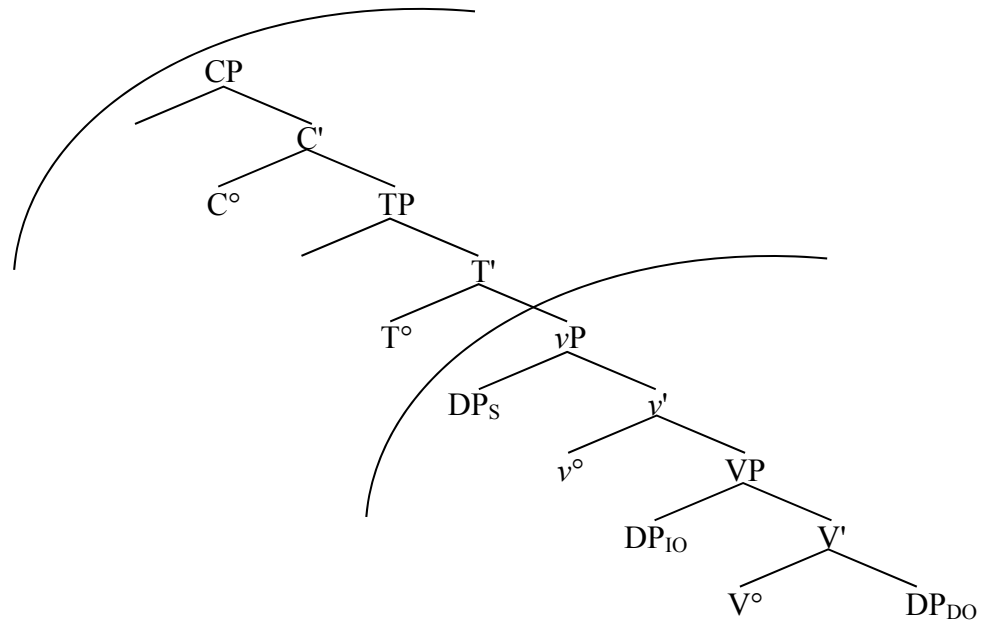
(10)



In sections 2.3-2.5, I will have a closer look at each of these three domains. Before doing so, I will just say a couple of words about the alternative view, which says that clauses consist of two basic building blocks, called 'phases' in Chomsky (1998, 2001, 2005, 2008). According to Chomsky, the two phases are (transitive) ν P and CP (11). These constitute locality domains in syntax (on which see section 3.2.4.1 below)⁵.

⁵ cf. Uriagereka (1999). See Boeckx & Grohmann 2007 for a critical assessment of phase theory.

(11)



2.3 vP/VP

The lowest part of the clause is the verb phrase, the domain in which the (verbal) predicate and its arguments (i.e. obligatory complements for which a given predicate is lexically subcategorized) are base-generated. In the verb phrase, the predicate assigns a thematic role to each of these arguments. With Grimshaw (2005), one can say that the entire functional structure of the clause is an 'extended projection' of the lowest lexical head in the clause, namely the lexical verb V° . I will adopt the split-VP hypothesis (Hale & Keyser 1993, 2002; Chomsky 1995), according to which the verb phrase consists a lower lexical verb phrase (VP) and a higher light verb phrase (vP)⁶.

Lexical verbs ('big V's') contain the core descriptive content of a verb, say a verbal root. In the case of transitive and ditransitive verbs, V assigns a thematic role to its internal arguments (like the role of 'Theme' to its complement (roughly equivalent to the traditional concept of 'direct object') and the role of 'Goal' or 'Beneficiary' to the argument in its specifier (the indirect object)). v ('little v ') on the other hand is associated with the notions of 'causativity' and 'agentivity' (or lack thereof). In its specifier, it introduces the so called 'external argument' (in the sense of Williams 1980 and Kratzer 1996), most commonly the argument to which the thematic role of 'Agent' is assigned. See Ramchand (2008) for a proposal to further decompose the verb phrase in a number of functional projections.

⁶ Presumably, V° undergoes head movement to adjoin to v° as soon as the latter is merged (cf. section 3.2.1).

2.4 The Tense Phrase

The middle layer of the clause is the Tense Phrase (TP), also known as IP (for Inflectional Phrase). TP was shown to consist of more than one functional projection by Pollock (1989) and by Belletti (1990). For instance, it was proposed that sentential negation heads its own specialized projection, namely NegP (cf. Kitagawa 1986; Haegeman 1995; Zanuttini 1997a; Cinque 1999: 120-126).

The most influential account of functional structure in the inflectional domain is the work on adverbs and functional heads by Cinque (1999). This study provides a detailed list of the projections that encode information related to mood, modality, tense and aspect, by comparing the order of inflectional morphemes which are attached to the verb in so called agglutinating languages and the base order of phrasal adverbs in languages like Italian, English and Dutch. Careful cross-linguistic comparison reveals that these elements universally come in a fixed order⁷. The entire sequence as proposed in Cinque (1999) is given in (12), but as noted in Cinque & Rizzi (2010), this is presumably only a fragment of the entire functional sequence of the clause.

- (12) MoodP_{speech act} > MoodP_{evaluative} > MoodP_{evidential} > ModP_{epistemic} > TP_{past} > TP_{future}
 > MoodP_{irrealis} > ModP_{alethic} > AspP_{habitual} > AspP_{repetitive(I)} > AspP_{frequentative(I)} > ModP_{volitional}
 > AspP_{celerative} > TP_{anterior} > AspP_{terminative} > AspP_{continuative} > AspP_{retrospective} >
 AspP_{proximative} > AspP_{durative} > AspP_{generic/progressive} > AspP_{prospective} > ModP_{obligation} >
 ModP_{permission/ability} > AspP_{Sgcompletive(I)} > AspP_{Plcompletive} > VoiceP > AspP_{celerative(II)}
 > AspP_{repetitive(II)} > AspP_{frequentative(II)} > AspP_{Sgcompletive(II)}

More information on the (external) syntax of (other types of) adjuncts can be found in Alexiadou (1997), Laenzlinger (1996, 1998, 2000, 2004), Nilsen (2000, 2003, 2004) Schweikert (2005) and Cinque (2006).

The arguments of the verb may also evacuate the verb phrase (perhaps for case checking reasons) to a position from where they can (but need not) control agreement morphology on the (finite) verb. Specialized Agreement projects ('AgrPs') have been proposed to account for this, though there is discussion about the status of such projections (see Belletti 1990, 2001b; Chomsky 1993; cf. Grohmann's (2003) ϕ -domain in (9-10)).

A special remark about the relation between the subject and the TP-domain is in order. Chomsky (1981) introduced a descriptive generalization called the 'Extended Projection Principle' or 'EPP' for short, which can informally be paraphrased as the requirement that each clause have a subject (see the discussion of A-movement in section 3.2.2). Most people accept

⁷ See also Cinque 2004a,b.

the view that the subject is base-generated in Spec, ν P⁸, but that it in languages like English it obligatory moves to some specifier position in TP. If it does remain in a lower position (sc. postverbally, possibly inside ν P), the EPP requires an expletive to be present as a dummy placeholder in the 'canonical' subject position (cf. the contrast between (13b) and (13c)).

- (13) a. [_{DP} Many people] were in the house.
 b. * Were [_{DP} many people] in the house.
 c. There were [_{DP} many people] in the house.

However, it seems to be the case that the EPP is not universally valid as it was originally formulated by Chomsky, and that it needs to be parametrized along a number of dimensions (cf. Belletti (2001, 2004) on postverbal subjects; see Alexiadou & Anagnostopoulou (1998) and Biberauer & Roberts (2005) for proposals to parametrize the EPP). There have also been proposals that there is more than one subject position (see esp. Cardinaletti 2004).

2.5 The Complementizer Phrase

Since the early '80s that the assumption is that clauses are maximal projections of complementizer heads, i.e. CPs rather than 'exocentric' S-categories (see esp. Stowell 1981). But from the earliest days of 'generalized endocentricity', arguments have been put for splitting up the projection CP in more than one projection (cf. already Reinhart 1981). The most influential and best motivated account of the split-CP hypothesis can be found in Rizzi (1997) and subsequent work. On the basis of a detailed analysis of the distributional patterns of Italian, French and English A'-moved phrases, Rizzi proposes the following template (14), in which a projection marked with an asterisk is to be understood as recursive:

- (14) [_{ForceP} [_{TopP*} [_{FocP} [_{TopP*} [_{FinP} [_{TP}]]]]]]]

The articulated left periphery is delimited by ForceP (upper boundary), where the illocutionary force of a clause is encoded and by FinP (lower boundary), the projection that determines whether a clause is finite or non-finite⁹. In between FinP and ForceP we find a number of 'scope-discourse'-projections, labelled TopP and FocP in (14), where wh-elements, topics and foci are hosted. These constituents can either be moved to or base-generated in their peripheral position. Phrasal movement to the left periphery is commonly called A'-movement: this type of movement has a number of special properties which will be touched upon in section 3. I will say more about the pragmatic aspects of topic and focus phrases in

⁸ For arguments that Spec,TP is not the base position of the external argument, see Sportiche (1988) and Koopman & Sportiche (1991) among many others.

⁹ See ch. 3, section 2.1.1 for discussion.

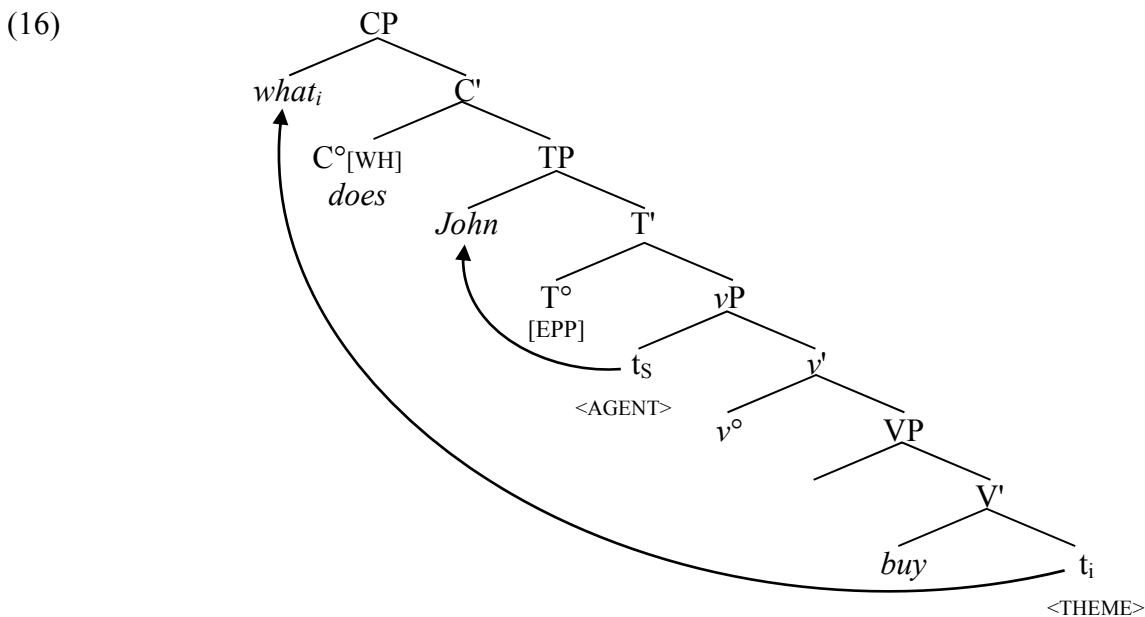
section 4. More discussion of the 'fine structure of the left periphery' in a number of different languages can be found in Puskás (2000), Poletto (2000), Benincà & Poletto (2004), Benincà & Munaro (2011).

2.6 Summary

To put all the above elements together, let's consider a simple example like English (15):

(15) *What_i does John buy t_i ?*

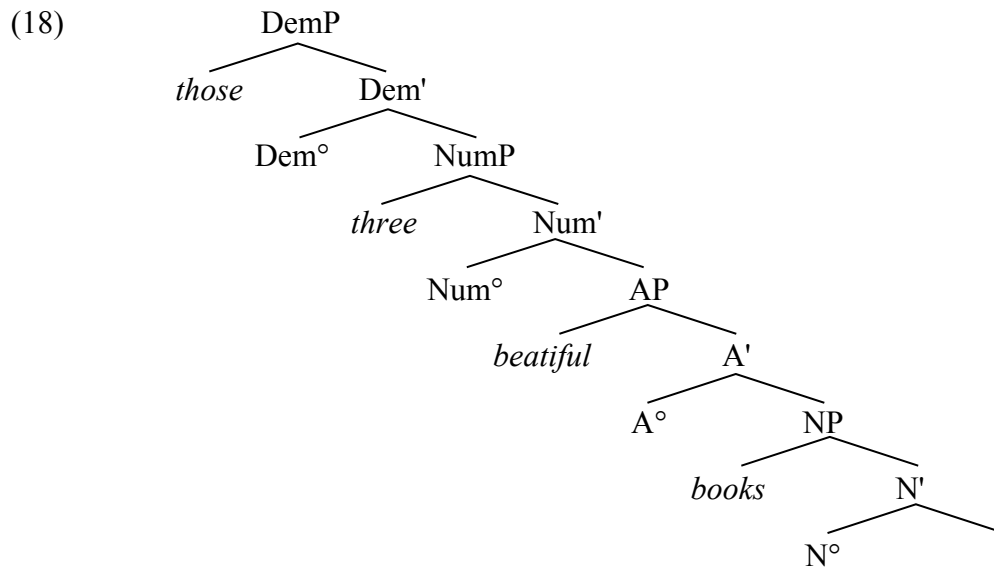
Abstracting away from the fact that English displays *do*-support (i.e. the presence of a dummy *do* in C°) in matrix interrogatives, one could say that the clause in (15) can be represented as in (16). The arguments of the verb are merged within the verb phrase, where they are assigned a θ -role (in this case Agent and Theme). For simplicity's sake, I assume that the direct object as well as the lexical verb remain in situ in VP. Moving to the TP-layer, we see that the subject moves to Spec,TP in order to satisfy the EPP-requirement of T°. Finally, since the entire clause is a constituent question (cf. the [WH] feature on C°), some wh-element (i.c. the object *what*) has to move to Spec,CP.



2.7 A note on DPs (and PPs)

Although it will not play a crucial role in this thesis, I will briefly say something about the syntax of noun phrases. As originally proposed by Abney (1987), a lexical noun like *books* in (17) projects a functional superstructure similar to the one projected by verbs in the clausal domain, where modifiers like adjectives, numerals, demonstratives and articles and the like are hosted (17b-18).

- (17) a. *those three beautiful books*
 b. [_{DemP} *those* [_{NumP} *three* [_{AP} *beautiful* [_{NP} *books*]]]



The idea that noun phrases also come with an 'extended projection' is known as the DP-hypothesis, with DP for 'Determiner Phrase' (Abney 1987; Bernstein 2001). The name 'DP' is best understood as a cover term for a series of functional projections. For more details on the functional structure of DP, see Cinque (2005, 2010, in prep.) and Alexiadou, Haegeman & Stavrou (2007).


3 Movement

3.1 The nature of syntactic derivations

In section 1.3, I introduced the difference between two variants of the basic structure-building operation Merge, namely external and internal Merge. The latter is also known as 'Move'. I will adopt the standard assumption that syntactic movement is universally to the left (Kayne 1994, Cinque 2009). Furthermore, I will use (some of) the terminology of Chomsky's (1998, 2001, 2008) Probe-Goal system.

The basic observation is that displacement is a property of human languages in the sense that one and the same item seems to be interpreted in more than one place in the clause (i.e. not only in its surface position). For instance, in the sentence in (19) *what* is not only the question operator that 'types' the whole sentence as a matrix question, it also is the Theme argument of the predicate *buy*.


(19) *What_i did John buy t_i?*



One can thus say that *what* fulfills two functions simultaneously, one in its base position (indicated by the sign 't', for trace) and one in its left-peripheral surface position. In order to capture this dual property of one and the same lexical item, it is assumed that the element is externally merged (or base-generated) in the lower position, and in the course of the derivation moved to a higher position (see section 3.5 below for more thorough discussion of syntactic movement).

In the Probe-Goal system, the wh-question in (19) is derived as follows. The head C° is said to be a 'Probe', and it is endowed with an unvalued wh-feature. As soon as it is merged, it probes down the tree to look for a phrase that has matching wh-feature (*what* in (20)), which is called the Goal. The Probe and the Goal establish a syntactic dependency relation with each other via an operation called 'Agree'. Agree is optionally followed by an operation 'Move' (or internal Merge), as in (20):

(20) [_{CP} What [_{C°} [_{wh}] did [_{TP} John [_{VP/VP} buy <what_[wh]>]]]]?



As indicated in (20), one could assume that the moved item leaves behind a 'copy' (cf. the so-called 'copy theory of movement'), which is not spelled out phonologically but which is interpretable at LF.

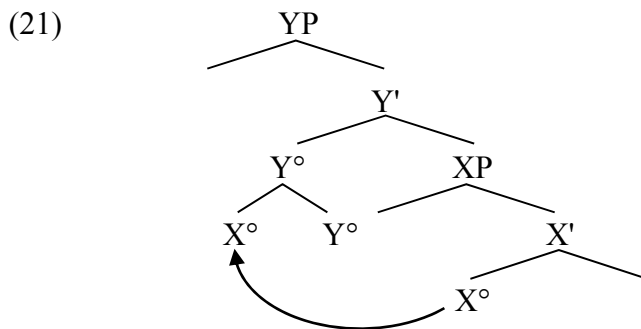
Alternatives to this Probe-Goal system include the 'feature checking' mechanism from early Minimalism (Chomsky 1993, 1995) and the criterial approach developed in Rizzi (1996, 1997) and subsequent work. All these approaches differ in their technical implementations in non-trivial ways, but for the purposes of the present work, nothing really hinges on these.

3.2 Kinds of movement

One can distinguish between two basic kinds of movement, namely head movement and phrasal movement. For the latter at least three types have been distinguished: A-movement, scrambling and A'(A-bar)-movement. Especially the last type of movement will be of great importance throughout the present work. The four movement types differ along a number of dimensions, namely in the kind of object that is moved, in the target site of the moved objects and in the distance that the movement operation can span (see also Grohmann 2003: 3-7). The locality constraints on different types of movement will be discussed in section 3.4.2.

3.2.1 Head movement

As the name suggest, head movement is the displacement of X° . In the classical theory (Baker 1988), a head that undergoes movement always moves strictly locally to adjoin to the next higher head, as represented in (21). See Matushansky (2006) and chapter 7 (section 2.1.3) for additional discussion.



I will illustrate this type of movement with examples of verb movement, with data which were discussed in detail in the seminal paper by Pollock (1989). The data in (22) illustrate an important difference between English and French:

(22) *John **often** buys [a book].*

(23) *Jean achète **souvent** [un livre].*

Jean buys often a book

'Jean often buys a book.'

I will assume that the adverbs *often* and *souvent* and all their located universally in one and the same functional projection (sc. $\text{AspP}_{\text{frequentative(II)}}$). Now observe that in English, the inflected verb is found to the right of *often*, whereas its French counterpart surfaces to the left of *souvent*, which separates the verb from its complement. On the basis of these and similar data, Pollock (1989) concluded that in French, finite verbs undergo head movement from V° to T° and that in English, this movement is absent. It is commonly assumed that V-to-T movement in languages like French and Italian (Belletti 1990) correlates with the fact that these languages have a richer verbal inflection than languages like English, which lack both V-to-T movement and person agreement on most finite verbs.

The three other types of movement all involve movement of a maximal projection. I will briefly discuss each of them in turn, starting with A-movement.

3.2.2 A-movement

A-movement can be defined as movement from a θ -position (inside vP/VP) to a position the TP-layer (perhaps a Case position). The classical case of A-movement is the phenomenon called 'raising'. It is illustrated in (24):

(24) *John seems to have bought the book.*

In (24), *John* is the external argument (the Agent) of *bought* (cf. (25a)). However, the infinitival phrase (whatever its category might be) is embedded by a raising verb (i.c. *seem*) which is a verb which does not introduce an external argument, as is shown by (25b) in which the subject of *seem* is the expletive pronoun *it*. If we adopt the Extended Projection Principle (cf. section 2.4 above), which says that every clause needs to have a subject, this raises a problem for a structure like (25a). To remedy this problem, some XP has to overtly move to satisfy the EPP-requirement of matrix T° . This is done by the external argument of the lexical verb, as shown in (25c):

- (25) a. [____ [T° [EPP] [*seems* [*John to have bought the book*]]]].
 b. *It seems that John has bought the book.*
 b. [$_{TP}$ *John* [T° [EPP] [*seems* [t_i *to have bought the book*]]]]].



3.2.3 Scrambling

The term 'scrambling' was first used in Ross (1967), and it is most often used to refer to a reordering of the verb's arguments inside what (pretheoretically) could be called the 'middle field' (i.e. the clausal domain without the left periphery being involved). Scrambling phenomena are best described for Germanic (e.g. Haider 2006) and Slavic (e.g. Bošković

2009) languages and for Japanese (e.g. Miyagawa 1997). However, it is fair to say that scrambling is until today not well understood, and probably it is not the case that all phenomena that ever have been labelled 'scrambling' can really be subsumed under one umbrella.

An example of scrambling in Dutch is given in (26). (26a) shows a sentence with a ditransitive predicate and with discourse neutral word order. Both the direct and the indirect object are found to the right of the adverb *gewoonlijk* 'usually'. Under the assumption that this adverb is base generated in Cinque's (1999) $Asp_{\text{habitual}}P$, a fairly high projection in the functional hierarchy, and that if the adverb itself undergoes movement it can only be movement of the left peripheral type (to be discussed below), we can conclude that the direct object DP *het boek* 'the book' in (26b) has been scrambled to a position to the left of this aspectual adverb.

- (26) a. ... *dat Jan gewoonlijk het boek aan Piet geeft.*
 that Jan usually the book to Piet gives
 b. ... *dat Jan [het boek]_i gewoonlijk t_i aan Piet geeft.*
 that Jan the book usually to Piet gives
 '... that Jan usually gives the book to Piet.'

I refer to Grewendorf (2005) for a proposal to link scrambling phenomena to information structure.

3.2.4 A'-movement

With A'-movement, we refer to those movement operations which target a landing site in the left periphery of the clause, i.e. the specifier of a functional projections of a split-CP in the sense of Rizzi (1997). Many elements concerning the syntax of this class of movement operations were first discussed in the seminal paper by Chomsky (Chomsky 1977). The clausal left periphery typically hosts elements that have been displaced for reasons of scope (i.e. genuine wh-movement which is found in matrix and embedded question and relative clauses) or discourse (topics and foci).

3.2.4.1 Wh-movement

Interrogative wh-movement is exemplified by the matrix question in (27a) and its relative counterpart by the (non-restrictive) relative clause in (27b).

- (27) a. *What_i did you buy t_i ?*
 b. *The book [which_i John bought t_i].*


Evidence for the claim that the question word *what* in (28) has indeed been moved from a lower position comes among other things from sentences where it does not move to the left periphery. For instance, in the echo-question in (28a) and in the multiple wh-question in (28b), the interrogative wh-word *what* remains 'in situ' in its postverbal base position.

- (28) a. *He bought what?*
 b. *Who bought what?*

A crucial property of wh-movement is that it can give rise to unbounded dependencies, i.e. the possibility for a filler and its corresponding gap to be separated by a potentially unlimited number of clause boundaries. This is illustrated in (29), where an interrogative (29a) and a relative (29b) wh-phrase are extracted across two finite clause boundaries.

- (29) a. $[_{CP1} [Which\ book]_i\ did\ John\ think\ [_{CP2}\ that\ Mary\ said\ [_{CP3}\ that\ you\ bought\ t_i]]]?$
 b. $[_{DP}\ The\ book\ [_{CP1}\ which_i\ John\ thinks\ [_{CP2}\ that\ Mary\ said\ [_{CP3}\ that\ I\ bought\ t_i]]]]$.

A crucial property of these unbounded dependencies is that they do not take place 'in one fell swoop': they can be decomposed in a series of local steps. It is said that long distance A'-movement proceeds in a 'successive cyclic' fashion, via the 'edge' of each cyclic domain. This was first conjectured by Chomsky (1973), on purely theoretical grounds, but since the original proposal, an impressive body of empirical data supporting the reality of successive cyclicity has been accumulated (see Chung 1982, 1998 and McCloskey 2002 among many others). For instance, in the sentence in (29a), the extraction of the phrase *which book* should be analysed as involving three local steps, each targeting the next higher CP-edge:

- (30) $[_{CP1} [Which\ book]_i\ did\ John\ think\ [_{CP2}\ that\ Mary\ said\ [_{CP3}\ that\ you\ bought\ t_i]]]?$
- 

There is a wide consensus that the main cyclic domain is CP¹⁰. Chomsky (1986, 2001, 2008) proposes that vP constitutes a cyclic domains as well. This hypothesis is widely adopted by proponents of Minimalism, but it is not, at this point, relevant for the present work (see Rackowski & Richards (2005) and den Dikken (2009) for perhaps the strongest empirical evidence in favour of the phasehood of vP). For expository reasons, I will therefore adopt the more 'conservative' view that in the clausal domain, only CP constitutes a cycle: this will be relevant in chapters 4 and 5 (esp. ch. 4, section 2.6.2), without prejudging the status of vP as being a phase. Furthermore, there is good evidence that crosslinguistically, DPs and PPs also count as cyclic domains.

¹⁰ See den Dikken (2009) for arguments against this *communis opinio*.

In following two sections I will discuss a number of very general facts about the syntax and to a lesser extent the interpretation¹¹ of two discourse-related types of A'-movement, namely focalization and topicalization.

3.2.4.2 CP-internal foci

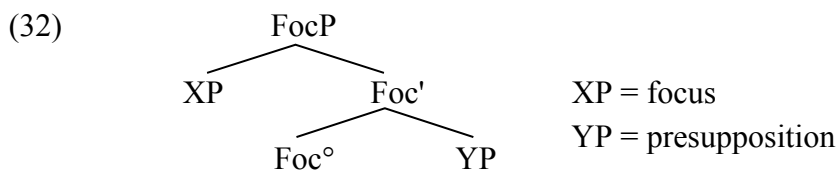
With É. Kiss (1998), I will distinguish two types of constituent focus, which I will call identificational and presentational focus¹². Only the former involves movement to CP and can thus be considered A'-movement. There is a tendency for a focalized constituent to convey new information, i.e. that it introduces is a new entity (person, object or concept) in the discourse, but such is by no means always the case.

Identificational foci, sometimes also called 'contrastive' or 'exhaustive' foci, are often associated with a notion of contrast or contradiction¹³. This is illustrated by the exchange in (31), in which B contradicts one specific element of a previous statement of A:

- (31) A: *Stefano ha telefonato.* // B: *GIANNI_i t_i ha telefonato.*
 Stefano has called Gianni has called
 'Stefano called. No, it was Gianni who called.'

According to Rizzi (1997: 285), a contrastive focus like *Gianni* in (31) [...] introduces new information, whereas the open sentences expresses contextually given information, knowledge that the speaker presupposes to be shared with the hearer.

One could represent this configurationally as in (32), where a focus head Foc° mediates between a focus phrase XP and the corresponding presupposition YP, an open proposition containing the trace of XP:



Another example of an identificational focus is given in (33), in which the focalized constituent is the direct object the transitive predicate *comprare* 'buy'. The word order in B's

¹¹ For discussion of the main pragmatic properties of different types of topics and foci, I refer to Erteschik-Shir (1997: 7-15; 2007: 7-27 (topics) and 27-42 (foci)).

¹² A more in-depth discussion of the syntax of focalization will be offered in ch. 6, sections 2.1-2.2.

¹³ In examples without labelled brackets, identificational foci will be indicated with caps.

reply clearly shows that the DP *un libro* 'a book' has been moved past the subject *Gianni* (compare A's statement, where the object *un giornale* 'a newspaper' sits in its base position).

- (33) A: *Gianni ha comprato un giornale.* // B: *No, [UN LIBRO]_i Gianni ha comprato t_i.*
 Gianni has bought a newspaper no a book Gianni has bought
 'Gianni bought a newspaper. No, it's a book that Gianni bought.'

As suggested by the translation, left peripheral identificational foci may be seen as functionally more or less equivalent to English clefts. This does not mean that *it*-clefts should necessarily receive the same analysis as identificational foci (Belletti (2009) and Haegeman & Meinunger (in prep.) for discussion of left peripheral analyses of clefts).

I will highlight two more properties of (Italian) identificational foci. The first is that there can be only one of them per clause:

- (34) a. *[IL LIBRO]_i ho dato a Gianni t_i.*
 the book I.have given to Gianni
 'It's the book that I have given to Gianni.'
 b.* *[IL LIBRO]_i [A GIANNI]_j ho dato t_i t_j.*

Secondly, the example in (34c) show that Italian identificational foci exhibit what is perhaps the most typical property of A'-movement, namely the possibility to establish a long distance dependency (i.e. to cross a sentence boundary):

- c. *IL LIBRO, Maria ha detto [CP che Gianni ha comprato t_i].*
 the book Maria has said that Gianni has bought
 'It is the book that Maria has said that Gianni has bought.'

3.2.4.3 Topics

Rizzi (1997: 285) defines topic as follows:

[a] topic is a preposed element characteristically set off from the rest of the clause by 'comma intonation' and normally expressing old information, somehow available and salient in previous discourse; the comment is a kind of complex predicate, an open sentence predicated of the topic and introducing new information.

In an X'-configuration, this look like (35):

- (35)
-
- ```

graph TD
 TopP --- XP
 TopP --- Top_prime[Top']
 Top_prime --- Top_degree[Top°]
 Top_prime --- YP

```
- XP = topic  
 YP = comment

In Italian, topics are typically realized with a left peripheral constituent and a TP-internal resumptive clitic pronoun, yielding a so called 'Clitic Left Dislocation' (CLLD) configuration. The data in (36) show that there can be more than one CLLD constituent per (main (36a) or embedded (36b)) clause:

- (36) a. *Il libro, a Gianni, gliel' ho dato.*  
 the book to Gianni him.CL-it.CL I.have given  
 approx. 'I gave the book to Gianni.'
- b. *Maria ha detto [che il libro, a Gianni, gliel' ha dato].*  
 Maria has said that the book to Gianni him.CL-it.CL has given  
 approx. 'Maria said that she gave the book to Gianni.'

Topics and foci can cooccur in the left periphery, if they do so, topics can both precede (37a) and follow (37b) the focus (cf. the template in (14)).

- (37) a. *Il libro, A GIANNI Maria l' ha dato.*  
 the book to Gianni Maria it.CL has given
- b. *A GIANNI, il libro, Maria l' ha dato.*  
 to Gianni the book Maria it.CL has given  
 approx. 'It is to Gianni that Maria gave the book.'

I will have little to say about the pragmatics and the interpretation of different types of topics. In the literature, many types of topics have been distinguished and many definitions have been proposed<sup>14</sup>. A clear taxonomy has been proposed by Hinterhölzl & Frascarelli (2007), who distinguish between three types of topics (Aboutness Topics, Contrastive Topics and Familiarity Topics), which in Italian are all realized as Clitic Left Dislocation, but are associated with a different intonation contour. I refer to the original paper for discussion. Suffice it to say that topicalized constituents are often but not always old (or 'given') information.

### 3.3 Relativized Minimality

At this point, the question arises as to whether, and if yes, how syntactic movement is constrained. An influential proposal that provides a principled mechanism to correctly predict the how far a given syntactic object can move and which combinations of movement operations are grammatical is the system of Relativized Minimality, first proposed in Rizzi (1990).

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<sup>14</sup> See Erteschik-Shir (2007: 7-27) for an overview.

### 3.3.1 The basic idea

Consider a syntactic configuration with three elements, X, Y and Z:

(38) X Y Z

In this configuration

Y cannot be related to X if Z intervenes and Z has certain characteristics in common with X. So, in order to be related to X, Y must be in a minimal configuration with X, where Minimality is relativized to the nature of the structural relation to be established.

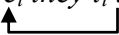
(Rizzi 2001b: 89)

Simply put: likes cannot cross likes. If they do so, an 'intervention effect' arises, which causes a given sentence to be ungrammatical. In terms of the probe-goal relation (abstracting away from the option of multiple agree, see Haegeman & Lohndal (2010) for discussion): if X probes for a property shared by both Y and by Z, then X will always find Y and will not be able to reach Z.

On a par with the different types of movement that were introduced in section 3.2, Rizzi (1990) distinguished three classes of movement operations that are relevant for Relativized Minimality<sup>15</sup>.

### 3.3.2 Head movement, A-movement and A'-movement and RM

Let me start with head chains. Rizzi proposes that a head can never cross another overt head, thus reducing the Head Movement Constraint (HMC) of Travis (1984) to a more general fact of natural language syntax. The standard example to illustrate the HMC is (39b). I assume that in (39b) the auxiliary *have* moves to a position to the left of the subject, and more specifically to some head position in the C-domain.

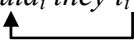
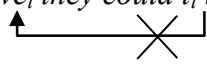
(39) a. *They have left.*  
b. *Have<sub>i</sub> they t<sub>i</sub> left?*  


In a sentence with more than one auxiliary, Relativized Minimality correctly predicts that only the structurally highest one (in English the leftmost one) can be moved to C in order to derive matrix yes-no question. In other words, the ungrammaticality of (40c) can be ascribed to the fact that *have* illicitly moves past *could*<sup>16</sup>.

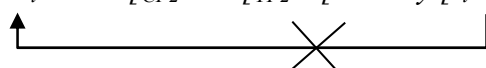
<sup>15</sup> It is not immediately clear how scrambling behaves with respect to Relativized Minimality: I will leave this issue aside.

<sup>16</sup> (39), which is the textbook example to illustrate HMC, might not be optimal. If C probes for finite features (say Tense) then only *could* is a licit target. Other examples can be produced, but since head movement is not a core subject of this thesis I will not go into this.

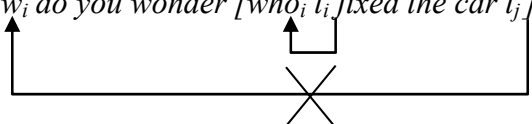


- (40) a. *They could have left.*  
 b. *Could<sub>i</sub> they t<sub>i</sub> have left?*  
  
 c. *\*Have<sub>i</sub> they could t<sub>i</sub> left?*  


Second, there are similar restrictions on A-movement. (41) is an ungrammatical example of a raising construction, where the embedded subject *John* moves to Spec,TP1 by skipping Spec,TP2, which are both subject positions and which, by virtue of the EPP, need to be filled overtly. In it said that (the expletive *it* in) the subject position in TP2 counts as an intervener, blocking a potential movement of *John* to Spec,TP1.

- (41) *\* [CP<sub>1</sub> [TP<sub>1</sub> John<sub>i</sub> seems [CP<sub>2</sub> that [TP<sub>2</sub> it [is likely [t<sub>i</sub> to sleep]]]]]]].*  


Finally, as expected, there are also restrictions on A'-moved elements. A classical example is extraction out of an embedded interrogative (cf. section 3.4.1.1. on the wh-island condition), which in some languages, like English, leads to ungrammaticality. For instance, in (42), it is not possible to form a main clause interrogative by extracting the wh-adjunct *how* across the wh-phrase *who* in the left periphery of the embedded clause:

- (42) *\* How<sub>i</sub> do you wonder [who<sub>i</sub> t<sub>i</sub> fixed the car t<sub>j</sub>]?* (intended answer: 'quickly', 'easily',...)  


However, as we have seen above (example (37b) is repeated below), some configurations where one A'-moved constituent crosses another A'-moved constituent are in fact grammatical. For instance, in (37b), the focus *a Gianni* 'to Gianni' has crossed the topic *il libro* 'the book':

- (37b) *A GIANNI, il libro, Maria l' ha dato.*  
 to Gianni the book Maria it.CL has given  
 approx. 'It is to Gianni that Maria gave the book.'

Therefore, in the more recent literature on Relativized Minimality a number of refinements has been added to the theory, especially in order to capture the behaviour of constituents that undergo A'-movement<sup>17</sup>.

<sup>17</sup> See Endo (2007: 19-43) for a detailed overview of the evolution of the theory of Relativized Minimality.

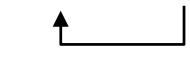
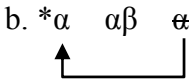
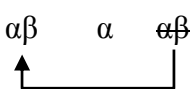
### 3.3.3 Splitting the A'-paradigm

Rizzi (1997) proposes that the A'-paradigm should be split up in at least two subclasses, namely a quantificational and a non-quantificational one. Foci and (interrogative) wh-elements are quantificational, whereas topics are non-quantificational. Rizzi (2004) makes a further distinction between two types of non-quantificational items, namely topic and modifier. The result is a finegrained typology of feature classes, each containing a set of elements that share a specific property (see also Starke 2001). These relevant feature classes are summed up in (43), where (43a) corresponds to the A-movement class and (43b,c,d) together form the class of A'-moved phrases.

- (43) a. Argumental: person, number, gender, case  
 b. Quantificational: Wh, Neg, measure, focus ...  
 c. Modifier: evaluative, epistemic, Neg, frequentative, celerative, measure, manner, ...  
 d. Topic

### 3.3.4 Feature based RM

Yet a further evolution in the theory of Relativized Minimality goes back to Starke (2001), where it is proposed that syntactic intervention is based on non-identity and richness of feature sets (Starke 2001; Endo 2007; Friedmann, Belletti & Rizzi 2009). The schematic representations in (44-45) summarize the possible configurations that do or do not lead to intervention.

- (44) a.  $*\alpha \quad \alpha \quad \epsilon$   
  
 b.  $*\alpha \quad \alpha\beta \quad \epsilon$   

- (45)  $\alpha\beta \quad \alpha \quad \epsilon\beta$   


(44) shows that a syntactic object with feature matrix  $[\alpha]$  cannot cross an object with feature matrix  $[\alpha]$  or with the feature matrix  $[\alpha\beta]$ . A syntactic object with feature matrix  $[\alpha\beta]$ , however, can cross an object with feature matrix  $[\alpha]$ , provided that  $\alpha$  and  $\beta$  are of a different feature class (45). In other words,  $\beta$  somehow enables the moved constituent to overcome the blocking effect of  $\alpha$ .

Having explained about the different kinds of syntactic movement, I will now address the question as to how it can be diagnosed whether a given phrase has been moved or not. I will concentrate on A'-movement.

### 3.4 Diagnostics for movement

There is nowadays a consensus that in a syntactic dependency of the type schematically represented in (46)

(46)  $XP_i \dots ec_i$

where a constituent XP is coreferential with and c-commands an empty category ec, XP can either be (i) base-generated in its surface position or (ii) it can have been moved there (see Aoun & Benmamoun 1998; Adger & Ramchand 2005)<sup>18</sup>. In the latter case, the empty category would be the base position of XP, referred to as either its 'trace' or, following the Minimalist approach, its 'copy'<sup>19</sup>. Importantly, there are some crucial differences between scenarios (i) and (ii): the movement derivation of a syntactic dependency is typically sensitive to so called 'island effects', and a moved constituent can in principle be 'reconstructed' to its base position. I will discuss each of those two phenomena in turn.

To illustrate the two types of syntactic dependencies, I will use data from well-discussed contrast between two topicalization strategies in Standard German, namely Hanging Topic Left Dislocation (HTLD) and Contrastive Left Dislocation (CLD). The discussion will be based on (data from) Boeckx & Grohmann (2004b), and I will not the analysis of Grohmann (2000, 2003).

Both HTLD and CLD consist of a left dislocated constituent and a resumptive pronoun (a so called d-pronoun). In the former, the left dislocated phrase standardly bears nominative morphology, irrespective of the case it would have in a TP-internal position and irrespective of the case of the resumptive pronoun. This is illustrated in (47) and (48), which are near identical but have a different derivation, the former illustrates HTLD and the latter CLD. The only difference between the two is that in HTLD in (47) the fronted phrase *dieser Frosch* 'this frog' is marked for nominative case, and the resumptive pronoun *den* 'it' bears accusative morphology (examples from Boeckx & Grohmann 2004b, their (2b,a)) while, in CLD (48) the left-peripheral constituent and the resumptive pronoun bear the same case, as for instance the pair of accusative-marked elements

(47) *Dieser Frosch, den hat die Prinzessin gestern geküßt.*  
this.NOM frog RP.ACC has the princess yesterday kissed  
'This frog, the princess kissed it yesterday.'

---

<sup>18</sup> In the terminology of the Probe-Goal system discussed in section 3.1, a base-generated dependency only involves Agree, whereas the a movement dependency involves Agree and Move.

<sup>19</sup> I do not go into the conceptual differences between 'trace' and 'copy' here.

- (48) *Diesen Frosch, den hat die Prinzessin gestern geküßt.*  
 this.ACC frog RP.ACC has the princess yesterday kissed  
 'This frog, the princess kissed (it) yesterday.'

I will show that only CLD can be plausibly analysed as being derived by movement, since it is sensitive to island constraints and it exhibits reconstruction effects. For discussion see also Grewendorf (2002), Grohmann (2000, 2003). These properties are not shared by HTLD, which I will characterize as a base-generated strategy. This case study will allow me to introduce and illustrate the concepts of syntactic islands and reconstruction: especially the former will play an important role in the remainder of this thesis (esp. ch. 4).

### 3.4.1 (Lack of) island effects

#### 3.4.1.1 A small inventory of syntactic islands

Island effects in syntax were first discussed in Ross (1967), and ever since, they have been at the heart of research in the generative tradition. The basic observation is that certain domains are transparent for phrasal extraction (like the declarative *that*-clause in (49a)), whereas others are opaque (like the conditional clause in (49b)). The latter type of domains are called 'islands'.

- (49) a. *What<sub>i</sub> did you say [that John will read t<sub>i</sub>]?*  
 b. *What<sub>i</sub> will you be happy [if John will read t<sub>i</sub>]?*

Cinque (1990): distinguished between strong (or 'absolute') islands, phrasal extraction out of which always leads to severe ungrammaticality, as opposed to weak (or 'selective') islands, which give rise to a milder deviation and whose status as an island seems to be parametrized across languages (see also Rizzi 1990; Szabolcsi 2006). The following examples illustrate the most important types of strong islands (with (51-52) perhaps as a subclass of (50)). Especially the type of island illustrated in (50) will be of great importance throughout this thesis.

- (50) Adjunct island  
 a. *He left [after he had finished his meal].*  
 b. *\*What<sub>i</sub> did he leave [after he had finished t<sub>i</sub>]?*
- (51) Complex Noun Phrase island (with a relative clause)  
 a. *She knows [<sub>DP</sub> the man [that wrote this book]].*  
 b. *\*What<sub>i</sub> does she know [<sub>DP</sub> the man [that wrote t<sub>i</sub>]]?*
- (52) Complex Noun Phrase island (with a complement clause)  
 a. *He heard [the rumor [that John kissed Mary]].*  
 b. *\*Who<sub>i</sub> did he hear [the rumor [that John kissed t<sub>i</sub>]]?*

(53) Coordinated structure island

- a. *I saw [John and Mary].*
- b. \**Who<sub>i</sub> did you see [John and t<sub>i</sub>]?*
- c. \**Who<sub>i</sub> did you see [t<sub>i</sub> and Mary]?*

Wh-islands and negative islands on the other hand, are typical examples of weak islands (on wh-islands, see also ch. 4, section 3.2.1):

(54) Wh-island

- a. *John wondered [who fixed the car].*
- b. \**What<sub>i</sub> did John wonder [who fixed t<sub>i</sub>]?*
- c. ?\* *[Which car]<sub>i</sub> did John wonder [who fixed t<sub>i</sub>]?*

(55) Negative island

- a. *John behaved badly at the party.*
- b. *How did John behave t<sub>i</sub> at the party?*
- c. *John didn't behave badly at the party.*
- d. ?\* *How didn't John behave t<sub>i</sub> at the party?*

Observe that the island effects in (54) and (55) may be derived as a result of intervention, assuming that the wh-phrase in the intermediate SpecCP in (54b,c) and the negative operator in (55c,d) share relevant features with the moved constituent.

### 3.4.1.2 Island effects as a diagnostic for movement

In general, the possibility for a filler-gap dependency to be established across a clausal boundary which is independently known not to count as an island boundary, and the ungrammaticality of the same type of dependency across an island boundary (i.e. an island effect) is considered to be effect as a reliable diagnostic for movement.

Let's return to our German case-study. Recall that apart from the aforementioned difference qua case morphology, which *an sich* does not teach us anything about the underlying structure of the two phenomena, there are two more differences between HTLD and CLD. The first is a different behaviour in island contexts: only CLD exhibits sensitivity to island constraints (Boeckx & Grohmann 2004b, their (19b) and (21)).

- (56) a. [*Der schöne Mann*], *Martin haßt [die Tatsache, [dass die Frau ihn geküßt hat]]*.  
the.NOM handsome man Martin hates the fact that the woman him kissed hat  
'The handsome man, Martin hates the fact that the woman kissed him.'
- b. \**[Den schönen Mann], den haßt Martin [die Tatsache, [dass die Frau geküßt hat]]*.  
the handsome man him.ACC hates Martin the fact that the woman kissed hat  
lit. 'The handsome man, Martin hates the fact that the woman kissed.'

This can be interpreted as evidence that CLD is derived by means of movement, and that HTLD is a base-generated strategy.

### 3.4.2 Reconstruction

#### 3.4.2.1 The phenomenon

For general discussion of reconstruction phenomena, the reader is referred to Barss (2001) and Sportiche (2006). I will illustrate reconstruction phenomena with data from binding theory. Consider the pair in (57), both containing the anaphor *himself*:

- (57) a. [<sub>TP</sub> John<sub>i</sub> [<sub>VP</sub> sees *himself*<sub>i</sub>]].  
 b. [<sub>TP</sub> John says [<sub>that</sub> Bill<sub>j</sub> sees *himself*\*<sub>vj</sub>]].

(57a) shows that *John* and *himself* can, and in fact need to, be coreferential. This coreference between *John* and *himself* is ruled out in (57b): as indicated, *himself* can only be coindexed with Bill and not with John. The requirement that an anaphor like *himself* needs to be c-commanded by a clausemate coindexed pronoun or proper name is known as Principle A of the Binding Theory.

Now observe that a sentence like (58) is grammatical, despite the fact that *himself* is not c-commanded by *John*.

- (58) [<sub>Which pictures of himself</sub><sub>i</sub>] did John<sub>i</sub> see?

However, this apparently unexpected lack of Principle A-violation can elegantly be explained if we look at the derivational history of (58). (59a) shows the extraction site of the wh-moved DP, namely the postverbal object position. Now if we replace this trace by a phonologically null copy of the moved phrase (cf. the 'copy theory of movement' (Chomsky 1993)) and we compute the binding relations at this earlier stage of the derivation, we obtain a configuration where *himself* is locally c-commanded by its binding antecedent *John*, as required (cf. (59b)). We can say that Principle A is satisfied 'under reconstruction'.

- (59) a. [<sub>CP</sub> [<sub>Which pictures of himself</sub><sub>i</sub>]<sub>j</sub> [<sub>C°</sub> did [<sub>TP</sub> John [<sub>VP</sub> see t<sub>j</sub>]]]]?  
 b. [<sub>CP</sub> [<sub>Which pictures of himself</sub><sub>i</sub>]<sub>j</sub> [<sub>C°</sub> did [<sub>TP</sub> John<sub>i</sub> [<sub>VP</sub> see <[<sub>which pictures of himself</sub><sub>i</sub>]<sub>j</sub>>]]]]?

The same phenomenon is illustrated in (60). In this example, the surface distance between the anaphor and its antecedent is even longer, since the DP containing *himself* has been long-distance moved.

- (60) [<sub>Which pictures of himself</sub><sub>i</sub>] did Bill say that John<sub>i</sub> saw?

Applying the same mechanism of reconstruction, we can again successfully establish the required configuration for Principle A to be satisfied:

- (61) a. [<sub>CP</sub> [Which pictures of himself<sub>i</sub> ]<sub>j</sub> [<sub>C°</sub> did Bill<sub>k</sub> say [<sub>CP</sub> that [<sub>TP</sub> John<sub>i</sub> [<sub>vP</sub> saw t<sub>i</sub>]]]]]]]?  
 b. [<sub>CP</sub> [Which pictures of himself<sub>i</sub> ] [<sub>C°</sub> did Bill<sub>k</sub> say [<sub>CP</sub> that [<sub>TP</sub> John<sub>i</sub> [<sub>vP</sub> saw <[which pictures of himself<sub>i</sub> ]>]]]]]]]?

Observe also that examples such as (61c) can be advocated in support of the phasehood of vP (and in support of Den Dikken 2009): in order for *Bill* to antecede the anaphor *himself*, the latter has to be found in a position higher than *John*. This makes the lowest copy not an appropriate reconstruction site, because there the anaphor would be bound by the closest antecedent, namely *John*. The complement of *believe* is standardly taken to lack a CP layer, suggesting that the *wh*-phrase is reconstructed to an intermediate landing site at the edge of vP headed by *believe*<sup>20</sup>.

- c. [Which description of himself<sub>j</sub>] did Bill<sub>j</sub> [<sub>vP</sub> <[which description of himself<sub>j</sub>]> [believe [<sub>TP</sub> John<sub>k</sub> to be unaware of <[which description of himself<sub>j</sub>]>]]]]]?

On reconstruction see also Rizzi (2000).

### 3.4.2.2 Reconstruction as a diagnostic for movement

Not unexpectedly, German HTLD and CLD behave differently with respect to the possibility to exhibit reconstruction phenomena (examples from Grohmann 2003: 150, his (42a) and (41b)). The examples in (62) contain a left dislocated phrase in which the anaphor *sich* is embedded. Lower down in the clause is a proper name which corefers with the leftward anaphor. Reconstruction is impossible in the case of HTLD (62a), whereas it is available in the case of CLD (62b):

- (62) a. \*[*Ein Grill bei sich<sub>i</sub> im Garten*], *den hat der<sub>i</sub> Alex wohl*.  
 a.NOM grill with him in.the garden it.ACC has the Alex surely  
 b. [*Einen Grill bei sich<sub>i</sub> im Garten*], *den hat der<sub>i</sub> Alex wohl*.  
 a.ACC grill with him in.the garden it.ACC has the Alex surely  
 'A grill in his own garden, Alex surely has.'

The ungrammaticality of (62a) can be explained by the fact that HTLD does not involve movement: therefore, there simply is no potential site for the phrase *ein Grill bei sich im Garten* to reconstruct to, and hence no local binder for the anaphor *sich*. On the other hand, such a reconstruction site is available in the CLD-case (63a). (63b) shows the configuration under which *sich* is locally bound by *der Alex*.

<sup>20</sup> Thanks to Liliane Haegeman (p.c.) for pointing this out to me.

- (63) a. [<sub>TopP</sub> [Einen Grill bei sich<sub>i</sub> im Garten]<sub>j</sub>, [<sub>CP</sub> den hat [<sub>TP</sub> [der Alex]<sub>i</sub> [<sub>VP</sub> wohl t<sub>j</sub>]]]].  
 b. [<sub>TopP</sub> [Einen Grill bei sich<sub>i</sub> im Garten], [<sub>CP</sub> den hat [<sub>TP</sub> [der Alex]<sub>i</sub> [<sub>VP</sub> wohl <[einen Grill bei sich<sub>i</sub> im Garten]>]]]].

I would like to conclude that it is sufficiently proven that German CLD involves movement and that HTLD is a base-generated topicalization strategy. Furthermore, the phenomena of syntactic islands and reconstruction lend strong empirical evidence to the generative claim that UG contains (a set of) rule(s) that allow constituents to be displaced in the course of a syntactic derivation. This is not the place for a full fledged discussion of German left peripheral phenomena (see esp. Grohmann 2003).

### 3.5 Summary

In this section, I have presented the main kinds of syntactic movement as well as their most important characteristics. In the section 4 I will look at a class of languages where syntactic movement is much more unrestrained than for instance in English. These languages are sometimes called 'free word order languages'. I will adopt a configurational approach to this type of phenomenon, assuming that each different word order pattern corresponds to a difference *qua* information structure.

## 4 Word order and information structure

### 4.1 Discourse-neutral word order

In section 1.3, I briefly introduced the Universal Base Hypothesis, according to which one universal template underlies the structure of each clause in each possible natural language (Kayne 1994, Cinque 1999 and related work). The main elements of the structure of the 'Universal Clause' were presented in section 2. We have seen that in the base, subjects precede verbs and verbs precede their complements, namely objects, yielding a left-to-right order SVO.

At this point it is of crucial importance to make a distinction between this hypothesized Universal Base and the discourse neutral word order in a specific language: although the base order will by assumption always be SVO, particular languages can have any permutation of these three elements as their 'basic' or 'neutral' word order (and in fact, all orders are attested



in the languages of the world, with strongly degrees of frequency). As pointed out by Hinterhölz (2010: 288), the unmarked word order in a given language is derived from the Universal Base and does not itself reflect this Universal Base in any direct way.

The discourse neutral or unmarked word order can be defined as an 'all-focus' or 'broad scope' sentence: a sentence that can be a felicitous answer to the question 'what happened?', when uttered out-of-the-blue. For instance, only (64b) can be a felicitous answer to (64a). (64c-d), both with a non-canonical word order derived by means of some left-peripheral fronting, require a more specific, richer discourse context in order to qualify as a felicitous answer to a question.

- (64) a. *What happened?*  
 b. *John bought a book.*  
 c. # *A BOOK John bought.*  
 d. # *As to the book, John bought it.*

This set of sentences suggests that in English, the neutral word order is SVO. Presumably, this order is only accidentally the same as in the Universal Base. To all likelihood, the verb and its arguments have evacuated the VP-internal base positions in the course of the derivation.

Another relevant example comes from Italian, where subjects can appear in both preverbal and postverbal position. As observed in Belletti (2001a, 2004), the two patterns are not functionally equivalent. Consider the possible answers to the *what happened?* question in (65). (66) shows that in clauses with an intransitive verb, the order subject-verb (SV) is preferred, and in clauses with a transitive verb, the preferred order is subject-verb-object (SVO) (67). On the other hand, the orders VS and VOS do not qualify as felicitous answers to the question in (65) (whence the #-sign):

- (65) A: *Che cos' è successo?*  
 what thing is happened  
 'What has happened?'
- (66) B: *Gianni ha telefonato.* preverbal subject  
 Gianni has called  
 B': # *Ha telefonato Gianni.* postverbal subject  
 has called Gianni  
 'Gianni has called.'
- (67) B: *Gianni ha comprato un libro.* preverbal subject  
 Gianni has bought a book  
 B': # *Ha comprato un libro Gianni.* postverbal subject  
 has bought a book Gianni  
 'Gianni bought a book.'

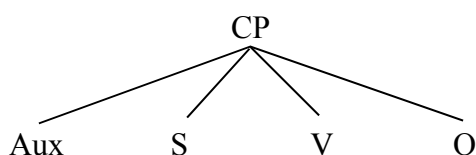
Apart from the 'broad scope focus' question-answer test, there are many other methods to determine which is the basic order of constituents in a given language. Schweikert (2005: 54-86) lists 14 different such methods. In any event, it is generally agreed upon that many of the possible 'deviations' from the neutral word order are motivated by reasons of information structure. I will now have a look at languages which are very liberal in the possible word orders they allow: these languages are sometimes called 'free word order languages'.

## 4.2 The free word order phenomenon

### 4.2.1 Non-configurationality

In the Principles and Parameters paradigm of the '80s, it was proposed that one of the sources responsible for crosslinguistic syntactic variation was the 'non-configurationality parameter' (Hale 1983), which said that not all languages of the world have an underlying hierarchical structure as in (10). Under this approach, a sentence in a non-configurational or free word order language could for instance have the 'flat' structure in (68), where hierarchically there is no difference between Aux, S, V and O, which entails that these elements can in principle be linearized in any given order (see Hale 1983 for ample discussion).

(68)



An early attempt to explain the free word order phenomenon in configurational terms can be found in Jelinek (1984)<sup>21</sup>. Nowadays, the idea that languages come in configurational and non-configurational versions is largely abandoned, not in the least because a flat phrase structure is not compatible with the well-motivated and generally accepted requirement that trees be 'binary branching', as formulated in Kayne (1984)<sup>22</sup>.

### 4.2.2 Discourse configurationality

The most plausible alternative for the structure in (68) is the view that all languages are configurational (i.e. are hierarchically organized), but that some languages are 'discourse configurational' whereas others aren't. In other words, in some languages word order is mainly

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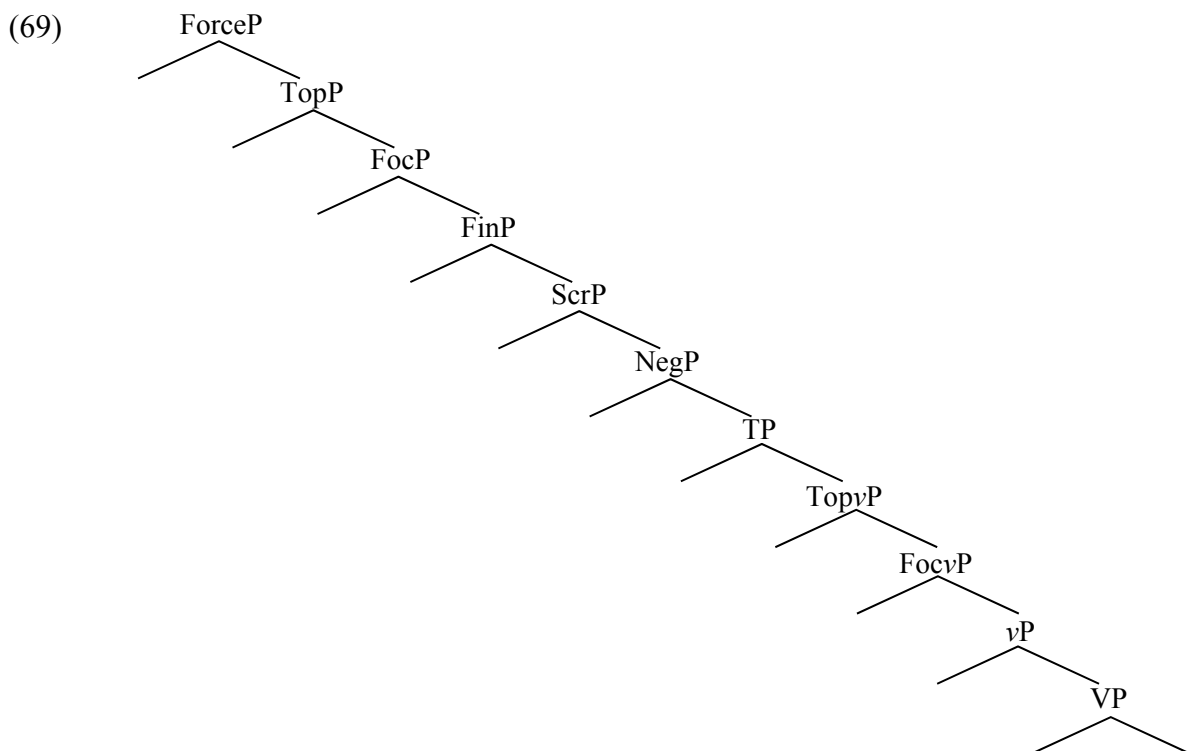
<sup>21</sup> cf. Jelinek's (1984) 'Pronominal Argument Hypothesis'. Additional recent discussion can be found in Legate (2001), Fanselow (2001), Boeckx (2003), Bošković (2005a), and the contributions in Sabel & Saito (2005). See Baker (2001) for an overview of the subject.

<sup>22</sup> cf. also the strictly binary character of the basic structure building operation Merge in all version of the Minimalist Program.

determined by factors as agreement and grammatical function (English, French), whereas in other languages, information structure is the crucial factor that by which word order is determined (Hungarian, Warlpiri, Russian) (Kiss (ed.) 1995). The basic idea is that some languages are parametrized in the extent to which they make use of discourse-related functional projections. This line of reasoning seems more promising than assuming a flat structure for free word order languages, although it should be said that many points need to be worked out in more detail, perhaps on the basis of the research agenda set by Miyagawa (2010).

The discourse-configurational approach has recently been applied to Latin word order by Devine & Stephens (2006). I will at present elaborate on some basic properties of word order in Latin. The discussion will largely remain at a descriptive level.

Before looking at the data, I would like to have a look at the basic structure for the Latin clause, with special attention for the location of discourse projections. In section 2.5 above, I introduced the split-CP model (Rizzi 1997), with the specialized Topic and Focus phrases it contains. In addition to these, other discourse-related have been proposed in the literature (see esp. Belletti 2001a, 2004; Grewendorf 2005; Poletto 2006 (cf. chapter 6, section 2.1)). It seems that for Latin, one needs to postulate at least (but probably more than) five specialized projections to which various types of constituents can move, namely a pair of CP-internal discourse projections (TopP and FocP), a clause-medial phrase that can host scrambled phrases ('ScrP', cf. section below 5.4 below) and a pair of lower discourse projections that dominate the verb phrase (TopvP and FocvP; cf. Belletti 2001a, 2004). The basic structure of the Latin clause could be as in (69) (partly based on Devine & Stephens 2006: 28):



As we will see below, for many Latin clauses it is by no means a trivial task to draw the corresponding tree, given that one single surface string can potentially be mapped to a number of different hierarchical representations.

## 5 Latin as discourse configurational language

Latin famously was described by Marouzeau (1949: 191) as a language in which word order is 'free but not arbitrary'<sup>23</sup>. It is nowadays generally agreed upon the word order patterns available in Latin are each associated with specific interpretive nuances (Pinkster 1990; de Jong 1994; Bolkestein 1996b; Devine & Stephens 2006; Spevak 2010 among many others). I will now present some of the most important characteristics of Latin word order. As a word of caution, I would like to stress that it is of course particularly difficult to study subtle discourse related phenomena of a dead free word order language, where one obviously does not have access to prosodic information<sup>24</sup>. As will be shown, linear often provides us with very little information. Therefore, I will as much as possible base my conclusions on data where one can be reasonably sure which tree corresponds to a given word order pattern under investigation.

### 5.1 Discourse neutral word order

There is a growing consensus that in Latin, the order SOV is the 'discourse neutral' word order (Salvi 2004; Devine & Stephens 2006). Devine & Stephens (2006: ch. 1; esp. 79) give the following (where '>' stands for 'is hierarchically higher than').

(70) Subj<sup>25</sup> > referential DO > IO/Obl > Adjuncts > Goal/Source complements >  
non-referential-DO > V

A simple example of an SOV-sentence is (70).

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<sup>23</sup> Marouzeau (1949: 191): 'Première constatation: l'ordre des mots en latin est libre, il n'est pas indifférent.'

<sup>24</sup> More methodological remarks and case studies on the 'syntactic reconstruction of old languages' can be found in (Kiss (ed.) 2005).

<sup>25</sup> For simplicity's sake, I'll equate 'subjects' to (non-predicative) constituents bearing nominative case and '(direct) objects' to constituents bearing accusative case (where this constituent is not the subject of an infinitival clause or case-marked by a preposition).

- (71) *Caesar exercitum reduxit.*  
 Caesar.NOM army.ACC led.back.PF  
 'Caesar led back his army.' (= Caes. Gal. 3.29)

On the basis of sentences like (71), Latin is often called a verb final language. However, it seems that it is more accurate to characterize the language as being INFL-final (with INFL for 'inflection') if one takes into consideration sentences like (72), which exhibits the order SOVAux:

- (72) [...] *utilitas amicitiam secuta est.*  
 utility.NOM friendship.ACC followed.NOM is  
 'Advantage has followed friendship.' (= Cic. Lael. 51)

Especially in Archaic and Classical Latin, the orders in (71) and (72) are, those most frequently attested (Linde 1923; Bauer 1995, 2009; Devine & Stephens 2006 and ch. 7 of the present work).

## 5.2 Other orders

It was possible for constituents to appear in a number of 'non-canonical' orders, i.e. orders that deviate from the discourse neutral order. First, direct objects could appear in clause-final position, as in the SVO-clause in (73) and the SVAuxO-clause in (74). These patterns become more frequent in later stages of the Latin language (Linde 1923; Bauer 1995).

- (73) [*Is demum equitum impetus*] *perculit hostem.*  
 this.NOM PRT horsemen.GEN assault.NOM shook.PF enemy.ACC  
 'That attack of the cavalry shook the enemy.' (= Liv. aUc 30.35.1)

- (74) [...] *quorum alter commentatus est mimos, alter egit tragoediam.*  
 which.GEN.PL other.NOM composed.NOM is mimes.ACC other.NOM did.PF tragedy.ACC  
 'Of whom the one has composed mimes and the other has acted in a tragedy.'  
 (= Cic. Phil. 11.13)

Moreover, subjects could also appear in postverbal position, as witnessed by the OSV and OVS sentences in (75-76):

- (75) *pabulum boues non eicient.*  
 fodder.ACC cattle.NOM not will.throw.out  
 'The cattle will not spill its food.' (= Cat. Agr. 4.1)

- (76) *Nihil impetrabat reus.*  
 nothing.ACC obtained.IMP accused.NOM  
 'The accused obtained nothing.' (= Cic. ad Att. 1.16.4)

Finally, verb initial clauses are attested as well in Latin (see Bolkestein 1995; Spevak 2005; Devine & Stephens 2006: 145-172)<sup>26</sup>.

- (77) *Vicit pudorem libido, timorem audacia, rationem amentia.*  
 defeated.PF shame.ACC lust.NOM fear.ACC insolence.NOM reason.ACC stupidity.NOM  
 'Lust defeated modesty, insolence defeated scruple, madness defeated reason.'  
 (= Cic. Clu. 15)

- (78) *Auertit [hic casus] uaginam.*  
 pushed.aside.PF this.NOM accident.NOM scabbard.ACC  
 'This accident pushed aside his scabbard.' (= Caes. Gal. 5.44)

Under the 'discourse configurationality' approach adopted here, the examples in (73-78) are by no means equivalent: their different syntax corresponds to a difference *qua* information structure. The possible permutations of the major constituents of the clause were probably subject to context-bound 'felicity conditions': not every sentence could be uttered felicitously in every context. Determining what the exact discursive nuance of a given word order pattern is is by no means a trivial task for at least two reasons.

First, Latin is a dead language, which means that we do not have access to information concerning the prosody and intonation that came with a given word order. Such information would be very helpful in determining the interpretation of a given surface string, since it is well known that different types of A'-movement, are often associated with different intonation contours (e.g. Frascarelli 2000; Frascarelli & Hinterhölzl 2007; Büring 2003, 2007; Bocci 2009).

Second, in most declarative main clauses, there is no clear boundary which separates the left periphery from the TP-domain, as could be said to be done by the inflected verb in Dutch and German main clauses (cf. Haegeman 1996 for such an interpretation). This makes it very hard to determine whether in a clause like (75), repeated here, the direct object has been scrambled (79a) (with FP standing 'Functional Projection'), i.e. some landing site below FinP but higher than the surface subject position), focalized (79b) or topicalized (79c).

- (75) *pabulum<sub>i</sub> boues t<sub>i</sub> non eicient.*  
 fodder.ACC cattle.NOM not will.throw.out  
 'The cattle will not spill its food.' (= Cat. Agr. 4.1)

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<sup>26</sup> Verb first sentences are often claimed to be 'thetic' rather than 'categorical' (in the sense of Sasse 1987, 1995).

- (79) a. [<sub>ForceP</sub> [<sub>TopP</sub> [<sub>FocP</sub> [<sub>FinP</sub> [<sub>FP</sub> pabulum<sub>i</sub> [<sub>TP</sub> boues t<sub>i</sub> non eicient]]]]]]]  
 b. [<sub>ForceP</sub> [<sub>TopP</sub> [<sub>FocP</sub> pabulum<sub>i</sub> [<sub>FinP</sub> [<sub>FP</sub> [<sub>TP</sub> boues t<sub>i</sub> non eicient]]]]]]]  
 c. [<sub>ForceP</sub> [<sub>TopP</sub> pabulum<sub>i</sub> [<sub>FocP</sub> [<sub>FinP</sub> [<sub>FP</sub> [<sub>TP</sub> boues t<sub>i</sub> non eicient]]]]]]]

All the possible representations in (79) correspond to the same surface string: it should be clear that the surface order in (75) provides us with very little information as to the position of the constituent *pabulum* with respect to the remainder of the clause. I prefer not to choose on purely interpretive grounds between the representations in (79), as do Devine & Stephens (2006) and Spevak (2010). The core part of this dissertation will be concerned with a specific word order pattern where we can actually be rather sure about the underlying hierarchical structure, namely left peripheral frontings in embedded clauses, where one or more constituents surface to the left of a subordinating conjunction (which then serves as a 'delimitating' element with respect to which other elements can approximately be located in the tree).

I will now have a look at some cases in main clauses where it is also possible to unambiguously identify a left-peripheral constituent as such. However, it needs to be stressed that examples like the ones below are not at all frequently attested.

### 5.3 Left peripheral constituents

More complete discussion of left dislocated topics in Latin can be found in Hoffmann (1989), Pinkster (1990: 37), Somers (1994) and Cabrillana (1999).

#### 5.3.1 Left dislocated topics with a resumptive pronoun

The first left dislocated strategy is one where a left peripheral constituent is associated with a (presumably TP-internal) resumptive demonstrative pronoun *is*:

- (80) [<sub>DP</sub> Cancer ater], *is olet et saniem spurcam mittit.*  
 ulcer.NOM black.NOM that.NOM stinks and pus.ACC putrid.ACC emits  
 'The black ulcer stinks and emits a putrid pus.' (= Cat. Agr. 157.3)

- (81) *Sed [urbana plebes], ea uero praeceps erat de multis causis.*  
 but urban.NOM mob.NOM that.NOM PRT fickle.NOM was for many.ABL causes.ABL  
 'But the mob in the city really acted impulsively, and for many reasons.'  
 (= Sal. Cat. 37.4)

### 5.3.2 Hanging topics

Some sentence topics are overtly marked as such by the preposition *de* 'about, as to', as for instance in (82). When the XP that is an entire clause, the Aboutness topic typically takes the shape of a clause-initial *quod*-clause (83).

- (82) [<sub>DP</sub> *De domo et Curionis oratione*], *ut scribis ita est.*  
 about house.ABL and Curio.GEN speach.GEN as you.write so it.is  
 'As to the house and Curio's speach, it is such as you write.' (= Cic. ad Att. 3.20.2)
- (83) [<sub>CP</sub> *Quod multitudinem Germanorum in Galliam traducat*], *id se*  
 what multitude.ACC Germans.GEN to Gaul.ACC he.brings.SUBJ that.ACC REFL  
*munienti, non Galliae oppugnandae causa facere.*  
 protect.GER.GEN not Gaul.GEN conquer.GER.GEN in.order.to do.INF  
 'As for the large groups of Germans that he brought into Gaul, he did this in order to defend himself, not in order to attack Gaul.' (= Caes. Gal. 1.44.6)<sup>27</sup>

Another type of topics that can unambiguously be identified is the so called *nominatiuus pendens* (Havers 1925, 1927; Mohrmann 1933; Boon 1981; Serbat 1991; cf. the discussion of the German Hanging Topic Left Dislocation in section 3.4). In both examples in (84-85), the left dislocated constituent corresponds to a resumptive element inside TP (highlighted in boldface):

- (84) [*Ceterae philosophorum disciplinae, omnino alia magis alia, sed tamen omnes, quae rem ullam uirtutis expertem aut in bonis aut in malis numerent*]<sub>i</sub>, ***eas***<sub>i</sub> [...] *nihil adiuuare arbitror.*  
 other.NOM philosophers.GEN disciplines.NOM completely other.NOM more other.ABL but still all.NOM which.NOM thing.ACC any.ACC virtue.GEN void.of.ACC or in good.ABL or in bad.ABL they.count.SUBJ these.ACC nothing.ACC help.INF I.think  
 'The other philosophical systems, one more than the other of course, but still all of them, which classify as either good or bad anything which is void of virtue, I think that they cannot offer any help.' (= Cic. Fin. 3.11)
- (85) [<sub>&P</sub> [*Ager rubricosus et terra pulla, [...]*], [<sub>&°</sub> [*item [quae aquosa non erit]]*]], ***ibi*** *lupinum bonum fiet.*  
 field.NOM with.red-ochre.NOM and earth.NOM dark.NOM likewise which.NOM watery.NOM not will.be there lupine.NOM good.NOM will.become  
 'In soil which is red or in dark ground, there lupine will grow well.' (= Cat. Agr. 34.2)

<sup>27</sup> Observe that in (83), the pronoun *id* is not a resumptive pronoun that forms a 'correlative diptych' with the left dislocated *quod*-clause: *id* refers to the event (roughly corresponding to the verb phrase) rather than to the entire proposition.



### 5.3.3 Other left peripheral constituents

Other cases of A'-moved, which are not overtly marked by wh-morphology, a preposition or a resumptive pronoun, can only be diagnosed in matrix wh-questions or exclamatives and in embedded clauses that are introduced by an overt subordinating conjunction, i.e. in clauses in which some constituent is present that can safely be assumed to occupy a position in the left periphery. Some constituents to the left of such a clearly identifiable left peripheral constituent can with sufficient confidence be identified as being A' moved (for some remarks, see Spevak 2010: 196-198). A number of examples are given in (86-91). The left peripheral constituent is always bracketed, the wh-word marked in boldface. I assume that the argumental status of and/or the case morphology on the fronted phrases suffice to assume that A'-movement has been at work<sup>28</sup>.

- (86) *Age uero, [uicinorum] quantum studium, quam incredibilis beniuolentia,*  
 PRT PRT neighbours.GEN how.much.NOM zeal.NOM how unbelievable.NOM goodwill.NOM  
*quanta cura est!*  
 how.much.NOM care.NOM there.is  
 'But what an enthusiasm of his neighbours, what an incredible goodwill, what a devotion.' (= Cic. Clu. 197)
- (87) *Nam [fidei quidem aut concordiae] quae spes est?*  
 PRT loyalty.GEN PRT or concord.GEN which.NOM hope.NOM there.is  
 'And yes, what hope for peace or concord do we have?' (= Sal. Iug. 31.23)
- (88) *Nam [ipse Caesar] quid est cur in prouincia commorari uelit [...]?*  
 PRT self.NOM Caesar.NOM what.NOM is why in province.ABL dwell.INF he.wants.SUBJ  
 'But as to Caesar himself, what is the reason why he wants to stay longer in the province?' (= Cic. prov. cons. 29)
- (89) *[Ad eum ire te legatum] quis non miraretur?*  
 to him.ACC go.INF you.ACC ambassador.ACC who.NOM not would.wonder.SUBJ  
 'Who would not be surprised if you went to him as an ambassador?' (= Cic. Phil. 12.6)
- (90) *[Midae quidem anulum, [quo circumacto habentem nemo cerneret]], quis non etiam fabulosiorem fateatur?*  
 Midas.GEN PRT ring.ACC which.ABL turned.around.ABL having.ACC nobody.NOM  
 notice.SUBJ who.NOM not even more.fabulous.ACC would.confess.SUBJ  
 'As for Midas's ring, which, when turned around, would make invisible the person who wears it, who would not confess this to be even more fabulous?'  
 (= Plin. Mai. N.H. 33.9)

<sup>28</sup> I assume that position of the nominative in (88) below the particle *nam* shows that the constituent *ipse Caesar* 'Caesar himself' is not an extra-sentential *nominatiuus pendens* (Hanging Topic).

- (91) [*De quo crimine*] **quid** *ego disputem* [...]?  
 about which.ABL crime.ABL why I.NOM discuss.SUBJ  
 'Why should I even discuss this crime?' (= Cic. Ver. act. sec. 2.119)

The examples in (92-94) are less clear: the adjuncts in (92-93) and the clause-initial nominative subject in (94) might be base-generated in the left periphery (the latter as a *nominatiuus pendens*).

- (92) [*In ea porro prouincia*] **quo animo** *C. Murenam fratrem suum aspiciet*?  
 in this.ABL PRT province.ABL which.ABL mind.ABL C.M.ACC brother.ACC his.ACC will.look.at  
 'And in that province, with which attitude will he confront his brother Gaius Murena?'  
 (= Cic. Mur. 89)

- (93) [*Sub hac uero modestia uiri*] **quantam** *debet uerecundiam uxor*  
 under this.ABL PRT modesty.ABL man.GEN how.much.ACC has.to deference.ACC wife.NOM  
*marito femina sibi.*  
 husband.DAT woman.NOM REFL.DAT  
 'But given the modesty of her husband, how much respect she owes him as a spouse,  
 and how much respects she owes to herself as a woman.' (= Plin. Pan. 83.8)

- (94) [*Feles*] *quidem quo silentio, quam leuibus uestigiis obrepunt auibus!*  
 cats.NOM PRT what.ABL silence.ABL how light.ABL steps.ABL creep.up.to birds.DAT  
 'With what silence, with what a light gait do cats creep up to birds!'  
 (= Plin. Mai. N.H. 10.202)

However, it is very hard to make well-founded statements on the exact nature of this word order pattern, without relying solely on contextual information and the 'intuitions' of the modern reader. Therefore, I would like to remain agnostic as to the pragmatics and the interpretation of this type of fronting, as well as to the question of whether the examples in (86-94) all instantiate the same phenomenon from a pragmatic point of view. I will return briefly to this topic at the end of chapter 7, but I postpone a more thorough (formal) investigation to future research.

## 5.4 Scrambling

Finally, there is evidence that middle field scrambling (as defined in section 3.2.3 above) was available in Latin. As should be clear by now, such a process can only be diagnosed in cases clauses where it is possible to tell (i.e. matrix interrogatives with a *wh*-word or embedded clauses with an overt conjunction). Consider therefore the pair in (95-96). I am interested in the order of the subject (nominative) and the direct object (accusative) in the bracketed ACs, both introduced by *cum* 'when'. In (95), subject and object come in the discourse neutral order,

yielding a CSOV-clause. On the other hand, in (96), the object *Volscos* 'the Volsci' has been scrambled to the left past the subject *pauor* 'fear', but still lower than the conjunction *cum*.

(95) *Decreuerunt enim ut [cum populus regem iussisset], id sic*  
they.decreed.PF PRT that when people.NOM king.ACC had.named.SUBJ that.NOM so  
*ratum esset si patres auctores fierent.*  
approved.NOM would.be.SUBJ if senators.NOM supporters.NOM became.SUBJ  
'For they decreed that when the people had named a king, that this would only become  
fact if the senators had ratified it.' (= Liv. aUc 1.17.9)

(96) *Mox ipsa castra legionibus circumdatis, [cum Volscos inde etiam*  
soon self.NOM camps.NOM legions.ABL placed.around.ABL when Volsci.ACC from.there also  
*pauor expulisset], capta direptaque.*  
fear.NOM had.chased.away.SUBJ taken.NOM plundered.NOM-and  
'Soon the camp itself had been surrounded by legions, and when fear had driven the  
Volsci away from there, it was taken and plundered.' (= Liv. aUc 2.25.4)

## 6 Conclusion

In this chapter, I have provided some background concerning the theoretical framework that I will adopt. I have introduced the main theoretical tools that will be used for analyzing a number of specific word order phenomena in Latin embedded clauses. In the following chapter, I will mainly be concerned with the syntax of a specific type of embedded clauses, namely adverbial clauses.



## Chapter 2.

# The internal syntax of Adverbial Clauses (ACs)

In the present chapter I will elaborate on the syntax of adverbial clauses, which throughout this dissertation will be abbreviated as 'ACs'. The discussion does not aim at exhaustivity: rather, I wish to highlight a number of elements which will be relevant for the remainder of the dissertation. Since my main concern will be the internal syntax of adverbial clauses, the present chapter will have little to say about the external syntax of ACs.

The chapter is organised as follows. In the opening section, I will offer some general background on the phenomenon of ACs, focusing on some special characteristics of Latin ACs. In section 2, the internal syntax of ACs is discussed. I will adopt the view that ACs can be analysed as free relative clauses which are derived by means of operator movement. Section 3 will be devoted to the observation that ACs typically do not allow for so called 'Main Clause Phenomena' (MCP). I will illustrate how the operator movement account can explain this fact (Haegeman 2007, 2009, 2010a,b). In section 4 it will be shown that a specific subclass of ACs, so called 'peripheral' ACs, do in fact tolerate MCP. I will show that peripheral ACs can also be identified in Latin. The chapter will be concluded with a case study on the distribution of the discourse particle *quidem*, which is only attested in peripheral ACs and thus qualifies as an MCP: I will propose that *quidem* is a marker of polarity focus, whose distributional pattern in ACs can be accounted for in terms of the intervention analysis developed in Haegeman (2007, 2009, 2010a,b) and Danckaert & Haegeman (to appear) and references cited there<sup>1</sup>.

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<sup>1</sup> Not all expressions of emphatic polarity are MCP. For instance English emphatic *do* clearly is not, since it is freely available in non root contexts. For discussion of the typology of expressions of polarity emphasis see <http://www.gist.ugent.be/polarityemphasis>.

# 1 Adverbial clauses: the landscape

## 1.1 Clausal adjuncts

Adjuncts can be of different categories. For instance, in English, they can be bare DPs (1a), AdvPs (1b), PPs (1c) or CPs (1d)<sup>2</sup>.

- (1) a. *John returned* [<sub>DP</sub> *that day*].
- b. *John returned* [<sub>AdvP</sub> *immediately*].
- c. *John returned* [<sub>PP</sub> *after an hour*].
- d. *John returned* [<sub>CP</sub> *after an hour had passed*].

Adjuncts which are categorially CPs can be called clausal adjuncts. In many (but not all) languages, among which English and Latin, one can make a distinction between finite (2a) and non-finite clausal adjuncts (2b). The current thesis is concerned with finite adverbial clauses only. Non-finite adverbial clauses, though of interest, will only be touched upon briefly in the present work (cf. section 1.3.1 below and *passim*): general discussion of this type of non-finite adverbials can be found in Stump (1984) and Kortmann (1991, 1994).

- (2) a. *After he had done the dishes, John went to bed.*
- b. *Having done the dishes, John went to bed.*

## 1.2 External syntax of ACs

Issues in the external syntax of ACs essentially relate to the locus where an AC is attached to its superordinate clause. In this dissertation, I will mainly concentrate on the internal syntax of ACs, by which I refer to the internal make-up of the embedded clause, irrespective of the relation between the AC and its superordinate clause. This topic will be discussed in detail in section 2.

### 1.2.1 Functional projections

Clausal adjuncts can express a wide range of interpretations, (see Hengeveld 1998 for detailed discussion). The most common types are temporal (3a), causal (3b), conditional (3c), concessive (3d), result (3e) and purpose clauses (3f).

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<sup>2</sup> There have been proposals to consider CPs a type of PPs (see e.g. Emonds 1985).

- (3) a. *John returned [when the party was already over].*  
 b. *John returned to the party [because he wanted more beer].*  
 c. *John will certainly come to party [if he finds out that Mary will be there as well].*  
 d. *[Although all his friends were there], John didn't show up at the party.*  
 e. *John was so tired [that he decided not to go to the party].*  
 f. *John went to the party [to forget all his sorrows].*

In line with the antisymmetric program, I will assume that each different type of AC, whether it is as 'functional' or as 'circumstantial' adjuncts, is base-generated (or, to use Minimalist terminology 'merged') in the specifier of a dedicated functional projection (cf. Cinque 1999; Schweikert 2005).

### 1.2.2 Clause-initial and clause-final position

In many languages, ACs can appear in clause-initial and in clause-final position<sup>3</sup>:

- (4) a. *[CP<sub>1</sub> [CP<sub>2</sub> If it rains], I will take my umbrella].*  
 b. *[CP<sub>1</sub> I will take my umbrella [CP<sub>2</sub> if it rains]].*

On a syntactic level, the main question is whether the conditional clauses in (4) are base-generated in one and the same position, the different surface order being derived from one basic structure, or whether there is more than one possible merge position. This question carries over to the syntax of circumstantial adjuncts in general, which by and large all tend to be acceptable in both clause-initial and clause-final positions.

Arguments in favour of base-generation in the right periphery (i.e. below the merge site of the lexical verb) can be found in Larson (1988, 2004); The opposite position, which seeks to derive rightward adjunct by a series of leftward (remnant) movement operations, is defended in Culicover & Rochemont (1997), Rosengren (2003), Schweikert (2005) and Cinque (2006) among others. See Hróarsdóttir (2000) for general discussion. Studies specifically devoted to the external syntax of clause-initial and clause-final ACs include Bianchi (1997, 2000) and Lobo (2002a,b). In any event, in an antisymmetric framework (which does not allow for right adjunction,) one is forced to assume that clause-final adjuncts are either base-generated in a position higher than the thematic domain (roughly *vP*, cf. ch. 1, section 2.1), and that their right peripheral surface position is derived via movement or that they are base generated in a right peripheral VP-shell structure Larson (1988) (see ch. 7, section 4.1.2.2 for discussion).

The interpretive difference between clause-initial and clause-final circumstantial adjuncts is probably related to differences in discourse organization and/or information structure, but it is fair to say that not all aspects of these (pragmatically related) shades of interpretation are

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<sup>3</sup> See Diesel 2001 for a detailed typological picture.

perfectly well understood (see Ramsay 1987; Johnston 1994a,b,c; Hasselgård 1997, 2010; Auer 2000; de Hoop & de Swart (2000); Ernst (2002); Shaer 2004; Diesel 2005; Verstraete 2007).

In the following section, I will highlight some important characteristics of Latin ACs. This section is mainly intended for the reader who is not familiar with Latin syntax: since the bulk of the Latin examples in the following chapters will contain at least one AC, some background information might prove to be useful. Moreover, most of the ACs in the examples will be introduced by either *cum*, *ut* or *si*, the three most common adverbial subordinators in Latin, on which I have done a systematic survey of the corpus.

In the following discussion of Latin ACs I do by no means pretend to exhaustivity: more general discussion and detailed description of Latin ACs can be found in Kühner & Stegmann (1966<sup>2</sup>, vol. II.2: 327-486), Hofmann & Szantyr (1965: 572-681) among others.

## 1.3 Latin ACs: some key properties

### 1.3.1 Latin ACs: finite adverbials

Finite Latin ACs are characterized by the following three properties: (i) they have a finite verb displaying person and number agreement (ii) they are always introduced by an overt subordinating conjunction, and (iii) they have a nominative subject<sup>4</sup>.

Their finite character and the obligatory presence of a conjunction sets ACs apart from non-finite adjuncts, like ablative absolutes and conjoined participles, in which the verb appears as a (mostly present or past)<sup>5</sup> participle and which are typically not introduced by an overt conjunction (Kühner & Stegmann 1966<sup>2</sup>: 771-792). On the other hand, both of these participial clauses cover more or less the same range of (only the possibility of a resultative interpretation seems to be lacking).

For example, the ablative absolute in (5), which contains a present participle is most naturally interpreted as a (concessive) conditional (Engl. 'even if'), whereas the participial adjunct in (6), with a past participle in the ablative, is roughly equivalent to a temporal adverbial clause.

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<sup>4</sup> With the exception of a limited number of cases, where the predicate appears as an infinitive and the subject takes accusative case. This pattern is only found in indirect speech: see section 4.4 below for discussion and examples.

<sup>5</sup> Sometimes also future tense participles, usually with a purposive meaning (see for instance (8) below).



- (5) *[Etiam [ te quiescente]] morietur.*  
 even you.ABL keeping.quiet.ABL he.will.die  
 'Even if you don't act, he will die.' (= Sen. Ira 3.43.3)
- (6) *[Pudore calcato], caedibus inquinavit manus, membra liberorum dispersit, nihil uacuum reliquit a scelere.*  
 shame.ABL trodden.upon.ABL slaughters.ABL it.stained.PF hands.ACC limbs.ACC children.GEN  
 he.dispersed.PF nothing.ACC empty.ACC he.left.over.PF from crime.ABL  
 'After shame had been trampled under foot, it [sc. passion Id] stained its hands with blood, it scattered the limbs of children, and left nothing free from crime.'  
 (= Sen. Ira 3.41.3)

Similarly, the so called 'conjoined participle'<sup>6</sup> in (7), which agrees in phi-features with the nominative subject *Lentulus* 'Lentulus', seems to convey a concessive meaning (cf. the particle *tamen* 'still' in the main clause). (8), on the other hand, illustrates the very common phenomenon where a future tense conjoined participle conveys a purposive meaning<sup>7</sup>.

- (7) *Ibi [uehementissime perturbatus] Lentulus tamen et signum et manum suam cognouit.*  
 there very.strongly disturbed.NOM L.NOM PRT and seal.ACC and group.ACC his.ACC  
 recognized.PF  
 'Although he was heavily upset, Lentulus still acknowledged his seal and handwriting.'  
 (= Cic. Cat. 3.12)
- (8) *Senones Galli multitudine ingenti ad Clusium uenerunt [legionem Romanam castraque oppugnaturi].*  
 Senonian.NOM Gauls.NOM crowd.ABL very.large.ABL to Clusium.ACC came.PF legion.ACC  
 Roman.ACC camp.ACC-and besiege.PART.FUT.NOM  
 'The Senonian Gauls came to the area around Clusium with a very large crowd, in order to besiege the Roman legion and camp.' (= Liv. aUc 10.26.7)

### 1.3.2 Monosemous vs. polysemous conjunctions

As mentioned above, finite Latin ACs are always introduced by an overt subordinating conjunction. In some cases, this conjunction has a rich descriptive content, and thus explicitly

<sup>6</sup> i.e. a participial or reduced relative clause (Hazout 2001; Cinque in prep.), which is known among classical philologists as a *participium coniunctum* (Kühner & Stegmann 1966<sup>2</sup>: vol. 1, 771a).

<sup>7</sup> Only in some rare cases, participial adjuncts are modified by what seems to be a C-particle like *postquam* 'after' (i), *quamquam* 'although', *tamquam* 'as, like' (see for instance Lease 1928):

- (i) *[Postquam Scipione eiusque copiis exturbatis] [...], animaduertit mirifica corpora Gallorum [...].*  
 after S.ABL his-and troops.ABL disturbed.ABL he.noticed.PF remarkable.ACC bodies.ACC Gauls.GEN  
 'After Scipio and his troops had been thrown into disorder, he (Caesar Id) noticed the remarkable sight of the dead bodies of the Gauls.' (= Anon. Bel. Afr. 40)

encodes the semantic relation between the AC and the clause it modifies. For instance, the conjunction *postquam* 'after' can only convey that the event described in the embedded clause took place before the event of the main clause.

- (9) [*Postquam in agrum Romanum uentum est*], *obuiam hosti consules eunt*.  
 after to field.ACC Roman.ACC come.NOM there.is towards enemy.DAT consuls.NOM went  
 'After they had entered Roman territory, the consuls went out to meet the enemy.'  
 (= Liv. aUc 2.6.5)

Similarly, as an adverbial subordinator, the conjunction *quia* can only mean 'because' (cf. section 4.4):

- (10) *Venio nunc ad eas aues quas Graeci uocant ἀμφίβιονς, [quia non tantum terrestria sed aquatilia quoque desiderant pabula]*.  
 I.come now to those.ACC birds.ACC which.ACC Greeks.NOM call amphibious.ACC because not  
 only from.earth.ACC but from.water.ACC as.well they.desire food.ACC  
 'I now turn to those birds which the Greeks call 'amphibious', because they not only want food from land, but also food from the water.' (= Col. Agr. 8.13.1)

Other conjunctions seem to be lexically underspecified they do not have sufficient descriptive content to make the relation between the embedded and the superordinate clause explicit. Latin has two adverbial subordinators which are notoriously 'multifunctional', namely *cum* and *ut*. The former can introduce temporal, causal and concessive ACs, whereas the latter can be found in temporal, resultative and purpose ACs. The usual strategy employed in traditional descriptive grammars is to subdivide all *cum*-clauses into a number of categories *cum*'s (*cum temporale*, *cum causale*, *cum historicum*, *cum inuersum*, *cum aduersatium*,...), on the basis of (rather subjective) interpretive distinctions.

In the case of *cum*, such a taxonomy is often quite arbitrary<sup>8</sup>, but for ACs introduced by *ut* it is easier to make a classification on objective grounds. I will attempt to make such a classification in the following paragraphs.

### 1.3.3 Distinguishing different types of ACs introduced by *ut*

ACs introduced by *ut* are in principle ambiguous between a temporal, a result or a purpose interpretation<sup>9</sup>. A first class that can be singled out quite easily are the temporal ACs: they canonically come with a verb in the indicative mood (most often in the perfect tense), as illustrated in (11).

<sup>8</sup> In any event, especially *cum*-clauses in which the verb bears subjunctive morphology are semantically almost as versatile as ablative absolutes and conjoined participles (cf. Luraghi 2001 for a similar idea).

<sup>9</sup> I am leaving out of account comparative *ut*-clauses (with a verb in the indicative), of which it is not immediately clear whether they are ACs, and concessive *ut*-clauses, which are relatively rarely attested.

- (11) *Nouus quoque terror additus Romanis [ ut fusa auxilia  
 new.NOM also terror.NOM added.NOM Romans.DAT when dispersed.ACC reinforcements.ACC  
 sua uiderunt].*  
 their.ACC they.saw.PF  
 'The Romans had a new reason to fear, when they saw that their reinforcement had  
 been dispersed.' (= Liv. aUc 21.56.1)

An example of an *ut*-clause with a verb in the subjunctive is given in (12):

- (12) *Fac, ut quam primum uenias neque in Apuliam tuam  
 make.sure.IMPTV that as first.ADV you.come.SUBJ and.not to Apulia.ACC your.ACC  
 accedas, [ut possimus saluum uenisse gaudere].*  
 you.go.SUBJ that we.can.SUBJ save.ACC come.INF.PF enjoy.INF  
 'Make sure that you come here as quickly as possible and that you do not go to your  
 beloved Apulia, so that we could enjoy your safe return together.'  
 (= Cic. ad Fam. 1.10)

As it stands, the *ut*-clause in (12), in which the inflected verb is present subjunctive, is quite ambiguous a result or a purpose interpretation. By pragmatic inference, the sentence is perhaps more plausibly interpreted as a result clause, but there is no clear indication for this. Such an indication might come from degree expressions (adverbs or adjectives) in the clause superordinate to the *ut*-clause, which form a kind of 'correlative diptych' with the *ut*-clause itself. For example, the adjective *tantus* 'such, so big' and the adverb *ita* 'so' identify the *ut*-clauses in (13-14) as result clauses:

- (13) *In eas cum incidissem in cena augurali apud Lentulum, tanta me  
 in those.ACC when I.had.fallen.SUBJ in meal.ABL augural.ABL at Lentulus.ACC such.NOM me.ACC  
 διάρροια arripuit, [ut hodie primum uideatur coepisse consistere].*  
 diarrhoea.NOM grabbed.PF that today first.ADV it.seems.SUBJ begin.INF.PF stand.still.INF  
 'When I was offered some of those at an augural dinner at Lentulus' place, I was seized  
 by such a violent diarrhoea, that it seems that only today it is starting to stop.'  
 (= Cic. ad Fam. 7.26.2)

- (14) *Marcellus candidatus ita stertebat [ut ego uicinus audirem].*  
 Marcellus.NOM candidate.NOM so snorred.IMPF that I.NOM neighbour.NOM heard.SUBJ  
 'My neighbour Marcellus, the candidate, was snoring so loudly that I could hear him.'  
 (= Cic. ad Att. 4.3.5)

On the other hand, an adverb like *idcirco* 'therefore, for this reason' clearly identifies a corresponding *ut*-clause as a purpose clause.

- (15) *Hoc idcirco scripsi, [ut intelligeres non solum me pro P. Sestio*

this.ACC therefore I.wrote.PF so.that you.understand.SUBJ not only me.ACC for P. Sestius.ABL  
*laborare debere, sed Sestium etiam pro Albinio*.  
 make.effort.INF have.to.INF but Sestius.ACC also for Albinus.ABL  
 'I wrote this so that you would understand that it I have to make an effort for Sestius,  
 and that Sestius should make an effort for Albinus.' (= Cic. ad Fam. 13.8.1)

Second, the presence of a perfect tense subjunctive, which is only allowed in resultative *ut*-clauses and disallowed *ut*-clauses in purpose, can disambiguate the two. For instance, (16) can only be interpreted as a result clause, since the verb *habuerim* is in the perfect tense subjunctive:

- (16) *sed tamen ita distinebar, [ut huic uix tantulae epistulae tempus habuerim [...]]*.  
 but PRT so I.was.kept.busy that this.DAT hardly so.small.DAT letter.DAT time.ACC  
 I.have.had.SUBJ  
 '... but still, I am so busy that I have hardly time for this small letter.'  
 (= Cic. ad Att. 1.14.1)

Moreover, it is known that result clauses sometimes disobey sequence of tense rules (cf. Kühner & Stegmann 1966<sup>2</sup>: vol. 2, 187-189), whereas purpose clauses don't.

A third and final difference between result and purpose clauses introduced by *ut* is the fact that in the two of them, sentential negation is expressed by means of a different lexical item. In result clause, negation is expressed by *non* 'not' (17), whereas purpose clauses are negated by *ne* 'not' (18)<sup>10</sup>.

- (17) *Ac tantus fuit etiam post discessum hostium terror [ut ea nocte [...]]*  
 and so.big.NOM was.PF even after departure.ACC enemies.GEN fear.NOM that that.ABL night.ABL  
*fidem non faceret adesse cum incolumi Caesarem exercitu*.  
 promiss not he.made.SUBJ be.present.INF with unharmed.ABL Caesar.ACC army.ABL  
 'And after their departure, fear for the enemy was so great that that night <Gaius Volusenus Id> could not convince the troops that Caesar was close by, with his army unharmed.' (= Caes. Bel. Gal. 6.41)

- (18) *Vitem bene nodatam deligato recte, [fluxuosa [uti ne sit]], susum uorsum semper ducito*.  
 vine.ACC well knotted.ACC tie.up.IMPTV straight.ADV bending.NOM so.that not it.is.SUBJ  
 upwards towards always lead.IMPTV  
 'Tie a well-knotted vine straight up, so that it does not bend, and make sure that it grows upwards.' (= Cato Agr. 33.1)

<sup>10</sup> Most negative purpose clauses are introduced by the specialized negative conjunction *ne*, which thus has a double function (viz. as a conjunction and a negation).

To conclude, it seems possible to distinguish different types of *ut*-clauses on formal grounds. This might mean that there are a number of different lexical items *ut*, which all impose different selectional requirements on the verb of their clause and on the marker of sentential negation. Such a taxonomy is much harder to make for *cum*-clauses (especially for *cum* + subjunctive, cf. fn. 8). In the latter case, *cum* is perhaps one single lexical entry, which happens to be underspecified.

### 1.3.4 More on verbal mood in embedded clauses

Finally, I will make some remarks about the morphology on verbs in embedded clauses, and especially on subjunctives. The points to be made in this section will mainly be illustrated with Latin examples containing a conditional clauses, introduced by *si*.

First of all, the presence of an indicative means that the proposition expressed by a given is presented without special modal value<sup>11</sup>.

- (19) [*Si tamquam inimicum et hostem insectari propositum est*], *pergite ut*  
 if like foe.ACC and enemy.ACC rail.at.INF planned.NOM it.is go.on.IMPTV like  
*coepistis facere. Sin...*  
 you.began.PL do.INF

'If it is your intention to attack me as a private and public enemy, continue to act as you have begun.' (= Liv. aUc 39.28.13)

- (20) [*Si hoc et uos recusabitis et omnes aliae gentes*], *ego quoque*  
 if this.ACC and you.NOM will.refuse.PL and all.NOM other.NOM people.NOM I.NOM also  
*inter ceteros ero.*  
 among others.ACC will.be

'If you and all the other peoples will refuse this, I too shall be among the others.'  
 (= Liv. aUc 42.41.7)

Latin (unlike for instance present day German) has only one morphological subjunctive paradigm (in present, imperfect, perfect and pluperfect tense, i.e. no future tense subjunctives). However, there are good reasons to assume that what is morphologically one homogeneous class, is actually a disparate set of different phenomena. Restricting the discussion to embedded clauses, one can at first sight distinguish at least three distinct types of subjunctives. The question whether and how these can be unified is of course of interest but will not be dealt with in this thesis. I refer to Sabanéeva (1996) for more complete discussion

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<sup>11</sup> The use of indicative mood in conditional clauses (protases and apodoses alike) is often called *realis*. Note that in (19), the continuation with *sin* 'but if' shows that we are indeed dealing with a 'real' conditional (in the sense of Lycan 2001), i.e. a central rather than a peripheral AC.

of the Latin subjunctive. For general discussion of the formal syntax of subjunctives, see Quer (1998, 2006).

The first type of subjunctive is the one that seems to be selected by a complementizer, or perhaps, in the case of complement clauses, by the predicate of the superordinate clause. For instance, the conjunction *licet* 'although' can only be construed with a verb bearing subjunctive morphology (at least in the Classical era, say 75 BC-150 AD). An example is given in (21).

- (21) [*Licet strenuum metum putes esse*], *uelocior tamen spes est*.  
although strong.ACC fear.ACC you.think.SUBJ be.INF quicker.NOM PRT hope.NOM is  
'Although you might think that fear is strong, still hope is quicker.'  
(= Q. Curt. Hist. 7.4.15)

The adverbial subordinator *cum* behaves in a slightly different way, in that it can occur with a verb in the indicative mood: this combination is always associated with a temporal meaning. On the other hand, when *cum* is followed by a subjunctive, as in (22), it can often be interpreted in a number of different ways, but in each of those the interpretation is in no way directly derived from the subjunctive morphology on the verb. Rather, it seems that the context will enable us to assign specific readings to subjunctival *cum*-clauses (see also fn. 3).

- (22) [*In Cumano [cum essem]*], *uenit ad me [...] noster Hortensius*.  
in Cuman.ABL when I.was.SUBJ came.PF to me.ACC our.NOM Hortensius.NOM  
'When I was in Cumae, our friend Hortensius came to me.' (= Cic. ad Att. 5.2.1)

I would like to conclude that in sentences like (21-22), the subjunctive has no clear semantic import.

The second type of subjunctive does have a clear interpretive import: it conveys modal meaning. It is traditionally called 'irrealis' and typically (but not exclusively) occurs in conditional clauses, in both the protasis (the *if*-clause) and its the apodosis (its superordinate clause)<sup>12</sup>. In classical Latin, the irrealis subjunctive always occurs in the imperfect (23) or pluperfect (24) tense<sup>13</sup>.

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<sup>12</sup> For reasons of space, I am leaving the closely related but much less frequently used *potentialis*-subjunctive out of account (see Kühner & Stegmann 1966<sup>2</sup>: vol. 1, 176-180; vol. 2, 393-398).

<sup>13</sup> In pre-classical Latin, a present subjunctive could also convey the meaning of the present irrealis, and imperfect subjunctive could be used to convey a past irrealis (Wolfgang de Melo p.c.).

- (23) [*Si aut collegam [...] tui similem, L. Aemili, haberes aut tu collegae*  
 if or colleague.ACC you.GEN similar.ACC L.A.VOC you.had.SUBJ or you.NOM colleague.GEN  
*tui esses similis], superuacanea esset oratio mea.*  
 your.GEN were.SUBJ similar.NOM superfluous.NOM would.be.SUBJ speech.NOM my.NOM  
 'If you had a colleague like yourself, Lucius Aemilius, or if you were like your  
 colleague, my speech would be superfluous.' (= Liv. aUc 22.39.1)
- (24) *Pugna raro magis ulla saeua aut utriusque partis pernicie clarior*  
 battle.NOM rarely more any.NOM fierce.NOM or both.GEN party.ACC ruin.ABL more.famous.NOM  
*fuisset, [si extendi eam dies in longum spatium siuisset].*  
 had.been.SUBJ if be.extended.INF her.ACC day.NOM in long.ACC space.ACC had.allowed.SUBJ  
 'There hardly could have been any battle more fierce and more renowned because of  
 the ruin it brought to both parties, if the day had allowed it to last for a longer time.'  
 (= Liv. aUc 21.59.7)

The third and last is the subjunctive of indirect speech, also known as the *coniunctiuus obliquus*, which can be compared to the German 'Konjunktiv I'. The general rule says that the subjunctive of indirect speech appears in all clauses which in direct speech (i) are finite and (ii) distinct from a declarative main clause<sup>14</sup>. Importantly, this subjunctive can appear in embedded clauses introduced by a conjunction that in direct speech always takes an indicative (like *postquam* 'after', ), thus as it were overwriting the indicative morphology.

Examples of a *coniunctiuus obliquus* are given in (25-26), where it appears in a conditional clause. Typically, the clause superordinate to the AC is an *Accusatiuus cum Infinitiuo* ('AcI', roughly an embedded declarative), rather than a finite clause<sup>15</sup>. (25) is part of a longer stretch of indirect discourse, where not every infinitival clause depends on a verb of saying. In (26), the verb of saying, namely *edixerunt* 'they decreed', is expressed overtly.

- (25) [*Si paeniteat*], *tutum receptum ad expertam clementiam fore.*  
 if he.felt.sorry.SUBJ safe.ACC retreat.ACC to known.ACC mercy.ACC will.be.INF  
 'If they showed remorse, a safe return to previously experienced mercy would be their  
 part.' (= Liv. aUc 3.2.5)
- (26) [...] *edixerunt etiam tribuni [auxilio se futuros [si quis in*  
 decreed.PF even tribunes.NOM help.DAT REFL.ACC be.PART.FUT.ACC if anybody.NOM in  
*militare stipendium tributum non contulisset]].*  
 military.ACC pay.ACC tribute.ACC not will.have.contributed.SUBJ  
 'The tribunes even announced that they would support anybody who did not pay his  
 contribution to the military tax.' (= Liv. aUc 4.60.5)

<sup>14</sup> On the representation of indirect speech in Latin, cf. Kühner & Stegmann (1966<sup>2</sup>: vol. 2, 532-549) and Bolkestein (1996c). See also section 4.4 of the present chapter, and ch. 4, section 4.3.2.

<sup>15</sup> Compare ch. 6, section 1.2.2.

To conclude this introductory remarks on Latin ACs, I will say something more about their status as syntactic islands and about the position they can occupy in the clause by which they are embedded.

### **1.3.5 Position with respect to the superordinate clause**

Latin ACs can occupy a number of positions in their superordinate clause. Most frequently, they occupy an (absolute) clause-initial or an (absolute) clause-final position. There is some evidence that Latin ACs can also appear in the middle field, though this pattern is rarer (much like TP-internal DP and PP time adjuncts in English (cf. Haegeman 2002)). I refer to ch. 3, section 3.1, and Appendix I for more details.

### **1.3.6 Islandhood of Latin ACs**

Since ACs are syntactically adjuncts, they qualify as strong islands (in the sense of Cinque 1990; cf. ch. 1, section 3.4.1.1). As will be shown in chapter 4 (section 1.3.2.1), Latin ACs can safely be concluded to be islands for phrasal extraction, as expected.

In the next section, I will turn to the internal syntax of ACs. I will present arguments that suggest that ACs can be analysed as adverbial free relatives, which are derived by means of movement of a clause-typing operator movement targeting the highest projection in their left periphery, namely ForceP.

## **2 The operator derivation of ACs**

### **2.1 ACs as free relatives**

The basic idea underlying the movement account of ACs is that ACs are adjunct free relatives (Geis 1970, 1985; Larson 1987, 1990; Enç 1987; Demirdache & Uribe-Etxebarria 2004; Bhatt & Pancheva 2006; Haegeman 2007, 2009, 2010a,b; Lecarme 2008: 210 and Caponigro & Pearl 2009 among others). Free relatives are relative clauses which do not have an antecedent (on the syntax of free relatives, see Bresnan & Grimshaw 1978; Groos & van Riemsdijk 1981; van Riemsdijk 2006). For instance, the direct object in (27) is a free relative.

(27) *I eat [what you cook].*



The clause *what you cook* can be analysed as a bare CP, with *what* in its specifier, or perhaps a CP with an empty DP-shell, or one might assume that the string *what you cook* is a DP and that *what* has moved to the D position. ACs would then be the adverbial counterpart of the argumental free relative in (27). The idea that ACs are a kind of relative clauses is perhaps intuitively most easy to appreciate in cases where the subordinating conjunction itself bears wh-morphology, as for instance in English *when*-clauses.

The operator movement derivation of English *when*-clauses was first proposed by Geis (1970, 1985), and it was later adopted and worked out by Enç (1987), Larson (1987, 1990), Citko (2000), Demirdache & Uribe-Etxebarria (2004), Lipták (2005), Haegeman (2007, 2009, 2010a,b), Takahashi (2008) and Ürögdi (2009) among others. I will present the main arguments in favour of this analysis, mainly focusing on English *when*-clauses and to a lesser extent Latin *cum*-clauses.

## 2.1.1 Adverbial subordinators with wh-morphology

### 2.1.1.1 *when* as a wh-item

First of all, many adverbial conjunctions display wh-morphology and some of them double up as an interrogative word. This is the case for English *when*. In the examples in (28), *when* is an interrogative marker in a matrix question. (28b) illustrates an example of so called long extraction of *when*: irrespective of the question whether is merged in an initial or a final position (cf. Haegeman 2003a; Shaer 2004; Cinque 2006) there is little doubt that in this example, *when* has undergone movement to the left periphery (this):

- (28) a. *When<sub>i</sub> does the film start t<sub>i</sub>?*  
 b. *When<sub>i</sub> do you think the film starts t<sub>i</sub>?*

Turning to non-interrogative instances of *when*, there are many cases where a temporal *when*-clause is a relative clause which is associated with an antecedent. The latter usually is some temporal expression, like the DP *the time* in (29). In this case as well, it seems reasonable to assume that *when* patterns with *bona fide* relative pronouns, and hence adopt the hypothesis that it has moved from a lower position to the left periphery, but as for now, there is no independent evidence for this.

- (29) *"Maggie Out" was a chant popular during the Miners' Strike, student grant protests, Poll Tax protests and other public demonstrations that fell within [[<sub>DP</sub> the time] [<sub>when<sub>i</sub></sub> Margaret Thatcher was the Prime Minister of the United Kingdom t<sub>i</sub>]].*  
 ([http://en.wikipedia.org/wiki/Maggie\\_Out](http://en.wikipedia.org/wiki/Maggie_Out))

Compare the relative clause in (30), where the same DP *the time* is modified by a restrictive relative clause<sup>16</sup>.

(30) *I don't think I refused a request for money or for equipment at any point [in [[DP the time] that I was prime minister]].*

(Tony Blair at his first evidence session to the Chilcot Inquiry into the Iraq War:  
<http://www.telegraph.co.uk/news/newstopics/politics/tony-blair/8273044/What-Tony-Blair-told-Chilcot-the-first-time.html>)

Presumably, the relative clause in (30) is derived by movement of a phonologically null operator (not indicated). In any event, the resemblance between (30) and (31) is a first indication that *when*-clauses are syntactically relative clauses.

### 2.1.1.2 *cum* as a *wh*-item

The Latin conjunction *cum* behaves in many respects similar to English *when*. Etymologically, *cum* is a relative adverb (Hale 1887; de Vaan 2008: 152), which was spelled as *quom* until the classical era<sup>17</sup>. In many Early Indo-European languages, relative pronouns and adverbial subordinators are derived from the same stem<sup>18</sup>.

The idea that Latin *cum*-clauses are all to be seen as relatives is explicitly put forward in Maurel (1995). In some cases, this analysis is pretty straightforward, for instance when the *cum*-clause appears with a nominal antecedent, on a par with the *when*-clauses discussed above. In (32-33), the DP that could be considered the antecedent of a *cum*-clause is itself a temporal expression. Concomitantly, the verb in the *cum*-clauses bears indicative mood (in traditional terminology, this type of *cum*-clause would be classified as *cum temporale*).

(32) *Secutum [DP illud tempus] est, [cum me ad Pompeium proficisci siue*  
followed.NOM that.NOM time.NOM is when me.ACC to Pompeius.ACC leave.INF either  
*pudor meus coegit siue officium siue fortuna].*  
shame.NOM my.NOM forced.PF or duty.NOM or luck.NOM  
'Then followed the time when either my sense honour or duty, or just coincidence  
brought me to join Pompey.' (= Cic. ad Fam. 11.27.4)

<sup>16</sup> See Cinque (2008) for similar examples from Italian.

<sup>17</sup> The spelling *cum* is actually post-classical (Wolfgang de Melo p.c.). Latin *qu-* and English *wh-* are of course etymologically equivalent (cf. Grimm's law).

<sup>18</sup> Both types of clauses often appear as correlatives; see Hettrich (1988) on Sanskrit and Haudry (1973) on Latin.

- (33) [*PP A. d. VI Idus Maias*], [*cum has dabam litteras*], *ex*  
 before day.ACC 6 Ides.ACC of.May.ACC when this.ACC I.gave.IMPF letter.ACC from  
*Pompeiano proficiscebar [...]*.  
 Pompeian.ABL I.was.leaving.IMPF  
 'On the tenth of May, when I dispatched this letter, I was leaving from Pompei.'  
 (= Cic. ad Att. 5.2.1)

In other cases, the antecedent noun does not have any temporal meaning; rather, it refers to some vaguer notion like 'circumstance' or 'fact'. Such *cum*-clauses usually come with a subjunctive. An example is given in (34), in which the antecedent noun in *causae*, which can here be translated as 'case'.

- (34) *Incidunt [...] saepe [DP causae] [cum repugnare utilitas honestati uideatur]*.  
 happen often cases.NOM when collide.with.INF utility.NOM honesty.DAT seems.SUBJ  
 'There are many cases in which utility seems to clash with honesty.' (= Cic. Off. 3.50)

Now consider the minimally different sentence in (35) (both (34) and (35) in Maurel 1995: 1993, his (10-11)). The same antecedent is here construed with a genuine relative clause, introduced by the *wh*-pronoun *quae* 'which':

- (35) *Incidunt multae<sub>i</sub> saepe [DP t<sub>i</sub> causae] [ quae conturbent animos]*.  
 happen many.NOM often cases.NOM which.NOM disturb.SUBJ minds.ACC  
 'Often many things happen which can disturb our mind.' (= Cic. Off. 3.40)

Finally, observe that in contrast with English *when*, French *quand* and Italian *quando*, Latin *cum* cannot have interrogative force (the interrogative temporal adverb being *quando?* 'when?').

## 2.1.2 Long distance readings

In the previous section, I mainly adduced evidence for the claim that *when/cum*-clauses are relative clauses. In the present section I will present arguments in favour of postulating movement of a relative operator.

### 2.1.2.1 English

Such a relativization movement can be diagnosed in sentences where a temporal operator seems to be extracted from an embedded clause, thus giving rise to so called 'long distance readings'<sup>19</sup>. Consider the example in (36) (Geis 1970, 1985; Larson 1987, 1990):

<sup>19</sup> Recall from ch. 1, section 3.2.4.1 that it is a distinctive property of A'-movement that it can cross sentence boundaries.

(36) *I saw Mary in New York when she said that she would be there.*

Example (36) is ambiguous between two readings. In one reading, Mary was seen in New York on the moment she was saying that she would be there. This is the 'short distance reading' or the 'high construal'. This reading corresponds to the representation in (37a), where it is shown that the *when*-element is extracted from a position in the highest of the two clauses (CP1). The other reading is the one in which Mary was seen when she was in New York, as she had promised she would be: this reading is the 'long distance reading', or the 'low construal'. Syntactically, this reading can only be obtained by extracting the temporal operator from within the *that*-clause (CP2), as in (37b).

- (37) a. I saw Mary in New York [<sub>CP1</sub> when<sub>i</sub> she said [<sub>CP2</sub> that she would be there] t<sub>i</sub>].  
b. I saw Mary in New York [<sub>CP1</sub> when<sub>i</sub> she said [<sub>CP2</sub> that she would be there t<sub>i</sub>]].

A sentence like (38) is not ambiguous any more: the only possible reading is the 'high construal', where the *when*-adverbial modifies the event of making a claim.

(38) *I say Mary in New York when she made the claim that she would be there.*

To all likelihood, this is because the potential lower launching site of the operator is now embedded inside a syntactic island, namely a Complex Noun Phrase (cf. ch. 1, section 3.5.1.1).

- (39) a. I say Mary in New York [when<sub>i</sub> she made [the claim [that she would be there] t<sub>i</sub>].  
b. \* I say Mary in New York [when<sub>i</sub> she made [<sub>DP</sub> the claim [<sub>CP</sub> that she would be there t<sub>i</sub>]].

Given the fact that sensitivity to island constraints counts as a diagnostic for movement (ch. 1), the unacceptability of the 'low construal' can be interpreted as a piece of evidence that *when*-clauses are derived by movement of a relative operator.

Observe now that the postulated long movement of *wh*-adverbials in English has a non-*wh*-counterpart. In a sentence like (40), in which there is a clear mismatch between the present tense of the main clause and the future tense of the embedded clause, the time adverbial *next year* can only be construed as modifying the event of the lower clause (cf. Postal & Ross 1970; Haegeman 2003a):

(40) [*Next year*]<sub>i</sub> the president says [*that the all the economical problems will be solved* t<sub>i</sub>].

### 2.1.2.2 Latin

I have not found any Latin example where a conjunction introducing a temporal AC can be interpreted with a low construal, i.e. in my terms as having been long-moved. The only example that comes close to the long distance *when*-clauses like (41) is one where a relative wh-phrase (sc. *quo die* 'on which day', which could be considered a relative temporal adverb to the antecedent *Kalendas Decembris*, 'the first of December') is long-distance moved out of a complement clause:

- (41) *Et erat spatium dierum fere XXX ante [Kalendas Decembris]<sub>i</sub> [C<sub>PRel</sub>[quo die]<sub>i</sub> and was space.NOM days.GEN almost 30 before first.ACC December.ACC which.ABL day.ABL [C°[TP iste [C<sub>Compl</sub>ut Syracusis Sthenius t<sub>i</sub> adesset] edixerat]].*  
 this.NOM that Syracuse.ABL Sthenius.NOM be.present.SUBJ he.had.decreed  
 'And it was about thirty days before the first of December, the day on which he [sc. Verres Id] had decreed that Sthenius should be at Syracuse.'  
 (= Cic. Ver. act. sec. II.96)

### 2.1.2.3 Analysis

Two syntactic properties of English *when*, viz. the ability to take part in an unbounded dependency (36; 37a) on the one hand and the sensitivity to island constraints on the other (38; 39b) strongly suggest that the element *when* is not base-generated in its left peripheral surface position, but that it has been moved to that position. This has led many researchers (Geis 1970, 1985; Larson 1987, 1990; Haegeman 2007, 2010a,b; Takahashi 2008 among others) to propose that the structure of an adverbial *when*-clause (CP<sub>2</sub>, an adverbial clause embedded by CP<sub>1</sub>) can be abstractly represented as in (42), with 'OP' standing for an abstract temporal operator:

- (42) [CP<sub>1</sub> [CP<sub>2</sub> OP [C°<sub>2</sub> [TP<sub>2</sub> t<sub>OP</sub> ]]] [TP<sub>2</sub> ]]
- 

More specifically, I will assume that this operator is a clause-typer that targets the specifier of the highest projection in the split-CP, namely ForceP (see ch. 3, section 1 for more details on the clause typing function of adverbial subordinators).

- (43)
-

At this point the question naturally arises whether this analysis only holds for *when*-clauses, or whether it can be extended to other ACs as well. In the next section, I will discuss the syntax of conditional clauses.

### 2.1.3 Conditionals

We can start from the observation that for instance in German, future *when*- and *if*-clauses are introduced by the same conjunction, namely *wenn*. According to Bhatt and Pancheva (2006: 657), there is no *a priori* reason why the derivation of a temporal clause like (44) and a conditional like (45) should have a different derivation (examples from Haegeman 2010b: 600, her (14b) and Bhatt and Pancheva 2006: 642, their (7b)).

(44) *Wenn Steffi kommt, fangen wir an zu spielen.*  
when Steffi arrives begin we PRT to play.INF  
'When Steffi arrives, we begin to play.'

(45) *Wenn Steffi gewinnt, wird gefeiert.*  
if Steffi wins it.is celebrated  
'If Steffi wins, there is a celebration.'

Bhatt & Pancheva (2006) propose that all conditionals (not just those introduced by a conjunction with *wh*-morphology) are derived through movement of a 'World operator', an operator that ranges over 'possible worlds'. Haegeman (2010b) argues that the launching of this operator can be identified with Cinque's (1999: 88) MoodP<sub>irrealis</sub>, the same projection where adverbs like *perhaps* are hosted, by which a speaker can indicate that (s)he is not sure about the truth of a given proposition<sup>20</sup>.

An apparent problem for the movement derivation of conditionals is the lack of long distance readings in cases where a *that*-clause is embedded by a conditional:

(46) a. *I will meet Mary in New York if she says that she will be there.*  
b. *I will meet Mary in New York on the condition that she says that she will be there.*  
c. # *I will meet Mary in New York on the condition which she said needed to be fulfilled for her to be there.*

The only possible paraphrase of (46a) is (46b). The complex but not non-sensical paraphrase in (46c) is not a possible reading of (46a). In for instance Citko (2000), this contrast with *when*-clauses was interpreted as evidence that conditionals, in contrast with *when*-clauses, are not derived by means of operator movement.

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<sup>20</sup> Below, in section 3.2.3, an additional argument in favour of the movement analysis of conditionals will be presented, which is related to the non-availability of certain high adverbs in this type of embedded clause.

However, this counterargument loses most its force if one takes into account the fact that adverbs which are generated in MoodP<sub>irrealis</sub> cannot undergo long distance movement like the (circumstantial) time adverbials in (40) above. (47a) can never be interpreted on a par with (47b).

- (47) a. *Perhaps* the president said [that the economical crisis will be solved].  
 b. The president said [that the economical crisis will *perhaps* be solved].

I refer to the literature for more detailed discussion (see Lycan 2001; Bhatt & Pancheva 2006; Arsenijević 2009b; Haegeman 2010b)<sup>21</sup>. In any event, we now have seen arguments for postulating a movement derivation for temporal and conditional ACs. In the following section, I will discuss possible extensions of the movement derivation to other types of clauses, especially other ACs, presupposed complement clauses and a certain type of appositive clauses.

#### 2.1.4 Possible extensions

I will consider three classes of embedded clauses for which a movement derivation seems plausible. I will illustrate all three of them with Latin examples which, interestingly, are all introduced by the same subordinator, namely *quod* (itself a relative wh-word)<sup>22</sup>.

In its first use, *quod* introduces a causal AC, in which it can be translated as 'because'. With or without a 'correlative' adverb like *idcirco* or *propterea* 'therefore'.

- (48) *Nec ex eo amor inter nos natus est sed, [quod erat uetus et magnus], propterea nullum periculum pro me adire dubitavit.*  
 and.not from that.ABL love.NOM between us.ACC born.NOM is but because it.was old.NOM and great.NOM therefore no.ACC danger.ACC for me.ABL go.to.INF he.doubted.PF  
 'This was not the source of our mutual affection: it was because our friendship was longstanding and very strong that he didn't hesitate to take risks for me.'  
 (= Cic. ad Fam. 12.29.1)

- (49) *Quae res [...], merito [...] fieri prohibetur, [quod frigoribus omnis surculus rigore torpet].*  
 which.NOM thing.NOM rightly happen.INF is.avoided because colds.ABL every.NOM twig.NOM frost.ABL is.stiff  
 'This (sc. pruning a vineyard in winter ld) is forbidden with good reason, because in cold weather every branch is stiff with cold.' (= Col. Agr. 4.29.3)

<sup>21</sup> Arsenijević (2009b) argues that conditional clauses can be analysed as the (cor)relative counterpart of embedded interrogatives.

<sup>22</sup> Other ACs that can plausibly be analyzed as relative clauses are those introduced by a conjunction containing the comparative particle *quam* 'than' (itself a wh-item) like *postquam* 'after' and *antequam* 'before'.

So far I have presented some evidence for deriving Latin ACs by operator movement. Recently, a number of scholars has tried to push this line of reasoning even further, by claiming that all kinds of English type *that*-complements and Romance complement clauses of the *que/che*-type are amenable to an analysis in terms of operator movement (Arsenijević 2009a; Kayne 2010b; Manzini 2010). Although these proposals seem very promising, I will not go into them here.

A second class of *quod*-clauses is relevant to this point: such clauses contain a complement selected by factive predicates (esp. so called 'emotive factives') like *gaudeo* 'be happy' (50), *doleo* 'be sad, regret', *paenitet* 'be sorry' (51).

(50) *Sane gaudeo [quod te interpellavi].*  
 surely I.rejoice that you.ACC I.interrupted.PF  
 'I am very happy that I interrupted you.' (= Cic. Leg. 3.1)

(51) *Neque mihi umquam ueniet in mentem Crasso inuidere, neque paenitere,*  
 nor me.DAT ever will.come in mind.ACC Crassus.DAT be.jealous.INF nor regret.INF  
*[quod a me ipse non descuerim].*  
 that from me.ABL self.NOM not I.have.been.unfaithfull.SUBJ  
 'I would never even consider to be jealous of Crassus, nor to regret that I have not been unfaithfull to myself.' (= Cic. ad Att. 2.4.2)

In the literature, it has been observed that the content of such complement clauses is pragmatically 'presupposed' (Kiparsky & Kiparsky 1970). Below, in section 3.2, I will show that this fact is not unimportant, since complement whose content is presupposed have some properties in common with a certain type of ACs (see esp. Haegeman (in prep.) and Haegeman & Ürögdi (2010a,b)).

Related to this type of clauses are subject clauses in which *quod* can be translated as 'the fact that'. An example is given in (52):

(52) *Multum ei detraxit inter eos uiuenti [quod alienae erat ciuitatis].*  
 much.ACC him.DAT took.away.PF among them.ACC living.DAT that foreign.GEN he.was state.GEN  
 'For him living among them, it was a great disadvantage that he came from another city.' (= Cor. Nep. Eum. 1.2)

The third and final kind of *quod*-clauses that I would like to present are so called 'epexegetic' clauses, where a *quod*-clause stands in apposition to a (pro)nominal antecedent (underscored in (53-54)). In this class of sentences, *quod* is best translated as 'namely (the fact) that'. Here as well, the content of the *quod*-clause can be said to be presupposed.



- (53) *Inter inanimatum et animatum hoc maxime interest, quod animatum agit*  
 between inanimate.ACC and animate.ACC this.NOM especially differs that animate.NOM does  
*aliquid.*  
 something.ACC  
 'The main difference between an inanimate thing and an animate being is the fact that  
 animates aim at something.' (= Cic. Acad. 2.37)
- (54) *Num etiam recentium iniuriarum, [quod eo invito iter per*  
 PRT also recent.GEN insults.GEN that him.ABL not.wanting.ABL way.ACC through  
*prouinciam per vim temptassent], [quod Haeduos [...] uexassent], memoriam*  
 province.ACC by force.ACC they.had.tried.SUBJ that Haedui.ACC they.had.insulted memory.ACC  
*deponere posse?*  
 lay.down.INF be.able.INF  
 'Or do we have to forget these recent insults, namely that by force they had tried to  
 make their way through the province against his will, and that they had provoked the  
 Haedui?' (= Caes. Gal. 1.14)

In the following section, I will show that the types of clauses for which a derivation in terms of operator movement is empirically best motivated, viz. ACs and 'presupposed' complement clauses, all share a very specific property: they do not allow for so called Main Clause Phenomena. It will be shown that the operator derivation can successfully account for this property.

### 3 Main Clause Phenomena

#### 3.1 The phenomenon of Main Clause Phenomena

In this section I will introduce the phenomenon of Main Clause Phenomena (henceforth MCP), which are also known as 'Root Transformations'. The basic observation is that a number of syntactic operations, in the early days of generative grammar called 'transformations', are freely available in root<sup>23</sup> clauses but by and large degraded or completely unacceptable in embedded clauses.

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<sup>23</sup> The term 'root' can roughly be equated to the highest node in a phrase marker, or, in more modern terms, the ForceP of an unembedded clause. Ross (1973: 397, his (1)) reinterpreted this asymmetry between 'high' (unembedded) and 'low' (embedded) clauses by formulating the ban on Root Transformations as in (i):

(i) The Penthouse Principle

MCP were first discussed by Emonds (1969, 1976). Emonds's seminal work was refined in Hooper & Thompson (1973), Ross (1973), Green (1976), Iwakura (1976), Emonds (1976, 2004), Haegeman (2003a,b, 2006, 2007, 2009, 2010a,b) and Heycock (2006)<sup>24</sup> among others. An inventory of operations that count as MCP in English can be found in Hooper & (Thompson 1973: 466-468). In the same paper, a detailed discussion is offered of domains that in English tend to resist MCP (Hooper & Thompson 1973: 473-495).

I will only illustrate the main principle with a selected number of MCP and MCP-resisting embedded clauses, with data from English. In (55-58), the a- and b-sentences show that a given operation is perfectly fine in root clauses (with the base structure in the a-examples, and the 'transformed' sentence in the b-sentences). The MCP-resisting clauses illustrated are ACs, like conditionals (55) and *when*-clauses (56), complements to nouns (57), factive complements (58), and sentential subjects (59).

Observe furthermore that the b-sentence of (56-58) also display various types of subject inversion patterns (underscored in (55-59))<sup>25</sup>. (56)-(58) illustrate patterns in which the subject remains in a position to the right in the sentence, and in which it can be preceded by one or more auxiliaries and the lexical verbs: (57) illustrates locative inversion (see Rizzi & Shlonsky 2006), (58) illustrates 'preposing around *be*' (Emonds 1976). (59) illustrates subject auxiliary inversion: as a result of movement of T to C, the subject occurs to the right of the auxiliary.

(55) **VP preposing**

- a. *He will marry her.*
- b. *Mary plans for John to marry her, and [<sub>VP</sub> marry her]<sub>i</sub> he will t<sub>i</sub>.*
- c. *Mary will be happy [if John marries her].*
- d.\* *Mary will be happy [if [<sub>VP</sub> marry her]<sub>i</sub> John does t<sub>i</sub>].*

(56) **Topicalization (argument fronting)**

- a. *John likes this book.*
- b. *[This book]<sub>i</sub> John likes t<sub>i</sub>.*
- c. *[That John likes this book] is true.*
- d. \* *[<sub>CP</sub> That [<sub>DP</sub> this book]<sub>i</sub> John likes t<sub>i</sub>] is true.*

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More goes on upstairs than downstairs.

<sup>24</sup> Heycock (2006) also discusses the phenomenon of embedded verb second in a number Scandinavian and Continental West Germanic languages. Since this topic is quite unrelated to what I will be discussing in this and the following chapters I will not take it into account.

<sup>25</sup> This phenomenon is called 'residual verb second' in Rizzi (1996), and can perhaps be considered to be structurally similar to the Dutch and German verb second constraint, but see Haegeman (2000) for potential counterarguments to such an analysis.

(57) **Locative inversion**

- a. *My landlady walked in.*
- b. *In<sub>i</sub> walked my landlady t<sub>i</sub>.*
- c. *[When my landlady walked in], I was reading the newspaper.*
- d. \* *[When in<sub>i</sub> my landlady walked t<sub>i</sub>], I was reading the newspaper.*

(58) **Preposing around be**

- a. *The Republican Party was even more corrupt.*
- b. *[Even more corrupt]<sub>i</sub> was the Republican Party t<sub>i</sub>.*
- c. *She was surprised that the Republican Party was even more corrupt.*
- d. \* *She was surprised [that [even more corrupt]<sub>i</sub> was the Republican Party t<sub>i</sub>].*

(59) **Negative inversion**

- a. *I have never in my life seen such a crowd.*
- b. *[Never in my life] have I seen such a crowd.*
- c. *I disputed [<sub>DP</sub> the [<sub>NP</sub> claim [that I have never in my life seen such a crowd]]].*
- d. \* *I disputed [<sub>DP</sub> the [<sub>NP</sub> claim [<sub>CP</sub> that [never in my life] have I seen such a crowd]]].*

The Main Clause Phenomena illustrated above all involve displacement of some constituent to the left periphery of the embedded clause. In addition, a number of adverbs base generated in the high TP have been observed to be barred from the same types of syntactic domains (Declerck & Depraetere 1995; Ernst 2009; Haegeman 2010b; Danckaert & Haegeman to appear). This is shown in (60-62), with a number of high modal adverbs from the functional hierarchy from Cinque (1999), viz. adverbs hosted in the epistemic ModP (60), evaluative MoodP (61) and speech act MoodP (62)<sup>26</sup>. The a-sentences show that the same adverbs are allowed in regular *that*-declaratives.

(60) a. *I think that Justine Henin will probably win Wimbledon.*

b. \* *I always take my umbrella [when it is probably raining].*

(61) a. *Well I think that fortunately the GOP has cured them of this insanity.*

(<http://www.topix.com/forum/tv/drama/TQQABO5HIP085UECR/p47>)

b. \* *[If fortunately Justine Henin wins Wimbledon], she will complete a career Grand Slam.*

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<sup>26</sup> Cf. Rutherford (1970). An example like (62b) improves substantially in if the adverb is set apart by using comma-intonation.



However, whereas there are fairly reliable tests to verify whether a given proposition is presupposed or not, it is notoriously hard to define in exact terms<sup>27</sup>, unless this is done negatively by equating 'asserted' to 'non-presupposed'.

Though clearly there is a relation between the presuppositional nature of a clause and the non-availability of MCP, it does not that this is not related to syntax. In the following sections I will briefly discuss two syntactic accounts for the distribution of MCP.

### 3.2.2 'Truncation' account (Haegeman 2003a,b; 2006)

The first line of reasoning that I would like to discuss could be called the 'truncation account'. It proposes that embedded clauses which do not allow for MCP are structurally deficient, in that they are not endowed with the same amount of functional structure as main clauses. More specifically, it could be argued that in such domains the discourse related Topic and Focus phrases are not projected, which directly accounts for the non-availability of A'-movement targeting the left periphery of for instance a central AC.

As a first approximation, under such accounts, and assuming a split-CP as in Rizzi 1997 (cf. ch. 1, section 2.4), the full-fledged left periphery of a main clause would look like (65), whereas the impoverished left periphery of a truncated clause could be represented as in (66):

(65) [<sub>ForceP</sub> [<sub>TopP\*</sub> [<sub>FocP</sub> [<sub>TopP\*</sub> [<sub>FinP</sub> [<sub>TP</sub> ]]]]]]]]

(66) a. [<sub>ForceP</sub> [<sub>FinP</sub> [<sub>TP</sub> ]]]  
 b. [<sub>ForceP</sub> [<sub>ModP</sub> [<sub>TopP</sub> [<sub>FinP</sub> [<sub>TP</sub> ]]]]]]

As shown in Haegeman (2006b, 2007, 2009) the proposal in (65-66) is too simplistic in that, for instance, it does not predict that Romance ACs are compatible with Clitic Left Dislocation<sup>28</sup>, while their English counterparts are not compatible with argument fronting. She proposes a more fine grained account, according to which ACs do have a low TopP, and this is the projection that can host CILD (see (73a) below), but for reasons that are not explored in detail, this projection is unavailable in English. Furthermore she also adopts Rizzi's (2004) proposal that adjuncts in the CP domain may occupy a specialised position ModP (66b), which is available in English (as well as in Romance). See also Bianchi and Frascarelli (2009) who associate specific interpretive values to the layered projections in the left periphery. Haegeman (2006b) relates the availability of TopP and FocP to that of assertive illocutionary force (see also Krifka 2001).

<sup>27</sup> Heycock (2006: 190) on Hooper & Thompson (1973): 'It is a general problem for work in this area that definitions given are vague and independent evidence for the validity of the concepts used often weak.'

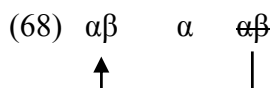
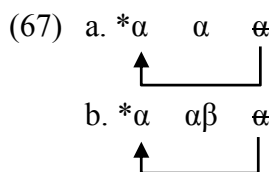
<sup>28</sup> As will be seen in chapter 5 (section 6), Romance CILD cannot readily be qualified as a main clause phenomenon.

In subsequent work, Haegeman has tried to derive the unavailability of topicalization and focalization in certain embedded clauses from independent factors, without postulating 'by brute force' the structural differences between the templates in (65) and (66). This has led to a novel approach, which I will sketch in the next section. To illustrate this alternative analysis I will concentrate exclusively on ACs and leave aside other embedded clauses which do not allow for MCP.

### 3.2.3 Intervention account

The intervention account (Haegeman 2009, 2010a,b) seeks to combine two apparently unrelated properties of ACs, namely (i) their being derived by means of an operator and (ii) their incompatibility with MCP. The basic idea is that MCP somehow activate a projection in the left periphery of the clause (topics and foci, whether they are moved or base generated) in the high TP-area, with which the operator movement that derives the AC is incompatible.

A crucial ingredient of the intervention account is the feature based approach to relativized minimality outlined in the introductory chapter (cf. ch. 1, section 3.4.2). The basic formulae, repeated here for convenience, say that a phrase with a poor feature content cannot cross a constituent with an equal (67a) or richer (67b) feature content. On the other hand, a phrase with a richer feature content can cross a constituent with a poorer feature content (68).



For the clause-typing operator, an identificational focus and a left peripheral topic (see ch. 1, section 3.4.2), I will assume the following feature make-up (partly inspired by den Dikken 2003):

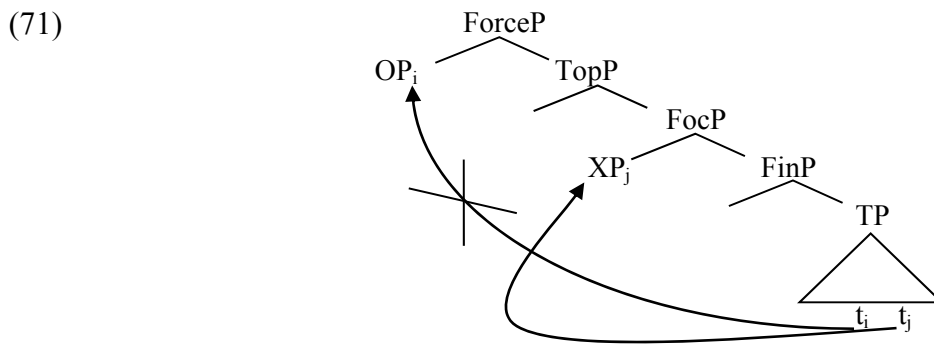
- (69) a.  $OP_{AC} \quad [+ Wh]$  = operator that derives AC  
 b.  $XP_{Foc} \quad [+ Wh, + Foc]$  = identificational focus  
 c.  $XP_{Top} \quad [+ Wh, + \delta]$  = topic

Some words of clarification are in order. I intend the Wh-feature to be a movement triggering feature, without specialized content: whatever syntactic object is endowed with it, will be forced to undergo A'-movement. The Foc-feature on the other hand expresses 'emphasis', but is not necessarily associated with the A'-movement triggering wh-feature, as for instance in the English focus-in-situ example in (70b):

- (70) a. *JOHN I don't like.* [+ Wh, + Foc]  
 b. *I don't like JOHN.* [+ Foc]

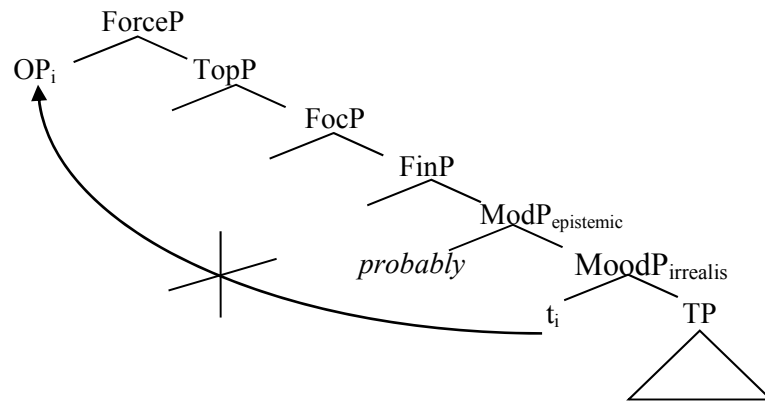
Finally, the  $\delta$ -feature expresses D-linking was introduced in ch. 1 section (cf. Haegeman in prep.): I refer to ch. 4, sections 3.2 and 3.3 for more detailed discussion.

With this in place, we are now in a position to explain the unavailability of phrasal movement targeting a position in the left periphery on an AC. I assume that in the unmarked case the clause-typing operator (i) has a poorer feature composition than both topics and foci (the features of the latter are a superset of the feature of the former) and (ii) that it targets the highest position in the split CP, namely Spec,ForceP, which dominates all topic and focus projections. This means that the presence of a topic or a focus will always block movement of the operator, with ungrammaticality as a result. To account for marked fronting in adverbial clauses I adopt the proposals in Haegeman and Ürögdi (2010a,b) according to which the operator may be featurally enriched under certain conditions.



Other MCP, like speaker-oriented adverbs which are located in the higher regions of the split TP, receive a slightly different but similar treatment. A specific case-study, namely the ban on high adverbs like *fortunately* and *probably* in conditional clauses is worked out in detail in Haegeman (2010b). She argues that the operator is a modal operator that originates in MoodP<sub>irrealis</sub>, a high projection in the functional hierarchy of Cinque (1999). Haegeman shows that this modal operator has the same feature composition as has high modal (epistemic, evidential,...) adverbs, which gives rise to a blocking effect similar to that illustrated in (71). Observe that this proposal, if correct, lends further support to the hypothesis that conditionals are derived through operator movement (see section 2.1.2).

(72)



To conclude, the intervention account seems to offer a more principled explanation for the observed main-embedded asymmetries, and can thus be considered more 'elegant' and endowed with more explanatory power. Moreover, there is an additional advantage to it: sentences like (73), where the direct object *questo libro* 'that book' appears as a CILD (Clitic Left Dislocation) topic, suggest that (at least some) domains which do not allow for MCP do in fact have a left periphery. (73b) shows that they do not tolerate A'-moved foci in their left periphery (examples from Bocci: 2007, his (35)).

- (73) a. *Se l'esame scritto non lo supera, non otterrà il diploma.*  
if the exam written not it he.passes not he.will.obtain the diploma  
'If he doesn't pass the written exam, he will not get the diploma.'
- b. ?? *Se LA PROVA ORALE non supera, non otterrà il diploma!*  
if the exam oral not he.passes not he.will.obtain the diploma  
'If he doesn't pass the oral exam, the will not obtain the diploma.'

## 4 Two types of ACs

I will start by introducing a distinction which is often made in the literature between two major classes of ACs, namely central and peripheral ACs. It will be shown that the validity of this distinction is corroborated by the observation that some ACs do in fact tolerate MCP.

### 4.1 Central vs. peripheral ACs

The view that all ACs do not form one homogeneous class is well established in both the formal and the pragmatic literature (see Haegeman 1984a,b,c; Takami 1988; Sweetser 1990; Wakker 1992; Dancygier & Sweetser 2000, 2005; Declerck & Reed 2001 and Frey 2003



among many others). Although it is perhaps possible to make a more fine-grained typology, I will distinguish only two major types of ACs, which I will call (with Haegeman) 'central' and 'peripheral' ACs.

The contrast between the two types is illustrated by the pairs in (74-76). The English conjunctions *while*, *if* and *because* can all introduce both central and peripheral ACs. In most cases, contextual information makes it clear which is the correct reading.

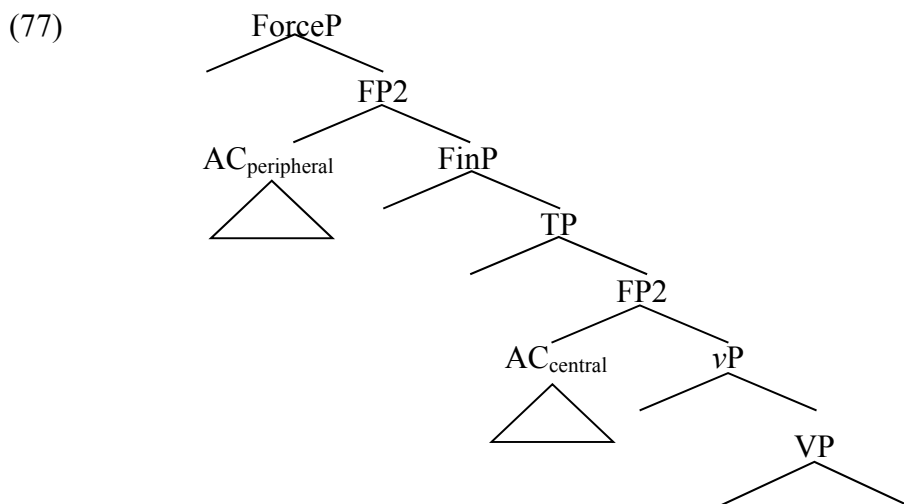
- (74) a. *He always sings [while he is in the shower].*  
b. *John hates shopping, [while his wife just adores it].*

- (75) a. *[If it rains], I will take the bus.*  
b. *[If (as you say) they are not home], there is no point in going there.*

- (76) a. *John goes to the gym every day [because he wants to loose weight].*  
b. *I think that John often goes to the gym, [because he seems to have lost weight].*

## 4.2 External syntax

The two types of ACs have a different external syntax (they are attached at different level to their superordinate clause), and this correlates in a systematic way with a different interpretation. Central ACs can be shown to be attached at a fairly low point to their superordinate clause (see Haegeman 1984a,b,c, 2003, where it is illustrated that they systematically fall inside the scope of matrix clause operators). They can be considered to modify the nuclear event (roughly the predicate and its arguments, say the *vP* phase). Peripheral ACs on the other hand can be said to be related to the speaker and the speech act. A simplified picture illustrating the different external syntax of peripheral and central ACs is given in (77), with FP1 as a cover term for a number of functional projections in the higher functional field, and FP2 standing for a similar series of projections in the lower functional field.



### 4.3 MCP in peripheral ACs

Hooper & Thompson (1973: 492-495) observe that peripheral adverbial clauses do in fact tolerate MCP ((78a) from Hooper & Thompson 1973 and (78b,c) from Haegeman 2010a: 642, her (42c,d)):

- (78) a. *Herbert will certainly be at this party, [because his mother, I talked to her this morning].*  
 b. *His face not many admired, [while [his character]<sub>i</sub> still fewer felt they could praise t<sub>i</sub>].* (Quirk, Greenbaum, Leech & Svartvik 1985: 1378)  
 c. *We don't look to his paintings for common place truths, [though truths<sub>i</sub> they contain t<sub>i</sub> none the less].* (Guardian, G2, 18.02.2003, page 8, col 1)

Furthermore, high 'speaker oriented' adverbs are also allowed in peripheral ACs, as in the examples in (79) ((79a) and (79b) from Haegeman 2006):

- (79) a. *The ferry will be fairly cheap, [while the plane will probably be too expensive].*  
 b. *[If Le Pen will probably win], Jospin must be disappointed.* (from Haegeman 2010b: 616 (cf. Nilsen 2004: 811 fn. 5))  
 c. *It was hard making jokes about my Dad but it worked all right in the end [since fortunately he is a Leeds United fan], so that was easy.*  
 ([http://www.eurogamer.net/forum\\_thread\\_posts.php?thread\\_id=73255&start=60](http://www.eurogamer.net/forum_thread_posts.php?thread_id=73255&start=60))

## 4.4 Peripheral ACs in Latin

The contrast between central and peripheral ACs has also been acknowledged in the literature on Latin (Fugier 1989; Pinkster 1990; Bolkestein 1991 and especially Mellet 1994, 1995). Well described is the contrast between two specialized causal conjunctions, namely *quia* 'because', which introduces central causal ACs, and *quoniam* 'since', which is associated with a peripheral, 'epistemic' interpretation. The pair in (80-81) illustrates this difference:

- (80) *Nam [quia dentibus carent], aut lambunt cibos, aut integros hauriunt.*  
PRT because teeth.ABL they.lack either they.lick up food.ACC or entire.ACC they.swallow  
'Because they [sc. flat fish Id] have no teeth, they either lick up their food or swallow it whole'. (= Col. Agr. 8.17.11)
- (81) [*Quoniam de frumentis abunde praecepimus*], *de leguminibus deinceps disseramus.*  
since about cereals.ABL sufficiently we.instructed.PF about pulses.ABL now we.discuss.SUBJ  
'Since we gave sufficient instructions about cereals, let's now discuss pulses'.  
(= Col. Agr. 2.10.1)

There can be said to be a relation of cause and effect between 'not having teeth' and 'having to lick up your food (instead of chewing it)'. Such a relation is clearly absent in (81).

An interesting way of disambiguating the two types is to look at their behaviour in indirect discourse. The general rule says that a declarative main clauses take the shape of an *Accusatiuus cum Infinitiuo* (i.e. a non-finite clause without a complementizer) if it is converted to indirect speech (embedded by an overt or covert verb of saying). All other clauses (interrogative and imperative main clauses and all embedded clauses) take a subjunctive (sc. the so called *coniunctiuus obliquus*). However, one class of exceptions to this general rule is particularly interesting: some ACs pattern with declarative main clauses rather than with real embedded clauses, in that their subject takes accusative morphology, and the verb appears as an infinitive (cf. Kühner & Stegmann 1966<sup>2</sup>: vol. 1, 137; Pfister 1995)<sup>29</sup>. This is illustrated in concessive clause in (82), introduced by the conjunction *quamquam* 'although'. Concessive clauses are independently known to belong to the peripheral rather than to the central type (see e.g. Haegeman 2004).

- (82) [*Quamquam ne impudicitiam quidem nunc abesse Pallante adultero*], *ne quis ambigat decus pudorem corpus, cuncta regno uiliora habere.*  
although not shamelessness.ACC PRT now be.absent.INF P.ABL lover.ABL so.that.not anybody.NOM doubts.SUBJ dignity.ACC shame.ACC body.ACC everything.ACC reign.ABL cheaper.ACC have.INF

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<sup>29</sup> See also ch. 4, section 4.3.2 for a similar observation on 'non-integrated relative clauses'.

'Nevertheless shamelessness was not in short supply now that she had an affair with Pallas, so that everybody knew that she considered her dignity, her shame, her body, everything less valuable than power.' (= Tac. Ann. 12.65)

Another example is (83), where the infinitive appears in a specific type of clause-final *cum*-clause known as *cum inuersum* (Kühner & Stegmann 1966<sup>2</sup>: vol. 2, 338-342<sup>30</sup>), in which the conjunction is often followed by *interim* or *interea* 'in the mean while' (as in (83)). This type of clause is more or less equivalent to the English adversative *while*-clauses (as in (75b)).

(83) *iacere tam diu inritas actiones quae de suis commodis*  
 lie.INF so long.ADV vain.ACC actions.ACC which.NOM about their.ABL interests.ABL  
*ferrentur, [cum interim de sanguine ac supplicio suo*  
 were.proposed.SUBJ when in.the.mean.while about blood.ABL and torture.ABL their.ABL  
*latam legem confestim exerceri [...]].*  
 proposed.ACC law.ACC immediately be.carried.out.INF  
 '[they complained that] the laws that had been proposed for their benefit were neglected too long, whereas the one concerning their punishment and torture had was immediately put to practice.' (= Liv. aUc 4.51.4)

In the final section of this chapter, I will work out in some detail another case study that illustrates the difference between central and peripheral ACs in Latin, and more specifically a difference with respect to the licensing of MCP. I will conclude that that the intervention account sketched in section 3.2.3 can successfully explain the observed distributional pattern.

## 5 The distribution of the particle *quidem* in ACs

The status of discourse particles as MCP has received some attention in recent years (see esp. Coniglio 2007, to appear). It appears that some German or Italian discourse particles have the same syntactic distribution as embedded topics, foci and high adverbs. In this section I will look at the Latin particle *quidem*<sup>31</sup>, which will be analysed as a marker of emphatic positive

<sup>30</sup> Another example is Liv. aUc 6.27.6. Note in passing that the term *cum inuersum* ('inverted cum') was coined because it is the *cum*-clause rather than the main clause that contains the main action: the event in the subordinate clause is so to speak 'foregrounded'.

<sup>31</sup> It is not easy to translate this particle in English; Oxford Latin Dictionary (Glare 1968), s.v. *quidem*, gives a.o. the following translations: 'certainly', 'indeed', 'assuredly', 'at all events', 'admittedly', 'and what is more', 'even'.

polarity, at least in some of its uses. I will conclude that *quidem* does indeed qualify as an MCP.

## 5.1 *quidem* as weak pronoun

The etymology of *quidem* is quite obscure: it apparently consists of an indefinite *qu-* (= wh-) stem and an adverbial suffix, but no transparent meaning arises from this combination. de Vaan (2008: 166) describes the suffix *-dem* (originally *-em*) as a marker of emphasis or focus, and Ernout & Meillet (1967<sup>4</sup>:556) derive *quidem* from < \**quid-em* or < \**que-dem*.

Along the lines of the classification of pronouns and adverbs developed by Cardinaletti & Starke (1999a) I will assume that *quidem* is part of a tripartite system consisting of strong - weak and clitic elements. These authors develop a crosscategorical typology of structural deficiency: phrases with full functional structure are 'strong', whereas phrases with reduced functional structure are characterized as 'weak'. Finally, clitics are analyzed as defective heads. Cardinaletti & Starke concentrate mainly on pronouns, but they themselves show that their analysis can be extended to adverbs<sup>32</sup>. I refer to the original paper as well as to Cardinaletti & Starke (1999b) for extensive discussion.

The full paradigm to which *quidem* belongs consists of the strong element *equidem*, the weak adverb *quidem* and the clitic *-quidem*. Their main properties are summarized in Table 1 in (84).

(84)

| <b>strong: <i>equidem</i></b>                                                            | <b>weak: <i>quidem</i></b>                                                                                                         | <b>clitic: <i>-quidem</i></b>                                                                        |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| - can occur in sentence-initial position (85), which shows its phonological independence | - barred from sentence-initial position; placement is partly phonologically determined (86)<br>- not a second position clitic (87) | - enclisis with prosodic restructuring ( <i>Kürzung durch Tonanschluss</i> <sup>33</sup> , cf. (88)) |

Table 1: *quidem* as a weak adverb, part of a tripartite system consisting of *equidem*, *quidem* and *-quidem*.

- (85) *Equidem nec quid taceam nec quatenus proloquar inuenio.*  
 PRT and.not what.ACC I.be.silent.SUBJ nor to.what.extent speak.out.SUBJ I.find  
 'I don't know what I should conceal or to what extent I should speak openly.'  
 (= Liv. aUc. 39.15.4)

<sup>32</sup> See esp. Cardinaletti & Starke (1999: 207-211) and Cardinaletti (to appear) on adverbs. In the last paper, (German and Italian) discourse particles are analyzed as clitic adverbs.

<sup>33</sup> see Questa (2007: 154-161) for detailed discussion.

(86) *Diligentiam quidem nostram aut <...> fortunam cur praeteream?*  
 diligence.ACC PRT our.ACC or fortune.ACC why pass.over.SUBJ  
 'As for my diligence of fortune, why would I pass over them?' (= Caes. Bel. Civ. II.32)

(87) *Mala crux east quidem.*  
 bad.NOM cross.NOM she.is PRT  
 'She's a plague, that's for sure!' (= Plaut. Cas. 416)

As indicated in the table above, there is metrical evidence that *quidem* can in some contexts cliticize to a phonological host. This can be diagnosed when it induces shortening of the final vowel of this host (88).

(88) a. *quandō quīdēm => quandōquīdēm*  
 b. *sī quīdēm => sīquīdēm*  
 c. *tū quīdēm => tūquīdēm*

## 5.2 Syntactic distribution of *quidem*

In order to characterize the status of *quidem* as an MCP, I will look at its distribution in ACs. The prediction is that if *quidem* is patterns with other MCP, it will only be attested in peripheral ACs.

### 5.2.1 ACs introduced by monosemous conjunctions

By comparing ACs of which it is clear whether they belong to the 'central' or to the 'peripheral' type, by virtue of the fact that they are introduced by a subordinating element that has only one meaning. In a corpus of Latin prose texts<sup>34</sup>, I have looked at occurrences of *quidem* in clauses with conjunctions that can only introduce central ACs, namely *quia* 'because', *postquam* 'after' and *antequam* 'before'. Next, I have contrasted these clauses with ACs which are unambiguously peripheral, by virtue of the fact that they are introduced by conjunctions as *quoniam* '(epistemic) because', *quando* '(epistemic) since' and *quamquam* 'although'.

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<sup>34</sup> I have only included tokens in which the subordinating conjunction and *quidem* are string adjacent or separated by a second position clitic. For this search, I have used the following sample corpus (1.560.941 words in total): Cato, *De agricultura*; Varro, *Res rustica*; Columella, *Res rustica*; Hyginus, *Astronomia*; Livius, *Ab urbe condita*; Velleius Paterculus, *Historiae*; Tacitus, *Annales* and *Historiae*; Anonymus, *Bellum Africanum*; Anonymus, *Bellum Hispaniense*; Anonymus, *Bellum Alexandrinum*; Plinius minor, *Epistulae & Panegyricus*; Fronto, *Epistulae*; Cicero, *Epistulae ad Atticum*, *Epistulae ad familiares*, *In Catilinam* and *In Verrem*; Apuleius, *Florida* and *Magia*; Tertullianus, *Apologeticum* and *Praescriptio haereticorum*; Caesar, *De bello civili* and *De bello Gallico I-VII*; Hirtius, *De bello Gallico VIII*; Sallustius, *De coniuratione Catilinae* and *De bello Iugurthino*.

As shown in Table 2 in (89), it appears that *quidem* is a good means to distinguish between central and peripheral ACs. It is never attested in central ACs, and 36 times in peripheral ACs.

(89)

| Central ACs            |          | Peripheral ACs         |          |
|------------------------|----------|------------------------|----------|
|                        | #        |                        | #        |
| <i>quia quidem</i>     | 0 (1698) | <i>quoniam quidem</i>  | 8 (705)  |
| <i>postquam quidem</i> | 0 (766)  | <i>quando quidem</i>   | 18 (268) |
| <i>antequam quidem</i> | 0 (165)  | <i>quamquam quidem</i> | 10 (651) |

Table 2: Distribution of *quidem* in ACs with monosemous conjunction  
Between brackets: total number of occurrences of the conjunction.

### 5.2.2 ACs introduced by polysemous conjunctions

As a second test, I have looked at occurrences of *quidem* in ACs introduced by *cum*, *si* and *ut*. All of these conjunctions can introduce both peripheral and central ACs. It turns out that especially the combination '*si* + *quidem*' is very frequently attested:

(90)

|            | Tot. # occurrences | # with <i>quidem</i> |
|------------|--------------------|----------------------|
| <i>cum</i> | 9035               | 19                   |
| <i>si</i>  | 8216               | 91                   |
| <i>ut</i>  | 8848               | 21                   |

Table 3: Distribution of *quidem* in ACs introduced by a polysemous conjunction

Since one has to rely mainly on pragmatic inference to characterize *cum*, *si* and *ut*-clauses as central or peripheral, it could be said that examples of *quidem* do not show us too much about the difference between the two types of ACs. Still, in most of the cases, it seems sufficiently clear that ACs with *quidem* are of the peripheral kind. I give a number of examples.

In (91), the *cum*-clause is best interpreted as having a concessive meaning. (92) is an example of a peripheral 'echoic' conditional clause ('if it is indeed the case that'). Finally, the *ut*-clause in (93) is a result clause. Result clauses have been claimed to be more liberal in allowing MCP than purpose clauses (Haegeman 2004: 62).

- (91) *De Vatinio autem, primum reditus intercesserat in gratiam per Pompeium [...],*  
 about V.ABL PRT at.first return.NOM had.happened to friendship.ACC by P.ACC  
*[cum quidem ego eius petitionem grauissimis in senatu sententiis*  
 although PRT I.NOM his candidature.ACC heaviest.ABL in senate.ABL speeches.ABL  
*oppugnassem].*  
 had.opposed.to.SUBJ  
 'To take Vatinius then, Pompey originally arranged a reconciliation between us immediately after his election to the Praetorship, although I had made some very strong speeches in the Senate against his candidature.' (= Cic. ad Fam. 1.9.19)
- (92) *Bono praesidio munitur existimatio tua, [si quidem in Aproni*  
 good.ABL protection.ABL is.guarded reputation.NOM your.NOM if PRT in Apronius.GEN  
*constituitur diligentia atque auctoritate.*  
 is.put care.ABL and influence.ABL  
 'Your reputation is well protected, if indeed it depends on Apronius' care and influence'.  
 (= Cic. Ver. act. sec. 3.154)
- (93) *Epicurus uero ea dicit, [ut mihi quidem risus captare*  
 Epicurus.NOM PRT these.ACC says so.that me.DAT PRT laughs.ACC grasp.INF  
*uideatur].*  
 it.seems.SUBJ.PR  
 'As for Epicurus, he speaks in a way that makes him seem to me to be provoking laughter.' (= Cic. Tusc. 2.17)

I would like to conclude that *quidem* shows the same distribution as MCP. In the upcoming sections, I will concentrate on the interpretation of *quidem* and to locate in the functional spine of the clause. Subsequently, I will proceed to explain *quidem*'s status as an MCP in terms of the intervention account sketched in section 3.2.3.

### 5.3 On the interpretation of *quidem*

Older philological studies of *quidem* have mainly concentrated on its (lexical) semantics (see Dombart 1869; Grossmann 1880; Ludewig 1891; Solodow 1978). The usual strategy is to make a taxonomy of different types of *quidem* and to attribute to each type a (slightly) different meaning. A distinction has been proposed between the 'contrastive' (see esp. Solodow 1978), 'concessive', 'explanatory' and 'emphasizing' uses of *quidem*.

A more unified account is developed in Kroon (2005, 2009a). She argues that *quidem* is a discourse marker which characterizes its host constituent as a separate discourse unit (namely a 'discourse move'). Kroon (2005: 577):



... *quidem* is used with a text unit which, from a communicative point of view, constitutes an autonomous discourse act, while from a grammatical perspective it is integrated in the semantico-syntactic structure of a preceding unit.

Kroon's proposal certainly has an intuitive appeal, since *quidem* is often found in nominal appositions (94) and parentheticals (95)<sup>35</sup>.

- (94) *Quin ad hunc, Philaenium, adgredimur, uirum **quidem** pol optimum et non similem furis huius?*  
 why.not to that.ACC Philaenium.VOC we.go man.ACC PRT PRT best.ACC and not similar.to thief.GEN that.GEN  
 'Why don't we go up to him, Philaenium? He's an excellent fellow, nothing like that thief over there.' (= Plaut. As. 680-681)

- (95) *Omnino, ut mihi **quidem** uidetur, studiorum omnium satietas uitae facit satietatem.*  
 in.general as me.DAT PRT seems passions.GEN all.GEN disgust.NOM life.GEN causes disgust.ACC  
 'In general, at least to my opinion, a disgust of all passions induces a disgust of life itself.' (= Cic. Sen. 20.76)

However, *quidem* is very frequently found in regular main clauses, (see for instance the declarative main clause in (87) or the rhetorical question in (86)) which, 'from a grammatical perspective', are not all syntactically embedded. If it is indeed the case that ,

I would therefore like to develop an alternative account, which I think is valid for at least a subset of all the cases where *quidem* can be used, namely those where it has sentential scope<sup>36</sup>. My thesis is that *quidem* is a marker of emphatic positive polarity.

<sup>35</sup> On the status of parentheticals and appositions as a separate assertion (i.e. with independent illocutionary force), see Potts (2002, 2005).

<sup>36</sup> There are reasons to assume that *quidem* can also occur in the left periphery of DPs (i) and PPs (ii):

- (i) *Ubi pus ferri desiit, transeundum [PP ad [DP [AP faciles **quidem** sed tamen ualidiores et frigidus] cibos][...].*  
 when pus.NOM run.INF stopped.PF proceeded.GER.NOM to easy.ACC PRT but still fairly.strong.ACC and cold.ACC foods.ACC  
 'When pus ceases to be discharged, one should start offering light yet nutritious and cold dishes.'  
 (= Cels. Med. 3.27.4B)
- (ii) *[...] illa ratiocinatio necessaria est, [cur [PP in planis **quidem** speculis] ferme pares optutus et imagines uideantur, [...].*  
 this.NOM reasoning.NOM necessary.NOM is why in flat.ABL PRT mirrors.ABL usually similar.NOM looks.NOM and images.NOM appear.SUBJ  
 '... it is necessary to consider the question as to why in flat mirrors, reflections and images usually appear to be similar [to reality],...!' (= Apu. Mag. 16.2)

## 5.4 *quidem* as a polarity marker

Initial evidence for the polar value of *quidem* comes from the following interesting example from Quintilian. Note that the slightly complicated example is partially but probably correctly restored. In this sentence, of the form ' $\neg$  (+A& $\neg$ B)', which roughly stands for 'it is not the case that I DID do A without doing B', where Latin *quidem* is translated with an English the emphatic *do*-auxiliary (which itself is not an MCP).

- (96) *Non enim [[dixi **quidem** <haec>], sed [non <scripsi>]], nec [[scripsi **quidem**] sed [non> not PRT I.said.PF PRT these.ACC but not I.wrote.PF nor I.wrote.PF PRT but not *obii legationem*]], <nec [[*obii **quidem** legationem*],> sed [non *persuasi Thebanis*]].*

Thebans.DAT

lit.: 'It is not the case that I *did* speak but that I did not submit a proposal, and it is not the case that I *did* submit a proposal but that I did not accept the duties of an ambassador, and it is not the case that I *did* accept the duties of an ambassador but that I did not persuade the Thebans.' (= Quint. I.O. 9.3.55)

In the following sections, I will work out a case study of one very specific syntactic environment in which *quidem* can be found, and which I believe to be revealing about the nature of this particle.

### 5.4.1 'Stripping' or Bare Argument Ellipsis

The phenomenon that I am interested in is illustrated in English (97) and Dutch (98):

- (97) *Abby speaks passable Dutch, (but) **not** Ben.*

- (98) a. *Het is Jan die de wedstrijd heeft gewonnen, (en) **niet** Karel.*

It is Jan who the match has won (and) not Karel  
'It is Jan who won the competition, (and) not Karel.'

- b. *Jan heeft de wedstrijd gewonnen, maar **niet** zonder moeite.*

Jan has the match won but not without effort  
'Jan won the match, but not without an effort.'

In the literature on ellipsis, this pattern is most often referred to as 'stripping' (alternatively 'Bare Argument Ellipsis' (Reinhart 1991), 'Contrastive Remnant Ellipsis' (Winkler 2005):

---

I will only be concerned with those cases where *quidem* can be considered a propositional operator (in the sense of Agouraki 1999). For the appearance of discourse particles in the nominal domain see also Haegeman (2010c).

chapter 3.3), or '(et-)epitaxis' (Rosén 2008, 2009: 413-416). A stripping configuration always consist of a (silent or overt) coordinating conjunction (*and, but,...*) and a single syntactic constituent, which I will call the 'remnant'. Moreover, and important for our purposes, Merchant (2003), López & Winkler (2000) and Winkler (2005) show that a crucial ingredient of stripping is a polarity marker (in boldface in the examples in (97-98)).

#### 5.4.2 *quidem* in stripping contexts

The Latin particle is also found in the context of stripping (99-102). As indicated, the remnant (bracketed) can be of various categories.

(99) *Quamobrem, mi Quinte, conscende nobiscum, et **quidem** [PP ad puppim].*  
 For.which.reason, my Quintus.VOC take.ship us.ABL-with and PRT to stern.ACC  
 'For this reason, Quintus, take ship together with us, and stand at the stern.'  
 (= Cic. ad Fam. 12.25.5)

(100) *Diu iam in urbe haereo et **quidem** [AP attonitus].*  
 a.long.time already in city.ABL I.dwell and PRT astonished.NOM  
 'I've been dwelling in the city for a long time, and I am astonished.' (= Plin. Ep. 1.22.1)

(101) *Litteras tuas uehementer exspecto et **quidem** [AP tales, [quales maxime opto]].*  
 letter.ACC your.ACC eagerly I.expect and PRT such.ACC as.ACC most.ADV I.wish  
 'I eagerly await a letter from you, one such as I most pray for.'  
 (= Cic. ad Fam. 10.22.3)

(102) *Confecerunt me infirmitates meorum, mortes etiam, et **quidem** [DP iuuenum].*  
 finished.off.PL me.ACC illnesses.NOM my.GEN.PL, deaths.NOM also, and PRT youngsters.GEN  
 'I was severely afflicted by the illnesses of my people, deaths even, and even the deaths of young people.' (= Plin. Ep. 8.16.1)

There is evidence that the only crucial ingredient of this phenomenon is the remnant constituent, at least in overt syntax: both *quidem* and the coordinating conjunction need not be spelled out. Consider for instance (103), where a right peripheral constituent appears together with *quidem* but without an overt coordinating conjunction.

(103) *Dabo tibi ex Aristotelis sinu regem Alexandrum, qui Clitum  
 I.will.give you.DAT from Aristotle.GEN circle.ABL king.ACC Alexander.ACC who.NOM Clitus.ACC  
 carissimum sibi et una educatum inter epulas transfodit, manu **quidem** sua.  
 dearest.ACC him.DAT and together raised.ACC during meal.ACC stabbed.PF hand.ABL PRT his.ABL  
 'I will give you as an example king Alexander, a pupil of Aristotle's, who, during a banquet stabbed his good friend Clitus, with whom he grew up together, and he did so  
 with his own hand.' (= Sen. Ira 3.17.1)*

Observe that the presence of *quidem* is not essential in rendering constituent focus in such stripping environments. Rosén (2009: 413) cites a number of examples of stripping which do not contain the particle *quidem*. (104), her (69), is one such example. In this example, the adjunct *immodice* best receives a focal interpretation, which shows that *quidem* is not in itself required for inducing constituent focus in the environments illustrated in (99-103) above.

- (104) *Uror, Iolla, uror, et [AdvP immodice].*  
 I.am.burned Iolla.VOC I.am.burned and excessively  
 'I am scorched, Iolla, scorched beyond measure.' (= Calp. Ecl. 3.8)

Crosslinguistically, it seems to be true that in most cases of stripping, the polarity concerned is negative (as in (97-98)), but in a (somewhat archaic) formal register of Dutch, one can obtain stripping with an element expressing positive polarity, namely the particle *wel* (105)<sup>37</sup>. This last pattern seems very similar to the Latin examples with *quidem*.

- (105) *Justine Henin heeft Kim Clijsters verslagen, en wel met 6/0 6/0.*  
 Justine Henin has Kim Clijsters beaten and PRT with 6/0 6/0  
 'Justine Henin defeated Kim Clijsters, and she did so with a 6/0 6/0 scoreline.'

### 5.4.3 The syntax of polarity focus

Many scholars have - on the basis of rich crosslinguistic empirical evidence - proposed that on top of the TP-internal NegP (ch. 1, section 2.3), a higher Polarity phrase should be postulated (Culicover 1991; Ouhalla 1993; Haegeman 1998, 2000a; Foreman 1999; Cormack & Smith 2000, 2002; Holmberg 2001, 2007; É. Kiss 2002: 130-136; Drubig 2003; Han & Romero 2004a,b; Repp 2006, 2009: ch.4; Hernanz 2007, 2011; Bhatt & Munshi 2009). I will call this projection PolP, and I will propose that it is located between the highest (recursive) TopP and FocP, i.e. in the left periphery of the clause:

- (106) [ForceP [TopP\* [PolP [FocP [TopP\* [FinP [TP ]]]]]]]

One of the typical properties of the polarity elements hosted in PolP is the fact that they obligatorily scope over (high) modal auxiliaries<sup>38</sup>, in contrast to low negation (see Cormack & Smith 1999, 2002 for an overview and references to older work). The example is from Cormack & Smith (2002: 146, their (36)):

<sup>37</sup> Julien (2002: 92 n.2) notes the following about affirmative polarity markers: 'Concerning polarity heads in particular it is interesting to note that whereas the languages of Europe generally lack the affirmative counterpart of the negation, Dutch has developed the affirmative marker *wel*'.

<sup>38</sup> English high modal auxiliaries occur in overt syntax in front of PolP, low auxiliaries appear after it.

(107) A to B: *Shouldn't you be at school?*

Interpretation: Is it not the case that you (B) should be at school?

Scope of the operators:  $Q > \text{Pol}_{[\text{NEG}]} > \text{Mod}$

In other languages, like Classical Arabic, the two negations are lexically differentiated (Ouhalla 1993). Without going into further details, I will take it for granted that postulating a PolP as in (106) is well motivated, given the rich cross-linguistic empirical evidence.

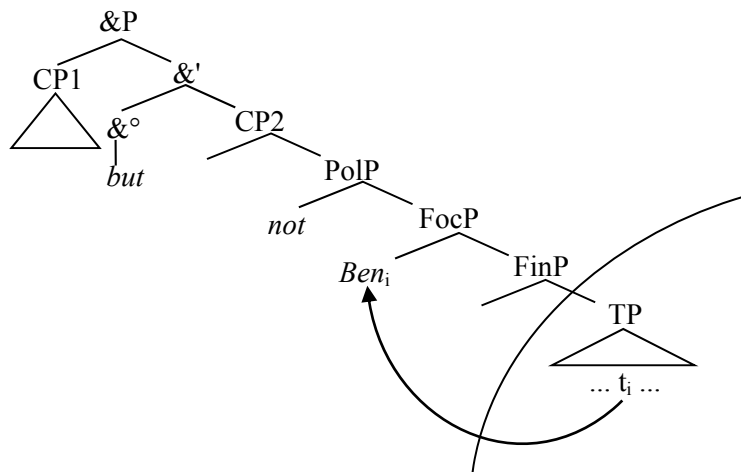
#### 5.4.4 Stripping as TP-ellipsis

Following Merchant (2001) and Aelbrecht (2010), I will assume that ellipsis is phonological deletion of syntactically full-fledged structure, which takes place on the PF-branch of the syntactic computation, i.e. after spell-out (cf. ch. 1, section 1.3)<sup>39</sup>. Here I will adopt an analysis of stripping along these lines, although it should be said that stripping is neither the best studied nor the best understood type of ellipsis.

Merchant (2003) proposes an analysis for the phenomenon of stripping in terms of TP-ellipsis. This process can be decomposed in two steps. The first is movement of a constituent to a left peripheral position (FocP), which leaves behind a TP with a gap. Subsequently, this TP is phonologically elided. The focalized remnant constituent survives this deletion operation, since it was moved to a position higher than the ellipsis site. For instance, the English example in (97), could be analysed as in (109-110) (adapted from Merchant 2003, his (25-26)).

(109) [<sub>&P</sub> [<sub>CP2</sub> *Abby speaks passable Dutch*], [<sub>&°</sub> (*but*) [<sub>CP2</sub> [<sub>PolP</sub> *not* [<sub>FocP</sub> *Ben<sub>i</sub>* [<sub>TP</sub> ... *t<sub>i</sub>* ... ]]]]]].

(110)



<sup>39</sup> The main argument for this line of reasoning is the observation that extraction out of an ellipsis site results in ungrammaticality if the latter contains a syntactic island.

Evidence for the hypothesis that in stripping contexts the focused remnant has indeed undergone focus movement comes from the fact that focus fronting in such contexts is island sensitive (the example is from Drubig (1994), cited in Repp (2009: 163)):

- (111) *He didn't interrogate* [<sub>DP</sub> [<sub>DP</sub> *the man*]<sub>CP</sub> *who invited* [<sub>DP</sub> [<sub>DP</sub> *the ex-convict*]<sub>PP</sub> *with the RED shirt*]]], *but*  
 a.\* {*the BLUE shirt / with the BLUE shirt / the ex-convict with the BLUE shirt*}.  
 b. [<sub>DP</sub> [<sub>DP</sub> *the man*]<sub>CP</sub> *who invited* [<sub>DP</sub> [<sub>DP</sub> *the ex-convict*]<sub>PP</sub> *with the BLUE shirt*]]].

The focused constituent *the blue shirt/with the blue shirt/the ex convict with the blue shirt* is contained within the relativized DP *the man who invited the ex-convict with the BLUE shirt*. Such relativised DPs (or 'Complex NPs', cf. ch. 1, section 3.5.1.1) constitute islands for movement:

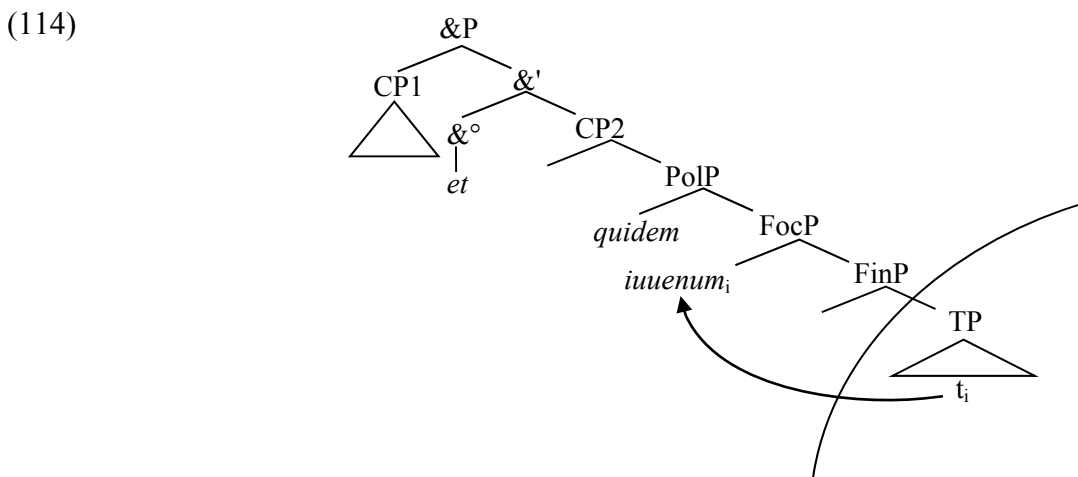
- (112) a. *I saw* [<sub>DP</sub> [<sub>DP</sub> *the author*]<sub>CP</sub> *who wrote 'Syntactic Structures'*].  
 b.\* [<sub>DP</sub> *Which book*]<sub>i</sub> *did you see* [<sub>DP</sub> [<sub>DP</sub> *the author*]<sub>CP</sub> *who wrote t<sub>i</sub>*]?

Hence the focused constituents *the blue shirt/with the blue shirt/the ex convict with the blue shirt* in (111) cannot move out of the complex DP *the man who invited the ex-convict with the BLUE shirt*. Instead, the entire DP island is pied-piped to a left peripheral focus position.

### 5.4.5 Stripping in Latin

Returning to the Latin data, I would like to proposed that the data presented in section 5.4.2 are amenable to the same analysis as the English stripping data. An example like (113), repeated here for convenience, could thus be represented as in (114).

- (113) *Confecerunt me infirmitates meorum, mortes etiam, et quidem* [<sub>DP</sub> *iuuenum*].  
 finished.off.PL me.ACC illnesses.NOM my.GEN.PL, deaths.NOM also, and PRT youngsters.GEN  
 'I was severely afflicted by the illnesses of my people, deaths even, and even the deaths of young people.' (= Pl. Ep. 8.16.1)

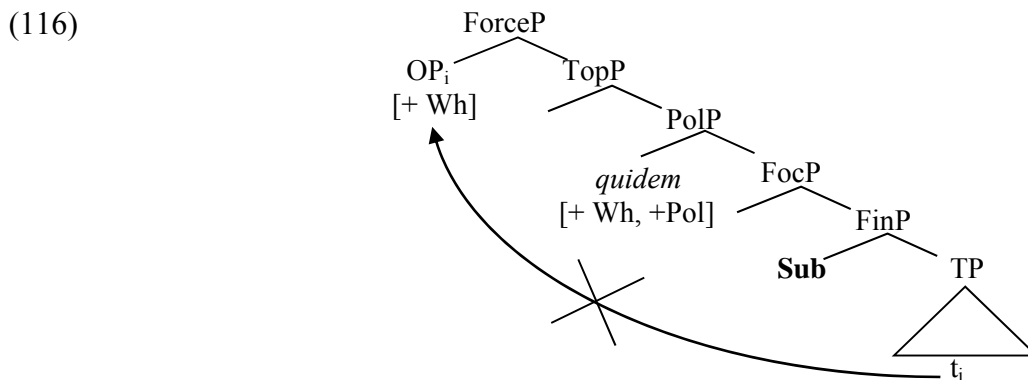


## 5.5 Accounting for the MCP-like distribution of *quidem*

I will now return to the distribution of *quidem* in ACs. In section 3.5.2 above, it was shown that *quidem* is only attested in peripheral ACs and excluded from central ACs, thus suggesting that *quidem* patterns with MCP. Given the characterization of *quidem* as a marker of polarity focus, I would like to propose that both *quidem* and the operator that derives central ACs belong to the class of quantificational/operator-like elements (indicated as [Wh] in the tree in (116)). I assume the following features to be associated with the relevant elements involved:

- (115) a.  $OP_{AC}$  [+ Wh] = operator that derives AC  
 b. *quidem* [+ Wh, + Pol] = emphatic polarity

In other words, their feature composition is such that they are potential interveners for one another (adopting a feature-based approach to Relativized Minimality, cf. Starke 2001; Rizzi 2004; Endo 2007). This gives rise to the configuration represented in (116), where ungrammaticality arises because the clause-typing operator cannot cross the emphatic polarity marker in Spec,PolP (i.c. *quidem*).



This analysis can account for the distributional pattern that was shown in section 3.5.2 above: it correctly predicts that *quidem* is not tolerated in the left periphery of central ACs, which are assumed to be derived by means of operator movement. On the other hand, they are correctly predicted to be grammatical in clauses for which such an operator derivation cannot be postulated.

## 6 Conclusion

In this chapter I have offered a general introduction to the phenomenon of adverbial clauses (ACs) and to Latin ACs in particular, focusing mainly on their internal syntax. I have presented the arguments in favour of a movement derivation for certain ACs. It was shown that there is evidence to postulate a correlation between movement of a clause-typing operator and the unavailability of MCP in a given clause. Furthermore, I have discussed a class of ACs which do allow for MCP: these clauses were identified as 'peripheral' ACs (as opposed to 'central' ACs) The contrast between these two classes of ACs was illustrated with a case study on the Latin particle *quidem*.

In the next chapter, I will look at word order in ACs, and more specifically to cases where one or more constituents are displaced to the left periphery of the clause.



## Chapter 3.

### The left periphery of embedded clauses

This chapter mainly serves as an introduction for chapter 4 to 7. As will become clear presently the empirical focus of the thesis is A'-movement in embedded clauses, and more specifically a specific pattern in which a fronted constituent ends up to the left of a conjunction that introduces an embedded clause. This pattern is at first sight surprising in the light of Rizzi's (1997) articulated CP, in which the topmost head in the hierarchy hosts the conjunction, but as we will see presently the pattern is attested in a range of languages, some of which will be illustrated in section 1. The basic pattern of the phenomenon under discussion is schematically represented in (1), with fronting in a clause-initial embedded clause represented in (1a), and fronting in a clause-final embedded clause in (1b).

- (1) a. [CP<sub>1</sub> [CP<sub>2</sub> XP<sub>i</sub> [ **Sub** [TP<sub>2</sub> t<sub>i</sub> ]]] [TP<sub>1</sub> ]]  
b. [CP<sub>1</sub> [TP<sub>1</sub> [CP<sub>2</sub> XP<sub>i</sub> [ **Sub** [TP<sub>2</sub> t<sub>i</sub> ]]]]]

I will call the phenomenon where one or more constituents surfaces to the left of a subordinating conjunction ('Sub' in (1)) 'Left Edge Fronting', abbreviated as 'LEF'. It is important to note that the name LEF is obviously purely descriptive: it is only meant to refer to the particular linear order sketched in (1). As will be shown later, the position of a clause exhibiting LEF with respect to its superordinate clause will be of great importance.

This chapter is organized as follows. In section 1 I will briefly demonstrate on the basis of some case studies drawn from a number of languages that subordinating conjunctions do not universally occupy the highest projection in an articulated CP. I will continue by discussing the consequences of this observation for the cartography of the left periphery of embedded clauses. In section 2, I will first formulate an explicit hypothesis concerning the template underlying the left periphery of Latin ACs. This will be the starting point for the subsequent

analyses. I will then briefly introduce some basic properties of LEF in Latin. Finally, in section 3 I will give a general overview of the corpus study that I conducted.

# 1 The position of subordinating conjunctions with respect to topics and foci

## 1.1 Subordinators in ForceP

In languages like English and Italian, most instances of embedded A'-movement, target a position below the conjunction that introduces the embedded clause. Thus, in the clause-initial peripheral AC in (2a), the DP *those books* is moved to a position to the left of the subject *John*, but it remains to the right of the conjunction *if*. In hierarchical terms this means that the conjunction occupies a higher position than the fronted constituent. Similarly, in the declarative complement clause in (3a), *those books* is moved to a position in front of the subject *he*, but to the right of the complementizer *that*. The unacceptability of the b-examples shows that in English, topicalized phrases obligatorily follow subordinating conjunctions:

- (2) a. [<sub>CP</sub> **If** [<sub>TopP</sub> [*those books*]<sub>i</sub> [<sub>TP</sub> *John already has t<sub>i</sub>*]]], *we should buy something else*.<sup>1</sup>  
 b. \* [[*Those books*]<sub>i</sub> [*if John already has t<sub>i</sub>*]], *we should buy something else*.
- (3) a. *John said* [<sub>CP</sub> **that** [<sub>TopP</sub> [*those books*]<sub>i</sub> [<sub>TP</sub> *he had already read t<sub>i</sub>*]]].  
 b. \* *John said* [[*those books*]<sub>i</sub> [*that he had already read t<sub>i</sub>*]].

Similarly, in Italian, the clitic left-dislocated topic follows the declarative complementizer *che*:

- (4) a. *Penso* [<sub>CP</sub> **che**, [<sub>TopP</sub> [*a Gianni*], [<sub>TP</sub> *gli* *dovrei* *parlare*]]].  
 I.think that to Gianni him.CL you.would.have.to talk.INF  
 'I that to Gianni, you should speak.'  
 b. \* *Penso* [[*a Gianni*][**che** *gli dovrei parlare*]].

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<sup>1</sup> Observe that this example illustrates a peripheral adverbial clause in the sense of Haegeman (2003a,b, 2006). Central adverbial clauses in English are incompatible with argument fronting (ch. 2, section 3.1):

(i) \* [*If [this book]<sub>i</sub> you find t<sub>i</sub> in the shop*], *buy it*.

This observation leads Rizzi (1997: 304) to propose that complementizers like *that* and *che* are located in the topmost projection of the split-CP:

at S-structure, *che* occupies the highest position of the C-system, the Force head, preceding the topic string [...].

However, it is certainly not the case that all subordinating conjunctions are the leftmost constituents of the clause, i.e. that in hierarchical terms they occupy the highest head in a split-CP system. In many languages a subordinator may follow fronted material. In the following section, I will show that low subordinators are crosslinguistically well documented in a range of ancient and modern languages. The diagnostic for the low position will always be the possibility for fronted constituents to be located the left of subordinators, or, in other words, the pattern which I called Left Edge Fronting (LEF) above and is schematically illustrated in (1).

## 1.2 Subordinators lower than ForceP

### 1.2.1 Introduction

The general pattern of LEF is schematically represented in (5), with LEF in clause-initial embedded clauses in (5a) and LEF in clause-final embedded clauses in (5b). I've labelled the projection where the subordinating conjunction is located as 'FP', for 'Functional Projection', I return to its nature in section 2.2 below.

- (5) a. [CP<sub>1</sub> [CP<sub>2</sub> [TopP/FocP XP<sub>i</sub> [FP **Sub** [TP<sub>2</sub> t<sub>i</sub> ]]]] [TP<sub>1</sub> ]]  
 b. [CP<sub>1</sub> [TP<sub>1</sub> [CP<sub>2</sub> [TopP/FocP XP<sub>i</sub> [FP **Sub** [TP<sub>2</sub> t<sub>i</sub> ]]]]]]

As pointed out in Fortson (2009: 160-161), the possibility of fronting an XP to a position to the left of a subordinating conjunction appears to be shared by many old IE languages. It is, for instance, attested in Vedic Sanskrit (6)<sup>2</sup>, Old-Avestan (7), Gothic (8) and Ancient Greek (9-10):

- (6) *á ródasī apr̥ṇad á svàr maháj*  
*[jātám [yád enam apáso ádhārayan]]*  
 born.ACC when him.ACC crafty.NOM.PL hold.CS.IMPF.3.PL  
 'He filled both worlds and the great sun, when the craftsmen held him, newly born.'  
 (= RV 3.2.7, from Fortson 2009<sup>2</sup>: 161)

<sup>2</sup> see also RV 4.30.13; 7.5.3; these examples were found in Hettrich (1988: 336-337). Compare the data collected in Hale (1987), who discusses fronting of a single (sub)constituent to the left of interrogative wh-elements.



but requires careful analysis of the full range of data, which is far beyond the scope of the present work<sup>3</sup>.

## 1.2.2 Modern Greek

In this brief discussion of Modern Greek, I will only focus on embedded Clitic Left Dislocation (CILD), although it should be said that this is by no means the only type of A'-movement in Modern Greek that can target an LEF position<sup>4</sup>.

Clitic Left Dislocation can take LEF-shape in complement clauses introduced by *óti* 'that' (declarative complements) and *an* 'if, whether' (indirect questions). However, this is not obligatory: the examples in (11) illustrate that a topicalized phrase can occur both to the left and to the right of *óti*; the same distribution holds for clauses headed by *an* (cf. Roussou 2000).

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<sup>3</sup> The LEF-data are interesting because many varieties of it are also available in (central) ACs: this is not expected in the light of the discussion in chapter 2, where it was said that ACs tend to not allow for A' movement to their left periphery. The examples in (i) show that both in initial and final conditional clauses, foci can appear to the left of the conjunction *an* (Marika Lekakou p.c.):

- (i) a. *Θα είμαι εντυχημένος [[τα ΒΙΒΛΙΑ]<sub>i</sub> [αν μου δώσεις t<sub>i</sub>]].*  
 FUT I.be happy.NOM the.ACC books.ACC if me.GEN you.give  
 'I will be happy if you give me the books.'  
 b. *[[Τα ΒΙΒΛΙΑ]<sub>i</sub> [αν μου δώσεις t<sub>i</sub>]], θα είμαι εντυχημένος.*  
 the.ACC books.ACC if me.GEN you.give FUT I.be happy.NOM  
 'If you give me the books, I will be happy.'

CILD is equally possible in conditional clauses:

- (ii) a. *Θα είμαι εντυχημένος [[τα βιβλία]<sub>i</sub> [αν μου τα δώσεις t<sub>i</sub>]].*  
 FUT I.be happy.NOM the.ACC books.ACC if me.GEN them.ACC you.give  
 'I will be happy if you give me the BOOKS.'  
 b. *[[Τα βιβλία]<sub>i</sub> [αν μου τα δώσεις t<sub>i</sub>]], θα είμαι εντυχημένος.*  
 the.ACC books.ACC if me.GEN them.ACC you.give FUT I.be happy.NOM  
 'If you give me the BOOKS, I will be happy.'

Concerning the embedded foci, it is not immediately whether these are of the identificational (and thus quantificational) type or of the presentational (non-quantificational) type (É. Kiss 1998). I refer to chapter 6, section 2.2.2 for evidence that the latter can be hosted in CP in Modern Greek. The presence of CILD is less unexpected (cf. the Romance data discussed in ch. 2, sections 3.2.2-3 and ch. 5, section 6), although the possibility to have it in clause-final ACs suggests that Greek behaves different than for instance Italian. I leave a closer examination of these interesting data for future research.

<sup>4</sup> For instance, the fronted constituents in (i) are foci (from Tsimpli 1995: 197-198, her (44a-b)).

- (i) a. *Με ρώτησε [[τα ΒΙΒΛΙΑ]<sub>i</sub> [αν επέστρεψα t<sub>i</sub>]].*  
 me.ACC he.asked.AO the.ACC books.ACC whether I.returned.AO  
 'He asked me whether I returned the BOOKS.'  
 b. *Μου είπε [[το ΒΙΒΛΙΟ]<sub>i</sub> [ότι έδωσε t<sub>i</sub>]].*  
 me.GEN he.said.AO the.ACC book.ACC that he.gave.AO  
 'He told me that he gave the BOOK.'

For discussion of other types of LEF without a resumptive clitic in Modern Greek, I refer to Philippaki-Warbuton (1987), Tsimpli (1995), Alexiadou (1997), Roussou (2000) and Kotzoglou & Papangeli (2008).

- (11) a. *Μου* *είπε* *[[το βιβλίο] [ότι το επέστρεψε]]*.  
 me.DAT he.said.AO the.ACC book.ACC that it.ACC he.gave.AO  
 b. *Μου* *είπε* *[ότι [[ το βιβλίο] [ το επέστρεψε]]]*.  
 me.DAT he.said.AO that the.ACC book.ACC it.ACC he.gave.AO  
 'He told me that he returned the book.'

In contrast, a number of other conjunctions show a different behaviour. Topics in clauses introduced by *na* can only precede the conjunction (12), whereas topics in *pou*-clauses can only follow it (13).

- (12) *Ελπίζω [[τα μήλα] [ να (\*τα μήλα) μην τα φάει ο Πέτρος]]*.  
 I.hope the.ACC apples.ACC PRT not them.ACC.CL eats.SUBJ the.NOM Petros.NOM  
 'I hope that Petros will not eat the apples.' (from Roussou 2000: 76, her (15a))

- (13) \* *ένας άνθρωπος [[αυτά τα πράγματα] [που τα ξέρει]]*  
 a.NOM man.NOM these.ACC the.ACC things.ACC REL them.ACC.CL knows  
 int. 'a man who knows these things.' (from Alexiadou 1997: 75, her (65b))

Moreover, in clauses where *pou* and *na* cooccur (as in the relative clause in (14a)), a CILD-topic can intervene between the two particles (14b) (Roussou 2000: 79, her (18a and c)):

- (14) a. *Θέλω ένα σπίτι [που [να έχει μεγάλο κήπο]]*.  
 I.want a.ACC house.ACC REL PRT has.SUBJ big.ACC garden.ACC  
 'I want a house with a big garden.'  
 b. *Θέλουν ένα βοηθό [που [[τα αγγλικά] [να τα μιλάει καλά]]]*.  
 they.want a.ACC help.ACC REL the.ACC English.ACC PRT them.ACC.CL speaks.SUBJ well  
 'They want an assistant who speaks English well.'

All this suggests that the following hierarchy should be assumed:

- (15) *pou* > Top > *ότι/an* > Top > *na*

In the literature, two options have been explored to interpret the sequence in (15), which both share the assumption that *pou* and *ότι* are not generated in the same projection. The first option is to say that there is more than one Topic projection. This is the position taken by Alexiadou (1997), and is fully compatible with Rizzi (1997). In between both TopPs, Alexiadou (1997) postulates a dedicated functional projection where clause-typing elements are hosted (moved (interrogative wh-phrase, 'WhP') or base-generated (declarative or interrogative complementizers like *ότι* and *an*, 'SubordinateTypeP'))<sup>5</sup>. The highest projection

<sup>5</sup> I presume that Alexiadou's 'WhP/Sub.TypeP' is one projection that can have (two) different values, but this is not quite clear in the original text.

of the split-CP ('RelativeP') is the base position of the (invariable) relative complementizer *pou*. This yields the following template (from Alexiadou 1997: 76, her (67) and 79, her (77)):

(16) [<sub>RelativeP(CP)</sub> *pou* [<sub>TopP</sub> [<sub>FocP</sub> [<sub>WhP/Sub.TypeP</sub> *óti/an* [<sub>TopP</sub> [<sub>IP</sub> ]]]]]].

The second option is to assume that there is only one (recursive) TopP in the C-domain: this position is defended in Roussou (2000). Roussou derives the double pattern in (11) by assuming that C-particles can undergo movement within the split-CP<sup>6</sup>. She distinguishes three domains for C-particles, with pure subordinating particles occupying the highest zone, clause-typing particles occupy. The advantage of assuming that C-particles can move from a lower to a higher zone is that it explains the fact that a number of particles have more than one function (from Roussou 2000: 79, her (20)):

- (17) a. *tha* modal  
 b. *na/as* modal, clause-typing  
 c. *óti/an* clause-typing, (subordinator)  
 d. *pou* subordinator

Thus, the marker of future tense *tha* is a pure modal particle (17a). The particles *na* and *as* have both modal and clause-typing characteristics, *óti* and *an* are clause-typers and subordinators and *pou* is a pure subordinator. Roussou assumes that *na* and *as* obligatorily move from the modal to the clause-typing zone (from Roussou 2000: 79, her (19), with minor modifications ld):

(18) [<sub>CSub</sub> *pou* [<sub>TopP</sub> [<sub>FocP</sub> [<sub>COp</sub> *óti/an/na/as* [<sub>Neg</sub> *den/min* [<sub>CM</sub> *tha/t<sub>na/as</sub>* [<sub>I</sub> cl + V ... ]]]]]]]

subordinating                      clause-typing                      modal

Movement of the complementizers *óti* and *an* to the highest C-head past TopP (illustrated in (19)) is argued to be only optional, which explains the apparently free alternation between the patterns in (11a) and (11b).

(19) [<sub>CSub</sub> *óti/an* [<sub>TopP</sub> [<sub>FocP</sub> [<sub>COp</sub> *t<sub>óti/an/na/as</sub>* [<sub>Neg</sub> *den/min* [<sub>CM</sub> *tha/t<sub>na/as</sub>* [<sub>I</sub> cl + V ... ]]]]]]]

<sup>6</sup> A similar line of reasoning is developed in van Craenenbroeck (2010), which is concerned with the syntax of A'-moved wh-phrases. He proposes that wh-phrases can be hosted in two different C-projections: a higher CP<sub>1</sub> occupied by clause-typing elements, and a lower one CP<sub>2</sub> that hosts syntactic operators in its specifier. In line with Roussou's (2000) proposal, van Craenenbroeck also assumes that some wh-phrases can undergo movement from CP<sub>1</sub> to CP<sub>2</sub>.

Building on proposals from Rizzi (1997, 2001a) I will in section 4 below, adopt the view that there is more than one (possibly recursive) TopP, rather than choosing the option according to which C-particles move inside CP. One of the main reasons for this choice is the fact that it is not clear whether the assumed displacements are well motivated, and what type of movement this would be in terms of a traditional typology of movement (as sketched in the introductory chapter, section 3.2.1). For one thing, if the particles in the Modern Greek left periphery are syntactic heads, we do not expect them to be able to move across topicalized or focalized constituents. To account for the unacceptability of adjunct fronting in verb first conditionals, like (20), it has been proposed by Rizzi (1997: 303-304) that the non-overt head of the projection where the fronted adjunct (whether this is TopP (Rizzi 1997) or ModP (Rizzi 2004)) blocks head movement of the auxiliary in subject-auxiliary inversion patterns (by virtue of the HMC (ch. 1, section 3.3.2)):

- (20) a. *[If yesterday John had done that],...*  
 b. \**[ForceP [Force° Should<sub>i</sub> [ModP tomorrow [Mod° [FinP [TP t<sub>i</sub> he ring]]]]]],...*
- 

In the remainder of this section I will present some additional comparative data further illustrating the point that subordinating conjunctions are not uniformly located in the highest projection of a split-CP.

### 1.2.3 Some additional cross-linguistic data

#### 1.2.3.1 Bulgarian

Embedded fronting in Bulgarian is discussed in Rudin (1990-'91), Krapova (2010a,b) and Laskova (2010)<sup>7</sup>. As illustrated in (21), foci in embedded declaratives can appear both to the right (21a) and to the left (21b) of the complementizer.

- (21) a. *Mislja, [če DETÊTO<sub>i</sub> nameriha t<sub>i</sub>].*  
 I.think that child-the they.found  
 b. *Mislja, [DETÊTO<sub>i</sub> [če nameriha t<sub>i</sub>]].*  
 I.think child-the that they.found  
 approx. 'I think that the child they found.'

LEF is also acceptable in other types of embedded clauses, like headed relative clauses (introduced by a *wh*-word (22) or by the invariant complementizer *deto* ((23), see Krapova 2010a)) and ACs (24-25).

<sup>7</sup> All the examples were kindly provided to me by Vesselina Laskova (p.c.), sometimes inspired on examples from Rudin (1990-'91).



- (22) *Živee na ulicata, [muzeja<sub>i</sub> [kūdeto t<sub>i</sub> se namira]].*  
 she.lives on street-the museum-the where REFL finds  
 'She lives in the street where the museum is located.'
- (23) *Pitah go dali poznava učenika [filma<sub>i</sub> [deto gleda t<sub>i</sub>]].*  
 I.asked him whether he.knows student-the film-the who watches  
 'I asked him whether he knows the student who is watching the film.'
- (24) *Ne ti li e strah, [[v samolet]<sub>i</sub> [kogato pūtavaš t<sub>i</sub>]]?*  
 not to.you Q is fear in airplane when you.travel  
 approx.: 'Aren't you afraid when you travel by plane?'

Furthermore, provided the appropriate intonation and discourse context, the examples in (25) with embedded CILD are also acceptable:

- (25) a. *[Tetradkata [ako ja vzeme]], ti trjabva da izlezeš.*  
 notebook-the if it she.takes you must leave  
 'If she takes the notebook, you must leave.'
- b. *Ti trjabva da izlezeš, [tetradkata [ako ja vzeme]].*  
 you must leave notebook-the if it she.takes  
 'You must leave if she takes the notebook.'

To conclude, on a par with Modern Greek, embedded fronting seems to be much more freely available in Bulgarian than in many other languages, like English.

### 1.2.3.2 Russian

LEF is also reported to be grammatical in some varieties of Russian. The examples in (26-27) are taken from Sabel (2002: 284, his (45-46)). The b-sentences show that the phenomenon at hand is subject to the Adjunct Condition:

- (26) a. *% Vse usnuli [CP groza<sub>i</sub> [CP kogda t<sub>i</sub> končilas']].*  
 everybody fell-asleep the-storm when ended
- b. *\* Vse groza<sub>i</sub> usnuli [CP kogda t<sub>i</sub> končilas'].*  
 everybody the-storm fell-asleep when ended  
 'Everybody fell asleep when the storm ended.'

- (27) a. % *My byli udivleny* [<sub>CP</sub> *vodku<sub>i</sub>* [<sub>CP</sub> *potomu čto on prines t<sub>i</sub>*]].  
 we were surprised vodka.ACC because he brought  
 b. \* *My vodku<sub>i</sub> byli udivleny* [<sub>CP</sub> *potomu čto on prines t<sub>i</sub>*].  
 we vodka.ACC were surprised because he brought  
 'We were surprised because he brought vodka.'

According to all my Russian informants, (26a) and (27a) are ungrammatical in Standard Russian. However, Lena Karvovskaya (p.c.) informs me that examples like these are to some extent productive in spoken registers of the language, but with considerable variation from speaker to speaker (whence the %-sign).

### 1.2.3.3 English

LEF in English is only possible in concessive ACs introduced by the conjunction *though*. This particular type of movement is sometimes called 'though-movement': it is discussed in Culicover (1982) and Meier (1989)<sup>8</sup>.

- (28) a. [**Though** *the house is expensive*], *we have decided to buy it*.  
 b. [[<sub>AP</sub> *Expensive*]<sub>*i*</sub>] [**though** *the house is t<sub>i</sub>*], *we have decided to buy it*.

Though though-movement typically affects APs, other categories can be fronted as well like the (determinerless) NPs in (29):

- (29) a. [[<sub>NP</sub> *Genius*] [**though** *John is*]], *he can't tie his shoe laces*.  
 b. [[<sub>NP</sub> *Proof of God's existence*] [**though** *this was*]], *we ignored it*.

I will not further analyse this pattern. For some discussion see the references cited and also Stuurman (1990: 235-247).

### 1.2.4 Intermediate conclusion

Before turning to considering the theoretical implication of data such as that presented in the previous sections, it should be stressed that crosslinguistically, the empirical facts concerning

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<sup>8</sup> Culicover (1982) and Meier (1989) also discuss similar types of fronting in clauses introduced by *as* and *that* (ia-b). However, the sentences in (ia-b) seem to be different from LEF in *though*-clauses (examples from Culicover 1982). For one thing, the variant of (ib) with the NP (with or without a determiner) *in situ* (ic) is completely unacceptable (compare the pair in (28)). Moreover, there are stronger restriction on the type of constituent that can be fronted: in *as*-clauses, only APs can be fronted, whereas LEF in *that*-clauses can only apply to NPs.

- (i) a. [*(As) intelligent* [**as** *John is*]], *he can't figure out how this works*.  
 b. [*Good soldier* [**that** *he was*]], *Sam stood his ground*.  
 c. \* [*That he was (a) good soldier*], *Sam stood his ground*.

LEF are complicated and as yet not sufficiently well understood. In addition, there seems to be cross-linguistic variation with respect to the availability of LEF in clauses that tend to resist MCP, like ACs (cf. fn. 4 and the Bulgarian data in (24-25) above). Future research will be needed to further clarify these issues.

## 2 Clause typing and the role of ForceP

### 2.1 On the position subordinating conjunctions in the C-system

#### 2.1.1 Clause type and illocutionary force

Recall that the Italian declarative complementizer *che* cannot be preceded by a (CILD-)topic: this was illustrated in (4) (repeated here for convenience).

- (4) a. *Penso* [<sub>CP</sub> *che*, [<sub>TopP</sub> [*a Gianni*], [<sub>TP</sub> *gli* *dovrei* *parlare*]]].  
 I.think that to Gianni him you.would.have.to talk.INF  
 'I that to Gianni, you should speak.'  
 b. \* *Penso* [[*a Gianni*][*che gli dovrei parlare*]].

It was proposed by Rizzi (1997) that *che* is located in the highest projection of the split-CP, viz. ForceP. The relevant template then looks like (30):

- (30) [<sub>ForceP</sub> *che* [<sub>TopP\*</sub> [<sub>FocP</sub> [<sub>TopP\*</sub> [<sub>FinP</sub> [<sub>TP</sub> ]]]]]]]

This move has a number of desirable consequences, especially if one takes into account Rizzi's characterization of the Force head of an embedded clause as the interface between the embedded clause itself and the superordinate clause (Rizzi 1997: 283):

Complementizers express the fact that a sentence is a question, a declarative, an exclamative, a relative, a comparative, an adverbial of a certain kind, etc., and can be selected as such by a higher selector. This information is sometimes called the clausal Type [...].

Given that complement clauses have to meet selectional requirements imposed by selecting predicates (e.g. in English, a predicate like *report* can only take a clausal complement of the declarative type; *explore* is only compatible with an interrogative complement clause,...), it seems indeed appropriate that the Type of an embedded clause should be encoded in the

highest head of a split-CP, where it is visible for the selecting head in the matrix clause<sup>9</sup>. As indicated, all the discourse related topic and focus projections are then located below ForceP.

One could develop a similar account for adjunct clauses, although these are obviously not selected by a predicate. Under the assumption that adjunct CPs are base-generated in specialized functional projections, it could be said that the clause typing operator in an AC serves to identify the entire embedded clause as an adverbial, after which it can enter in a relation of spec-head agreement with the functional head in whose specifier it is base-generated<sup>10</sup>.

## 2.1.2 Disjoining subordinators from clause-typers

As observed in Rizzi (2001a), in contrast with the conjunction *che* 'that', the Italian conjunction *se* 'if, whether', which introduces embedded yes-no questions and could thus be considered to be a clause-typer, can be preceded by a CILD topic (31a). The b-sentence shows that the same pattern is unacceptable in an embedded declarative (cf. also (4b)).

- (31) a. *Non so, [[a Gianni], [se avrebbero potuto dirgli la verità]].*  
 not I.know to Gianni if they.would.have could say.INF-him.CL the truth  
 'I don't know, to Gianni, if they could have said the truth.'
- b. \* *Credo, [[a Gianni], [che avrebbero dovuto dirgli la verità]].*  
 I.believe to Gianni that they.would.have had.to say.INF-him.CL the truth  
 'I believe, to Gianni, that they should have said the truth to him.'

Rather than assuming that the Type of embedded declaratives and the Type of embedded interrogatives is encoded in a different functional head, Rizzi (2001a) proposes that the complementizer *se* is not the real clause typer. In order to maintain the local relation between the matrix clause containing the predicate that selects an embedded interrogative on the one hand and the locus where the Type of the embedded clause is encoded on the other hand, he proposes that the Force head in *se*-clauses contains a phonologically null clause typer I will identify this clause typer with the null operator 'OP<sub>int</sub>' in (32). Rizzi goes on to propose that the *se*-element sits in its own dedicated projection, which he calls IntP. The left periphery of an Italian embedded interrogative can thus be represented as in (32)<sup>11</sup>:

<sup>9</sup> However, as pointed out to me by Liliane Haegeman, it seems necessary to assume that not all aspects of clausal complementation involve such local selection. Hungarian embedded interrogatives, in which the wh-word sits lower than the *that*-complementizer *hogy*, are a point in case. Romance subjunctives in *que/che* complement clauses are another. Such cases of 'selection at a distance' can be accounted for by assuming that the selecting element and the selectee are in a non-local 'Agree'-relation (in the sense of Chomsky 2001, 2008).

<sup>10</sup> For further discussion of the notion of clause typing and its relation to illocutionary force, see Cheng (1991), Allen (2006) and Coniglio & Zegrean (2010).

<sup>11</sup> Italian ACs seem to pattern with embedded interrogatives rather than with embedded declaratives. With some variation, Italian native speakers tend to accept both sentences like (ia) and (ib) (with a preference for (ia)):

(32) [<sub>ForceP</sub> OP<sub>int</sub> [<sub>TopP\*</sub> [<sub>IntP</sub> *se* [<sub>TopP\*</sub> [<sub>FocP</sub> [<sub>TopP\*</sub> [<sub>FinP</sub> [<sub>TP</sub> ]]]]]]]]]]]

## 2.2 The left periphery of Latin ACs

I will adopt Rizzi's (1997, 2001a) idea that not every subordinating conjunction is a clause typer<sup>12</sup>. Disjoining the clause-typing operator and the lexical element that is traditionally called 'subordinating conjunction' allows us to maintain that clause typing is universally encoded in ForceP, the highest head of the 'extended projection' (in the sense of Grimshaw 2005) of a verb. With Rizzi (2001a), I will assume that both in complement and adjunct clauses clause typing can either be achieved by an overt lexical element or by a phonologically null element. In the light of the discussion in the preceding chapter, I have equated this phonologically null element with the null operator deriving a number of embedded clauses, as proposed by Haegeman (2007, 2010a,b).

- 
- (i) a. *Poi però, [quando [il libro] [l' ho chiuso]], un dubbio m'è rimasto.*  
then PRT when the book it.CL I.have closed a doubt me is remained  
'And then, when I had closed the book, some doubts remained.'  
(<http://www.satisfaction.it/details.php?id=55&t=2>)
- b. % *[[[il libro] quando l' ho comprato] ero con la mia nipotina di 4 anni.*  
the book when it.CL I.have bought I.was with the my granddaughter of four years  
'When I bought this book, I was with my four year old granddaughter.'  
(<http://www.aurorablu.it/forum/archive/index.php?t-4225.html>)

By virtue of the fact that in Italian ACs count as strong islands, we can be confident that the pattern in (ib), in which the left dislocated phrase and the resumptive clitic straddle the subordinator, is not a case of extraction to the left periphery of the main clause. Furthermore, given that this pattern is also available for CILD-PPs (ii), we can be sure that sentences like (ib) are at least not necessarily base-generated (Guglielmo Cinque p.c.; cf. Cinque 1990: *passim*).

- (ii) *[[PP A Gianni] quando gli ho dato il libro],...*  
to Gianni when him.CL I.have given the book  
'When I had given the book to Gianni,...'

I will have more to say about Italian (and more general Romance) embedded CILD in ch. 5, section 6.

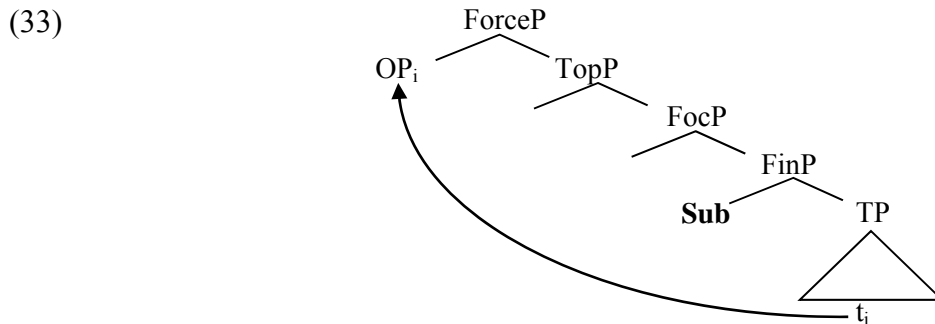
<sup>12</sup> The idea that not all subordinating conjunctions are clause typers can also be found in Bhatt & Yoon (1991: 47) (cf. Rizzi 1997: 328 n. 6):

[...] let us now put forward the hypothesis that the lexical complementizer [...] may either be pure Subordinators (or subordinator comps) [*sic* ld], or may indicate both the clause type/mood and subordinate status. We shall reserve the term 'complementizer' to refer to the latter category.

- (i) a. Subordinator [+ Subordinating, - Clause typing]  
b. Complementizer [+ Subordinating, + Clause typing]

Bhatt & Yoon (1991) propose that embedded verb second can only cooccur with a 'Subordinator', not with a 'Complementizer'. Since 'Subordinators' cannot type a clause, the verb has to do this by moving to C.

Furthermore, I will assume that in Latin the overt conjunctions occupy a position below the two discourse projections TopP and FocP. Since there is no evidence for such CP-internal Topic and Focus phrases below subordinating conjunction, I tentatively suggest to locate elements like *cum*, *si* and *ut* in the lowest projection of the split-CP, namely FinP<sup>13</sup>, but I don't think that anything crucial hinges on this particular decision. I then would like to propose the tree in (33) to represent the left periphery of Latin ACs:



(33) shows the left periphery of an embedded clause, with the overt subordinating conjunction 'Sub' in Spec,FinP and a phonologically null clause-typing operator 'OP' moving from a TP-internal position to Spec,ForceP.

Before giving more details about the corpus research that I have carried out, I will give a brief preview of the analyses that I will propose in chapters 4 to 7.

## 2.3 LEF in Latin: a first look at the data

I will start by introducing the three patterns that will be the central research theme of the remainder of this thesis. In a first type of example, illustrated in (34), a relative pronoun, here *quem* 'who (acc.)', appears to the left of the pronoun *ut*, which introduces a temporal AC. In a second type, illustrated in (35), a demonstrative pronoun, here *eum* 'him', occurs to the left of the conjunction *cum*, which introduces a clause-initial AC. In the third type of example, other kinds of constituents, to be discussed in more detail in chapter 6, appear to the left of the conjunction. This is illustrated in (36), in which the locative PP *in Tusculano* 'in the Tusculan estate' is fronted in a clause-final *cum*-clause.

- (34) [<sub>CP</sub> *Quem<sub>i</sub>* [*ut* *barbari* [<sub>CP</sub> *t<sub>i</sub>* *incendium effugisse*] *uiderunt*]], *telis* *eminus*  
 whom.ACC when barbarians.NOM fire.ACC flee.from.INF saw.PF missiles.ABL from.afar  
*missis interfecerunt.*  
 thrown.ABL they.killed.PF

<sup>13</sup> Krapova (2010a: 1257) assumes that the Bulgarian complementizer *deto* is located in FinP.

'When the barbarians noticed that he had escaped the fire, they threw missiles at him from a distance and they killed him.' (= Cor. Nep. Alc. 10.6)

- (35) [*Eum<sub>i</sub>* [**cum** *t<sub>i</sub>* *uidero*]], *Arpinum* *pergam*.  
 him.ACC when I.will.have.seen to.Arpinum I.will.proceed  
 'When I have seen him, I'll move on to Arpinum.' (= Cic. ad Att. 9.15.1)

- (36) *Conloqui* *uidebamus* [[*PP* *in Tusculano*] [**cum** *essem*]].  
 talk.together.INF we.seemed.IMPF in Tusculan.ABL when I.was.SUBJ  
 'It seemed as if we were discussing, when I was in the Tusculan estate.'  
 (= Cic. ad Att. 13.17-18.2)

I will show that the patterns in (34) and (25) should be set apart from that in (36). Before focussing on the differences between (34-35) on the one hand and (36) on the other, however, I will first bring out the common properties of the three patterns.

First, as will be shown in ch. 4, section 1.3.2, Latin ACs are subject to the Adjunct Condition (see ch. 1, section 3.4.1.1). This means that ACs such as those in (34-36) cannot be extracted from. As a result, one can be confident that sentences like (34-35) correspond to the representation in (37a), with XP remaining inside the embedded clause, CP2, rather than to the that in (38), where XP is extracted out of CP2 to a position in the left periphery of the higher clause, CP1. Although (37a) and (38) yield the same surface string, there is one important difference between the two: the pattern in (38) can only be grammatical in cases where CP2 is not a syntactic island.

(37) a. [<sub>CP1</sub> [<sub>CP2</sub> XP<sub>i</sub> [<sub>FP</sub> **Sub** [<sub>TP2</sub> *t<sub>i</sub>* ]]] [<sub>TP1</sub> ]]

(38) [<sub>CP1</sub> XP<sub>i</sub> [<sub>CP2</sub> [**Sub** [<sub>TP2</sub> *t<sub>i</sub>* ]]] [<sub>TP1</sub> ]]

The structure of (36) is schematically represented in (37b). Here again I assume that the fronted constituent remains in the embedded domain:

(37) b. [<sub>CP1</sub> [<sub>TP1</sub> [<sub>CP2</sub> XP<sub>i</sub> [<sub>FP</sub> **Sub** [<sub>TP2</sub> *t<sub>i</sub>* ]]]]]]

Second, in each of the three patterns which I will subsequently distinguish, more than one category can be fronted to the left of the subordinating conjunction. This is illustrated in (39-41)<sup>14</sup>:

<sup>14</sup> restrictions on multiple LEF will be dealt with in chapter 5.

- (39) [*Quas<sub>i</sub> nuper<sub>j</sub> [cum t<sub>j</sub> mercator t<sub>i</sub> tanti emere uellet a L. Axio [...]]],  
 which.ACC recently when trader.NOM that.much.GEN buy.INF wanted.SUBJ from L.A.ABL  
*minoris quadringentis denariis daturum negauit.*  
 less.GEN 400.ABL denarii.ABL sell.INF.FUT he.denied  
 'When recently a trader wanted to buy these from L. Axius at this price, the latter said  
 he would not sell for for less than 400 denarii.' (= Var. Agr. 3.7.10)*
- (40) [*[Haec atque alia eodem pertinentia]<sub>i</sub> [seditiosus facinorosusque <...>*  
 these.ACC and other.ACC same.ABL pertaining.ACC factious.NOM wicked.NOM -and  
*homo]<sub>j</sub> [cum maxime t<sub>j</sub> disserteret]], interuenit Tarquinius.*  
 man.NOM when exactly was.discussing.SUBJ interrupted.PF Tarquinius.NOM  
 'Exactly when this rebellious and wicked man was discussing these and other matters  
 related to the same point, Tarquinius interrupted.' (= Liv. aUc 1.50.7)
- (41) *Dominatio quaesita ab utroque est, non id actum [CP<sub>2</sub> [beata et*  
 dominion.NOM sought.NOM by both.ABL is not this.NOM done.NOM happy.NOM and  
*honestam] ciuitas ]<sub>i</sub> [ ut esset t<sub>i</sub>]].*  
 honourable.NOM community.NOM so.that is.SUBJ  
 'Both of them pursued personal power, they did not act to make sure that the state is  
 happy and honourable.' (= Cic. ad Att. 8.11.2)

Third, although I will mainly be concerned with LEF in ACs, it should be noted that LEF is also attested in various types of complement clauses, such as indirect questions (42-44):

- (42) [*CP<sub>1</sub> Nihil a me audiet ex [adulescentia sua]<sub>i</sub> [CP<sub>2</sub> quae<sub>j</sub> [qualis t<sub>i</sub>*  
 nothing.ACC from me.ABL he.hear.FUT from youth.ABL his.ABL which.NOM how.NOM  
 *fuerit , meministis]]].*  
 has.been.SUBJ you.remember.PL  
 'From me, he will hear nothing about his youth: you all know what it was like.'  
 (= Cic. Ver. I.12.32)
- (43) *Sed libet scire [[CP inopiam<sub>j</sub> [IntP [qua patientia]<sub>j</sub> [TP t<sub>j</sub> t<sub>i</sub> tuleris]]]]]?*  
 but pleases.it to.know poverty.ACC with.which patience you.endured.SUBJ.PF  
 'But is it pleasant to know with which patience you endured poverty?'  
 (= Q. Curt. Hist. Alex. 4.1.25)
- (44) *Immo si scias [CP reliquiae<sub>j</sub> [IntP quae<sub>j</sub> [TP t<sub>i</sub> t<sub>j</sub> sint]]].*  
 even.more if you.knew.SUBJ the.rest.NOM which.NOM there.is.SUBJ  
 'Even more so if you knew what is left over!' (= Plaut. Curc. 321)

The same can be observed in complement clauses introduced by the complementizers *ut* ('that') (45) and its negative counterpart *ne* ('that (not)') (46):



- (45) *Sed transitio sociorum [ fuga [ut tutior mora uideretur]] fecit.*  
 but desertion.NOM allies.GEN flight.NOM so.that safer.NOM delay.ABL seemed.SUBJ made.PF  
 'But the allies' desertion made fleeing seem a safer option than waiting.'  
 (= Liv. aUc 28.15.14)
- (46) *In senatum uenit, mandata exposuit, [sententiam [ne diceret]] recusauit [...].*  
 to senate.ACC he.came.PF tasks.ACC he.explained.PF opinion.ACC that he.says.SUBJ he.refused.PF  
 'He came to the senate, explained about his mission but refused to make an official  
 statement.' (= Cic. Off. 3.100)

LEF is also attested in relative clauses, but not very frequently. Although I cannot back this up with quantitative data to support this intuition, I have the impression that the phenomenon of LEF is mainly restricted to free relatives (i.e. relative clauses that lack an antecedent). Two examples of LEF in free relatives are given in (47-48):

- (47) *Si [[ternos denarios] [ qui coegit]] erit absolutus, quaternos, quinios, denos denique aut uicenos coget alius.*  
 if 3.DISTR.ACC denaries.ACC who.NOM charged.PF will.be forgiven.NOM 4.DISTR.ACC  
 5.DISTR.ACC 10.DISTR.ACC PRT or 20.DISTR.ACC will.charge another.NOM  
 'If somebody who charged three denaries per person got away with this, somebody else will come and charge four, five or ten and eventually even twenty denaries.'  
 (= Cic. Ver. act. sec. 3.220)
- (48) *Atqui [[de iniuriis dominorum in seruos] [ qui audiat]] positus est [...].*  
 PRT about injustices.ABL masters.GEN to slaves.ACC who.NOM listens.SUBJ appointed.NOM is  
 'But somebody is appointed to hear complaints about injustice inflicted by masters upon their slaves.' (= Sen. Ben. 3.22.3)

The only prose example of LEF in headed relative clauses that I found is given in (49), where the dative of purpose *praesidio* 'guard, protection' is fronted inside a prenominal relative clause<sup>15</sup>.

- (49) *Itaque ex copia tubicinum et cornicinum numero quinque quam PRT from group.ABL horn-blowers.GEN and trumpeters.GEN number.ABL five as uelocissimos delegit, et cum eis[DP [CP praesidio [CP qui forent]]] quattuor centuriones].*  
 quickest.ACC he.chose and with them.ABL help.DAT who.NOM be.SUBJ four centurions.NOM

<sup>15</sup> LEF in headed relative clauses is also attested in Plautine comedy:

- (i) *[meus uicinus]<sub>i</sub> [[meo uiro]<sub>j</sub> [qui liberum t<sub>j</sub> praehibet locum]]*  
 my.NOM neighbour.NOM my.DAT husband.DAT who.NOM free.ACC offers place.ACC  
 'my neighbour, who offers a free place to my husband'  
 (= Plaut. Cas. 536 (in trochaic metre), found in Bianchi 1999: 97)

'So out of the group of horn-blowers and trumpeters he chose the five quickest ones, and with them he sent four centurions as a protection.' (= Sal. Iug. 93.8)

I have no explanation for this discrepancy between the types of relatives, which is subject to verification.

### **3 Corpus study of LEF in Latin ACs**

In the final section of this chapter, I will give more details about the corpus study on ACs that I have conducted. I will start by describing the composition of the corpus, after which I will add some observations concerning the methodology that I have adopted. I will then present a first overview of the quantitative results of the research. I will finish the chapter with a brief preview of the analysis that will be developed in the following chapters.

#### **3.1 Facts and figures**

##### **3.1.1 Description of the corpus**

Table 1 in (53) provides a detailed description of the corpus that I have used as the empirical basis for my research. The corpus contains only prose texts. The reason for this choice is that the word order patterns in Latin poetry are considerably freer than those in prose, and it is not clear to what extent a number of systematic discrepancies between prose and poetry are to be ascribed to some stylistic process of 'poetic license' rather than to specific syntactic properties of Latin (see ch. 6, section 1.4 for some discussion of a remarkable word order pattern that is exclusively attested in poetry).

The works are given in chronological order. As indicated, I have included texts from different authors and different genres, so as to avoid that the quantitative results be biased by stylistic factors. In the sixth column I gave the total number of words of each work.

| (50)          | Author              | Date       | Work                       | Genre      | # words        |
|---------------|---------------------|------------|----------------------------|------------|----------------|
| I.            | Cato                | 160 BC     | <i>De agricultura</i>      | TECHN      | 16.027         |
|               |                     |            |                            |            |                |
| II.           | Cicero              | 65-40 BC   | <i>Ad Atticum</i>          | EPIST      | 127.251        |
|               | Anonymus I          | ± 40 BC    | <i>Bellum Africum</i>      | HIST       | 14.048         |
|               | Anonymus II         | ± 40 BC    | <i>Bellum Hispaniense</i>  | HIST       | 6.576          |
|               | Anonymus III        | ± 40 BC    | <i>Bellum Alexandrinum</i> | HIST       | 11.143         |
|               | Varro               | 36 BC      | <i>Res rustica</i>         | TECHN      | 35.692         |
|               |                     |            |                            |            |                |
| III.          | Velleius Paterculus | 30 AD      | <i>Historiae</i>           | HIST       | 26.705         |
|               | Columella           | 40-50 AD   | <i>De agricultura</i>      | TECHN      | 109.177        |
|               |                     |            |                            |            |                |
| IV.           | Plinius minor       | 90-110 AD  | <i>Epistulae</i>           | EPIST      | 65.359         |
|               |                     |            | <i>Panegyricus</i>         | RHET       | 20.572         |
|               | Tacitus             | 100-110 AD | <i>Historiae</i>           | HIST       | 54.891         |
|               |                     |            | <i>Annales</i>             | HIST       | 95.010         |
|               |                     |            |                            |            |                |
| V.            | Fronto              | 150-170 AD | <i>Epistulae</i>           | EPIST/RHET | 39.500         |
|               | Apuleius            | 170-180 AD | <i>Florida</i>             | RHET       | 7.946          |
|               |                     |            | <i>Magia</i>               | RHET       | 22.003         |
| <b>Total:</b> |                     |            |                            |            | <b>651.900</b> |

Table 1: Description of the corpus (abbreviations: TECHN = technical treatise; EPIST = epistolography (correspondence); HIST = historiography; RHET = rhetorical)

I have (somewhat artificially) subdivided the corpus into five discrete periods. Period I ('Archaic Latin') contains Cato's *De Agricultura* (written ca. 160 BC). The larger period of Classical Latin was split up in two subperiods: a first group (period II) consists of texts from Cicero, Varro and pseudo-Caesar, all from the second half of the first century BC. The second group (period III) contains the (prose) works of Velleius Paterculus and Columella, both active in the first half of the first century AD. For period IV ('Late Classical Latin') I included texts of Pliny the Younger and Tacitus. Finally, period V consists of Fronto's letters to the emperor Marcus Aurelius and two works by Apuleius, all from the second half of the 2nd century. The texts from this period can be considered 'mannerist', in the sense that authors like Fronto and Apuleius are generally considered to try to imitate the style of Cicero. A more schematic overview of these five periods is given in (51):

- |      |      |                               |                                |
|------|------|-------------------------------|--------------------------------|
| (51) | I.   | Archaic Latin                 | 2nd century BC                 |
|      | II.  | Classical Latin               | 1st century BC                 |
|      | III. | Classical Latin               | 1st century AD                 |
|      | IV.  | Late Classical Latin          | ca. 100 AD                     |
|      | V.   | 2nd century 'mannerist' prose | 2nd half of the 2nd century BC |

### 3.1.2 Methodology of the corpus research

The texts by Cato, the pseudo-Caesarian *bella*, Pliny's *Panegyricus* and both texts by Tacitus were drawn from the CD-ROM 'Hyperbase Latin' (Brunet & Mellet n.d.). All the other texts are drawn from the online *Bibliotheca Teubneriana Latina* (BTL 4 (2006); www.brepolis.net), with the single exception of Fronto's text, which is not available in any of the abovementioned databases. For this text, I have manually searched the edition by Haines (1962).

From these texts, I have selected all the ACs introduced by *cum*, *si* and *ut*. These three conjunctions are not only by far the most common, together they also cover almost the whole range of interpretive nuances that can be expressed by means of an AC, including temporality (*ut* and *cum*), conditionality (*si*), causality (*cum*), resultativity (*ut*), purpose (*ut*) and concessivity (*cum*, and to a lesser extent *ut*) (cf. ch. 2, sections 1.3.2-3 on the polysemous nature of these conjunctions). The major practical problem that arose during the research was that of drawing the distinction between adjunct and complement clauses introduced by *ut*. I have classified as complements those *ut*-clauses in whose superordinate clause a predicate appears that is listed in the Oxford Latin Dictionary [OLD] as being able to select an *ut*-clause. In Appendix II, the reader can find a list with all the predicates that can take an *ut*-clause as a complement (as an internal argument in the case of transitive predicates or an external argument in the case of unaccusatives or passives) that I have come across during the process of the corpus research.

For the texts contained in the CD-ROM Hyperbase, I was able to identify automatically all the embedded clauses introduced by the relevant conjunctions. For other texts, I either used an *index uerborum* (when available, cf. the separate list in the references), or I searched the text manually. In the final stage, all retrieved ACs were processed and tagged with the software of 'Abundantia Verborum' (developed at the KUL). Table 2 gives an overview of the number of *cum*, *si* and *ut*-clauses found in each text:

| (52) | Author              | Work                       | # cum-ACs   | # si-ACs    | # ut-ACs    | Total:              |
|------|---------------------|----------------------------|-------------|-------------|-------------|---------------------|
| I.   | Cato                | <i>De agricultura</i>      | 71          | 227         | 88          | <b>386</b>          |
|      |                     |                            |             |             |             |                     |
| II.  | Cicero              | <i>Ad Atticum</i>          | 733         | 1115        | 1001        | <b>2849</b>         |
|      | Anonymus I          | <i>Bellum Africum</i>      | 75          | 16          | 55          | <b>146</b>          |
|      | Anonymus II         | <i>Bellum Hispaniense</i>  | 78          | 7           | 49          | <b>134</b>          |
|      | Anonymus III        | <i>Bellum Alexandrinum</i> | 92          | 32          | 51          | <b>175</b>          |
|      | Varro               | <i>Res rustica</i>         | 294         | 260         | 318         | <b>872</b>          |
|      |                     |                            |             |             |             |                     |
| III. | Velleius Paterculus | <i>Historiae</i>           | 173         | 35          | 122         | <b>330</b>          |
|      | Columella           | <i>De agricultura</i>      | 842         | 873         | 823         | <b>2538</b>         |
|      |                     |                            |             |             |             |                     |
| IV.  | Plinius minor       | <i>Epistulae</i>           | 336         | 356         | 381         | <b>1073</b>         |
|      |                     | <i>Panegyricus</i>         | 128         | 115         | 129         | <b>372</b>          |
|      | Tacitus             | <i>Annales</i>             | 219         | 354         | 367         | <b>940</b>          |
|      |                     | <i>Historiae</i>           | 105         | 161         | 219         | <b>485</b>          |
|      |                     |                            |             |             |             |                     |
| V.   | Fronto              | <i>Epistulae</i>           | 119         | 165         | 162         | <b>446</b>          |
|      | Apuleius            | <i>Florida</i>             | 27          | 43          | 47          | <b>117</b>          |
|      |                     | <i>Magia</i>               | 83          | 195         | 155         | <b>433</b>          |
|      |                     | Total:                     | <b>3375</b> | <b>3954</b> | <b>3967</b> | <b><u>11296</u></b> |

Table 2: total number of ACs introduced by *cum*, *si* and *ut* per text.

### 3.1.3 Why adverbial clauses?

For the analysis of LEF patterns I chose to study ACs rather than complement clauses based on the following considerations. First of all, in contrast with complement clauses (like the conjunctionless *Accusatiuus cum Infinitiuo* (AcI) in (53) and the clause with a bare subjunctive in (54)), ACs are always introduced by an overt subordinating conjunction. This makes the subordinate clauses easier to find in a corpus, and above all, it makes LEF diagnosable.

(53) *Puer ab ianua prospiciens Hannibali dixit [plures praeter consuetudinem armatos apparere].*  
 slave.NOM from door.ABL looking.NOM H.DAT said.PF more.ACC beyond habit.ACC  
 armed.ACC appear.INF

'A slave, looking out from a door, said to Hannibal that an unusually large number of soldiers were in sight.' (= Nep. Han. 12.4)

(54) *Scribit Labieno [...] [cum legione ad fines Neruiorum ueniat].*  
 he.writes L.DAT with legion.ABL to borders.ACC Nervians.GEN he.come.SUBJ

'He wrote to Labienus to come with his legion to the territory of the Nervians.'  
 (= Caes. Gal. 5.46)

Second, ACs are ubiquitous in any Latin text. Third, and most importantly, ACs may occur in either a clause-initial or -final position. In this respect, they contrast with complement clauses, which have an outspoken preference for appearing in a clause-final position. As we will see, the positioning of the AC is relevant for the analysis of LEF. Table 3 shows that the number of clause-initial ACs is almost identical with clause-final ACs, although it should be said that the picture is less clear for the individual types of ACs<sup>16</sup>:

(55)

|                                     | <i>cum</i><br>(‘when’) | <i>si</i><br>(‘if’) | <i>ut</i><br>(‘so that’) | Tot.<br># |
|-------------------------------------|------------------------|---------------------|--------------------------|-----------|
| <b>clause-initial</b>               | 2071                   | 2457                | 561                      | 5089      |
| <b>middle field(?)<sup>17</sup></b> | 30                     | 29                  | 18                       | 77        |
| <b>clause-final</b>                 | 1207                   | 1161                | 2474                     | 4842      |
| <b>parenthetic</b>                  | 7                      | 93                  | 857                      | 957       |
| <b>other<sup>18</sup></b>           | 60                     | 214                 | 57                       | 331       |
| <b>Total</b>                        | 3375                   | 3954                | 3967                     | 11296     |

Table 3: position of ACs with respect to the superordinate clause

## 3.2 A first discussion of the figures

### 3.2.1 A quantitative left-right asymmetry

I have not taken into account those ACs that were for some reason ‘problematic’ (because they were parenthetic, the complement of a preposition,... cf. Appendix I) and could not be classified as clause-initial, clause-medial or clause-final. I excluded 1288 clauses in total. Out

<sup>16</sup> In languages where ACs can be both clause-initial and clause-final, the linear order of main clauses and ACs tends to reflect the chronological order of the events expressed in the two clauses. However, this is only a statistical tendency. See Diessel (2005) for general discussion, and Panchón (1998) on Latin temporal clauses. On the position of Latin ACs in their superordinate clause, see Appendix I.

<sup>17</sup> See Dryer (1992: 64) on ‘medial’ ACs crosslinguistically. An example of a Latin AC in clause-medial position (sc. a non-extraposed result clause) is given in (i):

(i) [...] *nihil tamen tanti [ut a te abessem] fuit.*  
 nothing.NOM PRT so.much.GEN that from you.ABL I.were.absent.SUBJ there.was.PF  
 ‘... still nothing was important enough for me to give up your company.’ (= Cic. ad Att. 12.5c.6)

<sup>18</sup> This class mainly contains fragment answers, elliptic exclamations and sentences where the text is uncertain. The high number of conditional clauses in this category is due to the existence of structures like (i), a conditional containing one or more indefinite pronouns. These clauses can appear in argument positions, and are probable best analyzed as free relatives with an empty DP-shell (cf. the coordination with a genuine DP):

(i) *Tu [et [DP haec] et [DP CP si quid erit quod intersit mea scire]]] scribas uelim.*  
 you and those.ACC and if something be.FUT which is.of.interest.SUBJ mine.ABL know.INF you.write.SUBJ I.want  
 ‘I would like you to report to me those matters as well as anything which is of importance to me.’  
 (= Cic. ad Att. 11.23.3.16)

of the 10008 remaining ACs, 849 exhibit LEF (i.e. 8,48%). We observe that vast of majority of those (788, i.e. 92,82%) are clause-initial ACs:

(56)

|                          | <i>Cum</i> | <i>si</i>  | <i>ut</i> | <b>Total</b> |
|--------------------------|------------|------------|-----------|--------------|
| <b>clause-initial AC</b> | 389        | 350        | 49        | <b>788</b>   |
| <b>clause-medial AC</b>  | 0          | 0          | 0         | <b>0</b>     |
| <b>clause-final AC</b>   | 10         | 10         | 41        | <b>61</b>    |
| <b>Total</b>             | <b>399</b> | <b>360</b> | <b>90</b> | <b>849</b>   |

Table 4: number of initial and final ACs exhibiting LEF

Furthermore, in a large subset of the 788 occurrences of LEF in clause-initial ACs, namely 424 tokens (i.e. 53,81%), the constituent that appears to the left of the conjunctin is either a relative wh-pronoun or a form of a demonstrative pronoun, mostly *is*, *ea*, *id* or *hic*, *haec*, *hoc*. There are no occurrences of fronted relative pronoun or of fronted demonstrative pronoun in LEF patterns in final AC. The relevant figures are given in Table 5 and will be discussed in detail in ch. 5).

(57)

| <b>Author</b>        | <b>Date</b> | <b>Work</b>           | <b>is<br/>#</b> | <b>hic<br/>#</b> | <b>iste<br/>#</b> | <b>ille<br/>#</b> | <b>qu-<br/>#</b> | <b>Tot.<br/>#</b> |
|----------------------|-------------|-----------------------|-----------------|------------------|-------------------|-------------------|------------------|-------------------|
| <b>Cato</b>          | 160 BC      | <i>De agricultura</i> | 1               | 3                | 0                 | 0                 | 0                | 4                 |
| <b>Cicero</b>        | 50-40 BC    | <i>Ad Atticum</i>     | 22              | 14               | 0                 | 5                 | 104              | 145               |
| <b>Anonymus I</b>    | ± 40 BC     | <i>Bellum Afr.</i>    | 1               | 1                | 0                 | 0                 | 11               | 13                |
| <b>Anonymus II</b>   | ± 40 BC     | <i>Bellum Hisp.</i>   | 2               | 3                | 0                 | 0                 | 12               | 17                |
| <b>Anonymus III</b>  | ± 40 BC     | <i>Bellum Alex.</i>   | 0               | 3                | 0                 | 0                 | 15               | 18                |
| <b>Varro</b>         | 36 BC       | <i>Res rustica</i>    | 6               | 4                | 0                 | 1                 | 20               | 31                |
| <b>Velleius Pat.</b> | 30 AD       | <i>Historiae</i>      | 3               | 2                | 0                 | 0                 | 25               | 30                |
| <b>Columella</b>     | 40-50 AD    | <i>De agricultura</i> | 27              | 15               | 0                 | 0                 | 42               | 84                |
| <b>Plinius minor</b> | 90-110 AD   | <i>Epistulae</i>      | 0               | 3                | 0                 | 0                 | 26               | 29                |
| <b>Plinius minor</b> | 90-110 AD   | <i>Panegyricus</i>    | 0               | 2                | 0                 | 0                 | 1                | 3                 |
| <b>Tacitus</b>       | 100-110 AD  | <i>Annales</i>        | 0               | 0                | 0                 | 1                 | 7                | 8                 |
| <b>Tacitus</b>       | 100-110 AD  | <i>Historiae</i>      | 0               | 0                | 0                 | 0                 | 5                | 5                 |
| <b>Fronto</b>        | 150-170 AD  | <i>Epistulae</i>      | 2               | 0                | 0                 | 1                 | 6                | 9                 |
| <b>Apuleius</b>      | 170-180 AD  | <i>Florida</i>        | 0               | 2                | 0                 | 0                 | 1                | 3                 |
| <b>Apuleius</b>      | 170-180 AD  | <i>Magia</i>          | 0               | 2                | 0                 | 2                 | 21               | 25                |
| <b>Total:</b>        |             |                       | <b>64</b>       | <b>54</b>        | <b>0</b>          | <b>10</b>         | <b>296</b>       | <b>424</b>        |

Table 5: occurrences of third person pronominals to the left of subordinating conjunctions introducing clause-initial ACs.

This quantitative left-right asymmetry and the observation that forms of the relative pronoun and of the demonstrative pronouns are exclusively attested in clause-initial ACs will lead me to propose that the pattern summarized in (58a) and (58c), in which the constituent to the left of the conjunction is either a wh-pronoun or a demonstrative, constitutes a separate class, which I will refer to as LEF1. All the remaining instances of LEF, that is to say those in which

the fronted constituent is neither a wh-pronoun or a relative pronoun, and which may be initial or final, will be argued to form a homogeneous class as well: I will call refer to this class as LEF2. Unlike LEF1, LEF2 is can occur in both initial and final embedded clauses (cf. (59b)). The two types of LEF are schematically represented below<sup>19</sup>:

(58) LEF1

- a. [CP<sub>1</sub> [CP<sub>2</sub> WH [Sub ]][TP<sub>1</sub> ]]
- b. \* [CP<sub>1</sub> [TP<sub>1</sub> [CP<sub>2</sub> IS [Sub ]]]]
- c. [CP<sub>1</sub> [CP<sub>2</sub> IS [Sub ]][TP<sub>1</sub> ]]
- d. \* [CP<sub>1</sub> [TP<sub>1</sub> [CP<sub>2</sub> IS [Sub ]]]]

(59) LEF2

- a. [CP<sub>1</sub> [CP<sub>2</sub> XP [Sub ]][TP<sub>1</sub> ]]
- b. [CP<sub>1</sub> [TP<sub>1</sub> [CP<sub>2</sub> XP [Sub ]]]]

The wh-instantiation of LEF1 (59a) will be analyzed in chapter 4, whereas the pronominal instantiation (59c) will be the subject of chapter 5. It will be argued that these two are instantiations of the same pattern, namely one which involves (wh-)topicalization and clausal pied-piping. On the other hand, LEF2 will be characterized as a specific focalization strategy: it will be discussed in chapters 6 (syntax and interpretation) and 7 (diachronic evolution).

### 3.2.2 Diachrony

A more detailed overview of the quantitative data is given in Tables 6 and 7, which show the frequency of the occurrence of LEF patterns per text:

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<sup>19</sup> where 'IS' is to be understood as a of meta-expression standing for all LEF-forms of demonstrative pronouns.



| (60) | Author        | Date       | Work                   | LEF1            | LEF2            |                |                 |
|------|---------------|------------|------------------------|-----------------|-----------------|----------------|-----------------|
|      |               |            |                        |                 | Init. ACs       | Fin. ACs       | Total           |
| I.   | Cato          | 160 BC     | <i>De agricultura</i>  | 6/280           | 45/280          | 4/92           | 49/372          |
|      |               |            |                        |                 |                 |                |                 |
| II.  | Cicero        | 50-40 BC   | <i>Ad Atticum</i>      | 142/1241        | 60/1241         | 16/1096        | 76/2337         |
|      | Anon. I       | ± 40 BC    | <i>Bellum Afr.</i>     | 14/84           | 11/84           | 0/57           | 11/141          |
|      | Anon. II      | ± 40 BC    | <i>Bellum Hisp.</i>    | 18/87           | 11/87           | 0/38           | 11/125          |
|      | Anon. III     | ± 40 BC    | <i>Bellum Alex.</i>    | 19/111          | 5/111           | 0/52           | 5/163           |
|      | Varro         | 36 BC      | <i>Res rustica</i>     | 33/374          | 62/374          | 26/409         | 88/783          |
| III. | Velleius Pat. | 30 AD      | <i>Historiae</i>       | 30/161          | 2/161           | 0/143          | 2/304           |
|      | Columella     | 40-50 AD   | <i>De agricultura</i>  | 222/1263        | 26/1263         | 3/1026         | 29/2289         |
| IV.  | Plinius min.  | 90-110 AD  | <i>Epist. + Paneg.</i> | 32/515          | 0/515           | 0/787          | 0/1302          |
|      | Tacitus       | 100-110 AD | <i>Ann. + Hist.</i>    | 14/536          | 9/536           | 6/745          | 15/1281         |
| V.   | Fronto        | 150-170 AD | <i>Epistulae</i>       | 10/208          | 7/208           | 3/176          | 10/384          |
|      | Apuleius      | 170-180 AD | <i>Flor. + Mag.</i>    | 28/233          | 10/233          | 3/220          | 13/453          |
|      |               |            | <b>Total:</b>          | <b>568/5091</b> | <b>248/5091</b> | <b>61/4841</b> | <b>309/9932</b> |

Table 6: absolute frequency of LEF in adverbial clauses, compared to the total number of clause-initial (for LEF1 and LEF2) and clause-final (for LEF2) adverbial clauses.

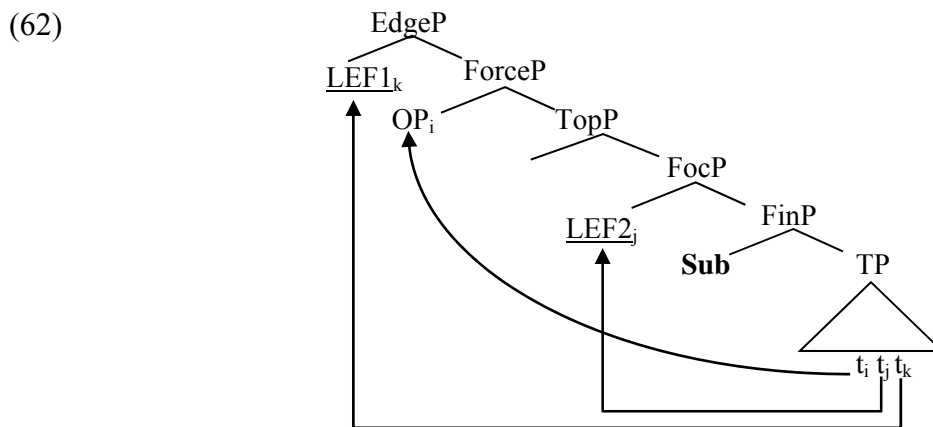
| (61) | Author        | Date       | Work                   | LEF1  | LEF2      |          |       |
|------|---------------|------------|------------------------|-------|-----------|----------|-------|
|      |               |            |                        |       | Init. ACs | Fin. ACs | Total |
| I.   | Cato          | 160 BC     | <i>De agricultura</i>  | 2,1%  | 16,1%     | 4,3%     | 13,2% |
|      |               |            |                        |       |           |          |       |
| II.  | Cicero        | 50-40 BC   | <i>Ad Atticum</i>      | 11,4% | 4,8%      | 1,5%     | 3,3%  |
|      | Anon. I       | ± 40 BC    | <i>Bellum Afr.</i>     | 16,7% | 13,1%     | 0%       | 7,8%  |
|      | Anon. II      | ± 40 BC    | <i>Bellum Hisp.</i>    | 20,7% | 12,6%     | 0%       | 8,8%  |
|      | Anon. III     | ± 40 BC    | <i>Bellum Alex.</i>    | 17,1% | 4,5%      | 0%       | 3,1%  |
|      | Varro         | 36 BC      | <i>Res rustica</i>     | 8,8%  | 16,6%     | 6,4%     | 11,2% |
| III. | Velleius Pat. | 30 AD      | <i>Historiae</i>       | 18,6% | 1,2%      | 0%       | 0,7%  |
|      | Columella     | 40-50 AD   | <i>De agricultura</i>  | 17,6% | 2,1%      | 0,3%     | 1,3%  |
| IV.  | Plinius min.  | 90-110 AD  | <i>Epist. + Paneg.</i> | 6,2%  | 0%        | 0%       | 0%    |
|      | Tacitus       | 100-110 AD | <i>Ann. + Hist.</i>    | 2,6%  | 1,7%      | 0,8%     | 1,2%  |
| V.   | Fronto        | 150-170 AD | <i>Epistulae</i>       | 4,8%  | 3,3%      | 1,7%     | 2,6%  |
|      | Apuleius      | 170-180 AD | <i>Flor. + Mag.</i>    | 12,0% | 4,3%      | 1,4%     | 2,9%  |

Table 7: relative frequency of LEF in adverbial clauses, compared to the total number of clause-initial (for LEF1 and LEF2) and clause-final (for LEF2) adverbial clauses.

As the reader can verify, the frequency of LEF2 declines in the course of periods II and III: the diachronic evolution of LEF2 will be discussed in chapter 7. No such development can be observed for LEF1. I will have nothing to say about the diachronic evolution of LEF1 but I hope to return to this in future work.

## 4 A preview of the upcoming analyses

To conclude this chapter, I would like to give a very short preview of the syntactic analyses of both LEF1 and LEF2 that I will propose. They are summarized in the tree in the tree in (62). The curved arrow represents the movement of the clause-typing operator (cf. ch. 2). The square arrows show the displacement of the LEF constituents. LEF2 will be characterized as a focalization strategy, and I will argue that LEF2 constituents are located in the specifier of the embedded FocP. On the other hand, for reasons to be made clear in chapter 4, I will assume that despite their topic-like interpretation, LEF1 constituents are not hosted in the embedded TopP, but rather in a projection that I called EdgeP, which can be seen as the intermediate landing site for phrases undergoing long distance movement (i.e. the 'escape hatch' of a cyclic domain).



One of the main challenges will be to make sure that all the proposed movement operations, which can cooccur in one and the same clause, do not give rise to a violation of Relativized Minimality (on which see ch. 1, section 3.3).

## Chapter 4.

# The syntax of island pied-piping: evidence from Latin relative clauses

## 1 Introduction

In this chapter, I will be looking at long distance wh-dependencies which involve pied-piping of a propositional island, i.e. 'clausal pied-piping'. The pattern that I will be focussing on is illustrated in (1). I will discuss the details below.

- (1) *[CP<sub>1</sub> An eum discere ea<sub>i</sub> mauis [CP<sub>2</sub>[CP<sub>3</sub> quae<sub>i</sub> [cum plane perdidicerit t<sub>i</sub>]]<sub>j</sub> [TP<sub>2</sub> t<sub>j</sub> nihil sciat]]?*  
PRT him.ACC learn.INF those.things.ACC you.prefer which.ACC when thoroughly  
internalize.SUBJ.PF nothing.ACC he.knows.SUBJ  
'Do you want him to learn the type of things that give him no knowledge, even when he knows them in and out?' (= Cic. Fin. 5.76)

Having introduced the basic pattern with data from Latin and a number of other languages, I will briefly address the question as to whether non-island clauses can be pied-piped as well. The second section of the chapter will be devoted to the syntactic analysis of so called 'massive pied-piping', with special attention for the phenomenon known as 'internal wh-movement'. It will be shown that analyses which do not assume clausal pied-piping run into problems. In the third part, I will discuss an asymmetry between interrogative and relative wh-elements with respect to the kind of material they can pied-pipe. Finally, in the closing part of this chapter (section 4), I will discuss the so called *relatif de liaison*, which is a particular type of non-restrictive relative clause, illustrated in (2):

- (2) *Hunc sequi se iubet et id, quod in praesentia uestimentorum fuit, arripit. His in ignem eiectis flammae uim transiit.*

[<sub>CP</sub> *Quem*<sub>i</sub> [*ut* barbari [<sub>CP</sub> *t*<sub>i</sub> incendium effugisse] uiderunt]], telis eminus  
whom.ACC when barbarians.NOM fire.ACC flee.from.INF saw.PF missiles.ABL from.afar  
*missis interfecerunt.*  
thrown.ABL they.killed.PF

'He (sc. Alcibiades) ordered to follow him, and he grabbed whatever cloths could be found near. He threw these in the fire and ran through the raging flames. When the barbarians noticed that he had escaped the fire, they threw missiles at him from a distance and they killed him.' (= Cor. Nep. Alc. 10.6)

The conclusion will be that although (1) consists of three CPs and (2) of only two, they both exhibit the same phenomenon of clausal pied-piping.

## 1.1 Presentation of the data

### 1.1.1 Relative Verschränkung

Latin allows for a relativization operation in which a relative pronoun originates inside a syntactic island (on different types of syntactic islands, and more specifically the islandhood of ACs, see ch. 1, section 3.4.1.1). This phenomenon is traditionally referred to as '*Relative Verschränkung*' or '*verschränkter Relativsatz*' (see Devantier 1886; Kunst 1908a,b; Mihaileanu 1911; Hofmann & Szantyr 1965: § 307; Kühner & Stegmann 1966<sup>2</sup>: vol. II.2, 315ff.; Maurel 1989; Bortolussi 2005). The basic pattern is exemplified in (3-4):

- (3) [<sub>CP1</sub> *Vos* [...] *uadenti Hasdrubali*<sub>i</sub> *ad Alpes Italiamque*, [<sub>CP2</sub> [<sub>CP3</sub> *qui*<sub>i</sub> *si t*<sub>i</sub> *se cum*  
you.PL.NOM going.DAT H.DAT to Alps.ACC Italy.ACC-and who.NOM if REFL with  
*fratre coniunxisset*] *nullum iam nomen esset populi Romani*], [...] *obstitistis*].  
brother.ABL unite.SUBJ no.NOM PRT name.NOM be.SUBJ people Roman.GEN you.opposed.to.PL  
'You provided resistance to Hasdrubali<sub>i</sub>, when he<sub>i</sub> was on his way to the Alps and to Italy. If he<sub>i</sub> had managed to join his brother, the entire Roman people would have been destroyed.' (= Liv. aUc 26.41.13)

The example in (3) contains a relative clause (labelled as CP2), which is introduced by the relative wh-pronoun *qui* ('who'(nom.)). The antecedent of this pronoun is *Hasdrubali* ('Hasdrubal' (dat.)) and is located in CP1. The special characteristic of the sentence is that the extraction site of the relative pronoun that is not located in the relative clause CP2, but in an AC (CP3) which is located in a leftward position in CP2. Syntactically, the pronoun *qui* is the nominative subject of the predicate of CP3, *coniungo* ('to unite'). The same pattern can be seen in (4):

- (4) [<sub>CP1</sub> *Equitatum tantum<sub>i</sub> praecedere ante agmen imperat legionum,* [<sub>CP2</sub> [<sub>CP3</sub> cavalry.ACC so.far precede.INF before column.ACC he.orders legions.GEN  
*quantum<sub>i</sub> cum processisset t<sub>i</sub>]<sub>j</sub> t<sub>j</sub> sine defatigatione equorum in eadem se*  
 as when they.advance.SUBJ without tiring.ABL horses.GEN to same.ACC REFL  
*reciperet castra*]].  
 retreat.SUBJ camp.ACC

'He commanded the cavalry to advance, to such a distance in front of the column as should make it possible, after such advance, to retire without fatiguing the horses to the same camp as himself.' (= Caes. B.G. VIII [Hirtius] 8.27)

In (4), the adverbial wh-phrase *quantum* ('as far as') originates in CP3, whereas its antecedent is located in CP1. Linearly, *quantum* sits to the left of the conjunction *cum* that introduces CP3.

In this chapter, I will be mainly concerned with sentences where a relative pronoun originates inside an AC, i.e. a finite adjunct, although it should be said that relative pronouns can also occur in non-finite adjuncts (mainly participles). (5-6) show instances of pied-piping of a ablative absolute by a relative pronoun, with a present participle in (5) and a past participle in (6):

- (5) [<sub>CP1</sub> [...] *mulier exclamat se ab eo nullo modo uelle curari*  
 woman.NOM exclaimed REFL by him.ABL no.ABL way.ABL want.INF be.healed.INF  
 [<sub>CP2</sub> [<sub>CP3</sub> *quo curante*]<sub>i</sub> [<sub>TP2</sub> t<sub>i</sub> *omnis suos perdidisset*]]].  
 who.ABL healing.ABL all.ACC her.ACC had.lost.SUBJ

'The woman cried out that she absolutely did not want to be cured by the man, through whose cares she had lost all her children.' (= Cic. pro Clu. 40)

- (6) [<sub>CP1</sub> [*Cetera illa*]<sub>i</sub> *adhibebat,* [<sub>CP2</sub> [<sub>CP3</sub> *quibus<sub>i</sub> demptis*]<sub>j</sub> [<sub>TP2</sub> t<sub>j</sub> *negat se*  
 other.ACC those.ACC he.supplied.IMPF which.ABL taken.away.ABL denies REFL  
*Epicurus intellegere quid sit bonum*]]].  
 Epicurus.NOM understand.INF what.NOM is.SUBJ good.NOM

'He also mentioned these other elements, without which Epicurus denied he could understand what is good.' (= Cic. Fin. 2.64)

Relative pronouns can also pied-pipe a so-called *participium coniunctum*, which is a tensed participle, present in (7), perfect in (8), agreeing in case, gender and number with its head noun:

- (7) [<sub>CP1</sub> *Nam oculi tamquam speculatores altissimum locum obtinent*, [<sub>CP2</sub> [<sub>CP3</sub> *ex quo plurima conspicientes*]<sub>i</sub> [<sub>TP2</sub> *t<sub>i</sub> fungantur suo munere*]]].  
 PRT eyes.NOM like watchmen.NOM highest.ACC place.ACC obtain from  
 which.ABL more.ACC.PL seeing.NOM they.fulfill.SUBJ their.ABL task.ABL  
 'For the eyes, just like watchmen, occupy the highest position, from where they see more, so that they can fulfill their function.' (= Cic. Nat. D. 2.140)
- (8) [<sub>CP1</sub> *Simul secretis sermonibus admonebat malorum*, [<sub>CP2</sub> [<sub>CP3</sub> *quae tot annis perpessi*]<sub>j</sub>, [<sub>TP2</sub> *t<sub>j</sub> miseram seruitutem falso pacem uocarent*]]].  
 at.the.same.time secret.ABL words.ABL he.reminded.of.IMPF sufferances.GEN which.ACC so.many  
 years.ABL suffered.NOM miserable.ACC slavery.ACC falsely peace.ACC they.call.SUBJ  
 'At the same time, in private conversations, he reminded them of the sufferances they had gone through for so many years, when they falsely called their miserable state of slavery 'peace'.' (= Tac. Hist. 4.17)

Although I am not going to come back to the derivation of sentences where a relative pronoun is contained in a non-finite adjunct, it should be noted that the analysis of sentences where a relative pronoun originates in a finite adjunct to be developed below can be carried over to (5-8), modulo the different nature of the adjunct (finite vs. non-finite).

### 1.1.2 Clausal pied-piping

In the sections to follow, I will analyse the sentences in (1-2) in terms of 'clausal pied-piping', i.e. I will propose that to derive such clauses we need to postulate leftward movement of the clause containing the *wh* element which itself is the target of movement. The basic configuration I will argue for is schematically represented in (9):

- (9) a. [<sub>CP1</sub> XP<sub>i</sub> [<sub>Spec,CP2</sub> [<sub>CP3</sub> **wh<sub>i</sub>** [<sub>FinP3</sub> **Sub** [<sub>C°3</sub> **t<sub>i</sub>** ]]]]<sub>j</sub> [<sub>TP2</sub> **t<sub>j</sub>** ]]]

The schema in (9) involves three clauses. I will adopt the terminology of Truswell (to appear): CP1 is the *antecedent clause*, which contains the antecedent XP of the relative clause CP2. CP1 can be of any clause type. CP2, the *host clause*, is a relative clause, which itself contains a third clause, CP3, the *island clause*. The moved relative *wh*-phrase always linearly precedes the subordinator ('Sub' in (9)) that introduces CP3. I will mainly concentrate on cases in which CP3 is a fully tensed clause. As shown in (9), the pattern is derived as follows. First, the *wh*-constituent moves to the left periphery of the most deeply embedded clause, CP3, which is (most often) an island (see below, section 1.3). Then all of CP3, including the left peripheral *wh*-phrase, is moved to the left periphery of CP2. The latter step is referred to as 'clausal pied-piping' because it involves movement of a clausal domain which can be considered a by-product of movement of a phrase embedded in that clausal domain.

The main argument for assuming that clausal pied-piping has happened in cases like (1-8) is the following. Suppose that each of the three clauses in (9) needs to be clause-typed, and

that each clause can only be clause-typed once. CP1 is the only main clause: it has declarative illocutionary force and as such it needs no overt morphosyntactic marking in order to be clause-typed. The other two clauses are both embedded. Consider first the AC CP3. In ch. 3, section 2.2, I argued that the subordinating conjunction introducing an AC sits fairly low in the split-CP, viz. in FinP, and that the real clause-typer was an empty operator in ForceP (not indicated in (9)), but nothing hinges on this for the time being. In addition, the wh-word that is supposed to introduce the relative clause CP2 is also located in CP3, unless one is willing to assume that the relative pronoun has been extracted from the adjunct island which is CP3. This leaves us with a puzzle: on the one hand, CP3 cannot be clause-typed twice, and CP2 cannot be not clause-typed at all. In order to resolve this problem without calling upon a suspicious island violation, I will propose that the actual relative operator is not the wh-word itself, but instead the entire CP3. I will show that via a process of feature percolation, the wh-word has passed on its wh-feature to the island clause, which causes CP3 to undergo A'-movement itself.

### 1.1.3 Four important features of *relative Verschränkung*

#### 1.1.3.1 A left-right asymmetry

Before we proceed, four important remarks are in order. First of all, it should be noted that CP3 can never occur in a rightmost position in CP2, as a sentence-final adjunct (whatever the correct analysis of those may be). In all the examples attested, at least the tensed verb of CP2 always follows the tensed verb of CP3. Put differently: the last word of CP3 can never be the last word of the entire structure. On the basis of the available material, we can tentatively postulate the ungrammaticality of a structure like (10b):

- (10) a. [CP1 XP<sub>i</sub> [CP2 [CP3 **wh**<sub>i</sub>- [FinP3 **Sub** [TP3        ]] [TP2 [vP/VP    ]]]]]  
       \* b. [CP1 XP<sub>i</sub> [CP2 [TP2 [vP/VP ] [CP3 **wh**<sub>i</sub>- [FinP3 **Sub** [TP3        ]]        ]]]]

#### 1.1.3.2 Case morphology

Secondly, case morphology on the fronted wh phrase confirms that the extraction site of the moved wh-phrase is indeed located in the island clause (on syntactic islands, see ch. 1, section 3.4.1.1). This is especially clear in examples such as (11), in which both in CP3 and in CP2 an argument is missing and for which we would postulate an empty category. In this example, both the understood direct object of CP2 and the understood subject of CP3 have the same referent, viz. Heraclitus:

- (11) *Sed omnia uestri, Balbe, solent ad igneam uim referre, Heraclitum<sub>i</sub>*  
 but everything.NOM of.you B.VOC have.the.habit to fiery.ACC power.ACC trace.back H.ACC  
*ut opinor sequentes, [...]* [<sub>CP2</sub> [<sub>CP3</sub> **qui<sub>i</sub>** *quoniam*   <sub>i</sub>, *quid diceret, intellegi*  
 as I.think following.NOM who.NOM since what.ACC he.said.SUBJ be.understood.INF  
*noluit*]<sub>j</sub>, *t<sub>j</sub> pro<sub>i</sub> omittamus*].  
 he.not.want.PF let.us.leave.out  
 'But your people, Balbus, usually trace everything back to some fiery force. I believe  
 you follow Heraclitus in this respect. But since he did not want that his words to be  
 understood, let's not take him into consideration.' (= Cic. Nat. D. 3.14.35)

Within CP3 there is no overt subject to the left of *quoniam*: I will assume that the canonical subject position is filled by a non overt element, represented by a dash (   <sub>i</sub> ). The (understood) subject of the finite *quoniam* clause is associated with nominative case. In CP2, again, there is no overt object to realise the internal argument of the transitive verb *omittamus* ('let us omit') and I will again assume that it is associated with a non overt category, this time an object (represented as *pro<sub>i</sub>*), which bears the same referential index as the subject of the *quoniam* clause (on null objects in Latin, see van der Wurff (1994) and Luraghi (1997)). This understood object would have accusative case. Observe now that the relative pronoun *qui* (with *Heraclitum* as its antecedent) to the left of *quoniam* has nominative case: I will interpret this to mean that it has been extracted from the *quoniam*-clause, and that the null subject is a copy/trace of the moved relative pronoun.

### 1.1.3.3 No parasitic gaps

It should be noted in passing that examples such as (11) show that the phenomenon discussed in this chapter should not be analysed as involving an extraction from CP2 with the possible presence of a parasitic gap in CP3<sup>1</sup>.

Parasitic gaps are empty categories which are licensed only in the presence of a trace of wh-moved category with which they are coindexed<sup>2</sup>. A classic example is given in (12a). The b-sentence shows that the empty category in the clause-final adjunct cannot exist without the presence of an extraction gap. Finally, the pair in (12c-d) illustrate the islandhood of the *without*-adjunct, which means that the gap in (12a) cannot be itself an extraction site.

- (12) a. [*Which documents*]<sub>i</sub> *did you file t<sub>i</sub> [without reading PG<sub>i</sub>]*?  
 b. \**I filed the documents on parasitic gaps [without reading]*.  
 c. *I met John [without having read the documents on parasitic gaps]*.  
 d. \**[Which documents]<sub>i</sub> did you meet John [without having read t<sub>i</sub>]*?

<sup>1</sup> But compare the Bavarian data presented in section 1.2.4. Note however that Southern German dialects do not have null objects.

<sup>2</sup> For a recent *status quaestionis* on PGs, see the contributions in Culicover & Postal (2001 (eds.)). On PGs and ACs, see Haegeman (1984c).



Going back to the Latin example in (11), we saw that the extracted wh-pronoun *qui* bears nominative case, since it is the subject of the predicate *noluit* 'he didn't want' of CP3. The case properties of *qui* led me to the conclusion that the empty category in the island CP3 is indeed a genuine wh-trace: this means that it cannot be a parasitic gap.

#### 1.1.3.4 Linear position of the relative pronoun

Fourth, in all the cases known to me, the extracted wh-phrase is always the leftmost element in CP3. One proviso has to be made here, though: the fronted wh-phrase, which by hypothesis originates in CP3, and the subordinating conjunction introducing CP3 need not be adjacent, as shown in (13)<sup>3</sup>. In this example, the relative pronoun *quae* ('who') has been extracted from within the temporal adverbial clause introduced by *cum* ('when'). It is separated from *cum* by the fronted object *florentes priuignos* ('flourishing step-children'):

- (13) *Illic uiginti annis exilium tolerauit Augustae; ope sustentata,*  
 there twenty years.ABL exile.ACC she.endured.PF Augusta.GEN support.ABL supported.NOM.F  
*[[quae]<sub>i</sub> [[florentes priuignos]<sub>j</sub> [cum t<sub>i</sub> t<sub>j</sub> per occultum subuertisset]]],*  
 who.NOM.F. flourishing step-children.ACC when by hidden.ACC had.overthrown.SUBJ  
*misericordiam erga adflictos palam ostentabat.*  
 compassion.ACC towards ruined.ACC openly she.showed.IMPF  
 'There she suffered during twenty years in exile, supported by Augusta, who after secretly having ruined her flourishing step-children, openly displayed her compassion towards her wretched victims.' (= Tac. Ann. 4.71.4)

For now, I will have nothing to say about the interpretation and syntactic position of the intervening (underscored) material: I will postpone a proper analysis until chapter 6. I will now give a number of examples of comparable structures from other languages.

#### 1.1.4 Nature of the relative clause CP2

In the vast majority of the cases examples displaying this structure, the relative clauses involved are non-restrictives<sup>4</sup>: as shown in Table 6 below (cf. (137) in section 4.1.1), my corpus contains 296 instances in which a relative pronoun sits at the left edge of an embedded clause, preceding the subordinator. In all of these 296 cases, this relative pronoun introduces a non-restrictive relative clause. This predominance of non-restrictives is not insignificant: it is reported as well for other languages which allow for the same phenomenon (cf. section 1.2.2 on Early Modern English). I refer to section 5.4.2.6 for a possible explanation.

<sup>3</sup> Other cases involve a pronoun intervening between the wh-word and the subordinator (e.g. Cic. ad Att. 1.18.1.3; Cic. ad Att. 8.4.1.2 (*ego* 'I (nom.)'); Cic. Tusc. 1.17.39 (*tu* 'you (nom.)')), but this might very well be a second position effect (with the clitic pronoun moving to the second position of an intonational phrase (in the sense of Nespor & Vogel 2007<sup>2</sup>; see also Bošković 2000).

<sup>4</sup> Throughout the thesis, I will use the term 'non-restrictive relative clause' rather than 'appositive relative clause'.

Non-non-restrictives are only occasionally found, as illustrated in (1) and (14-15). These examples could all be considered as light-headed relatives, in the sense of Citko (2004). Light headed relatives do have an antecedent DP, but it is a pronominal or a bare quantifier rather than a full DP with a determiner and a nominal restriction. In the below examples, the 'light heads' are *ea* 'those' in (1), *nihil* 'nothing' in (14) and *is* 'he, that one' in (15):

- (1) *[CP<sub>1</sub> An eum discere ea<sub>i</sub> mauis [CP<sub>2</sub>[CP<sub>3</sub> quae<sub>i</sub> cum plane*  
 PRT him.ACC learn.INF those.things.ACC you.prefer which.ACC when thoroughly  
*perdidicerit t<sub>j</sub>]<sub>j</sub> [TP<sub>2</sub> t<sub>j</sub> nihil sciat]]?*  
 internalize.SUBJ.PF nothing.ACC he.knows.SUBJ  
 'Do you want him to learn the type of things that give him no knowledge, even when he knows them in and out?' (= Cic. Fin. 5.76)

- (14) *[Quid ex eo boni sperari atque effici potest [qui in patris luxurie sic uixerit*  
 what from him of.good be.hoped and be.effectuated can who in of.father luxury so lived.SUBJ  
*[ut [...] nihil<sub>i</sub> umquam patrem facere uiderit [CP<sub>2</sub>[CP<sub>3</sub> quod<sub>i</sub> cum t<sub>i</sub> imitatus*  
 that nothing.ACC ever father.ACC do.INF he.saw.SUBJ that.ACC „when imitated.NOM  
*esset]<sub>j</sub> [TP<sub>2</sub> t<sub>j</sub> non [...] patris similis putaretur]]]]?*  
 he.were.SUBJ not father.GEN similar.NOM he.would.be.judged  
 (lit.) 'What good can be hoped or brought about from this person, who lived in his father's luxury to such an extent that he never saw his father do anything, that would not cause him to be judged to be similar to his father if he imitated it.'  
 (= Cic. Ver. act. sec. 3.160)

- (15) *[Et quidem uide quam te amarit is<sub>j</sub> [CP<sub>2</sub>[CP<sub>3</sub> qui<sub>i</sub> t<sub>i</sub> albus*  
 and PRT see.IMPTV how.much you.ACC loved.SUBJ.PF he.NOM who.NOM white.NOM  
*aterne fuerit]]]<sub>j</sub> [TP<sub>2</sub> ignoras t<sub>j</sub>]]].*  
 black.NOM-or was.SUBJ.PF you.don't.know  
 'And see to what extent you were loved by this guy, about whom you don't know whether he was black or white.' (= Cic. Phil. 2.41)

(16) is a correlative (with the structure *quod<sub>i</sub> ... id<sub>i</sub> ...* ) and could be classified as a maximalizing relative clause (Grosu & Landman 1998)<sup>5</sup>:

<sup>5</sup> (16-17) are special in that CP<sub>3</sub> contains yet another clause CP<sub>4</sub>, in which the relative pronoun originates. However, here I am only interested in the properties of CP<sub>2</sub>. See sections 1.3.1.2 and 2.6.1.2 of the present chapter for further discussion of these two examples.

- (16) [<sub>CP1</sub>[<sub>CP2</sub>[<sub>CP3</sub>[<sub>CP4</sub> *Quod*<sub>i</sub> *t<sub>i</sub>* *per ignotos* *actum*]<sub>j</sub> [<sub>FinP3</sub> *cum* *comperisset* *t<sub>j</sub>*]]]<sub>k</sub>,  
 what.ACC by unknown.ACC done.ACC when he.had.learned.SUBJ  
*doleret* *t<sub>k</sub>*], [<sub>C°</sub> [*id<sub>i</sub>* *a suis* *seruis temptatum esse*] *neglegeret?*]]  
 he.deplore.SUBJ that.ACC by his.ABL slaves.ABL tried.ACC be.INF he.overlook.SUBJ  
 'If he were saddened upon learning that this has been accomplished by unknown  
 perpetrators, would he then be indifferent if his own slaves tried to do the same?'  
 (= Cic. pro Cael. 22.54)

The only potential case of a headed restrictive relative that I have found is given in (17):

- (17) *Reliqua pars epistulae est illa quidem in utramque partem, sed tamen non nullos  
 interdum iacit igniculos uirilis.*  
 [<sub>CP1</sub>[<sub>CP2</sub>[<sub>CP3</sub> *Quod*<sub>i</sub> *quale*<sub>j</sub> *t<sub>i</sub>* *t<sub>j</sub>* *tibi* *uideretur*]<sub>k</sub> [<sub>FinP2</sub> *ut* *posses*  
 which.NOM how.NOM you.DAT seems.SUBJ so.that you.could.SUBJ  
*interpretari* *t<sub>k</sub>*]]]<sub>l</sub>, *misi ad te* *exemplum*<sub>i</sub> *epistulae* *t<sub>l</sub>*].  
 interpret.INF I.sent.PF to you.ACC copy.ACC letter.GEN  
 'The rest of the letter goes in two directions, but nevertheless at some points it shows  
 some sparks of virility. To give you the opportunity to judge for yourself what you  
 think of it, I sent you a copy of the letter.' (= Cic. ad Att. 15.26.2)

However, the analysis of this sentence is not unproblematic. Given the unavailability of a nominal antecedent for *quod* ('what', neut. sg.) in (17) the preceding discourse, one could assume that CP2 is a headed relative clause that sits in a lefthand position (through topicalization of the relative clause?) in the clause containing its nominal antecedent *exemplum* 'copy'. Under this analysis, (17) is not a prenominal relative clause 'sandwiched' between a determiner and the antecedent NP (on which, see Bianchi (1999: 193-194), and a similar example from Plautus cited there (Persa 694)). Alternatively, one could think of the neutre pronoun *quod* to have *epistula* (fem.) in the previous sentence as its logical antecedent, without agreeing with this *qua* gender: such lack of agreement in relative clauses was not uncommon in colloquial language (Wolfgang de Melo p.c.).

## 1.2 Cross-linguistic parallels

The pattern discussed above for Latin is not unique to this language. In this section I show that a similar pattern is also to be found in other languages. The discussion is not exhaustive, but it shows that the phenomenon is found in Greek (1.2.1), in Germanic (1.2.2-3) and in Romance languages (Old Portuguese, 1.2.4).

### 1.2.1 Ancient Greek

The following sentences serve to show that *relative Verschränkung* was also attested in Ancient Greek (examples found in Kunst (1908a: 6-7). Kühner & Gerth (1966<sup>3</sup>: vol. II, 420-421 (§ 557)) note that the phenomenon is attested much more frequently ('ungleich häufiger') in Latin than in Greek.

The structure of (18) is largely identical to the Latin examples introduced earlier: an AC with a relative pronoun on its left edge sits itself in a leftward position in a relative clause. Observe that CP<sub>2</sub>, a genuine headed relative, contains a resumptive pronoun (ἐκείνων 'they' (gen.)), which is coreferential with the relative pronoun (οἷς 'they' (dat.)) contained in CP<sub>3</sub>.

- (18) [<sub>CP1</sub> Πρὸς δὲ τοῦτον οὐχ ἡμᾶς αὐτοὺς ἀσκοῦμεν, ἀλλ' ἀνθρώπους<sub>i</sub> [...]] [<sub>CP2</sub> [<sub>CP3</sub> οἷς<sub>i</sub>  
for PRT him.ACC not us.ACC selves.ACC we.train but people.ACC who.DAT  
ὀπόταν τις <sub>t<sub>i</sub></sub> διδῶ πλείω μισθόν]<sub>j</sub>, [<sub>TP2</sub> <sub>t<sub>j</sub></sub> μετ' ἐκείνων<sub>i</sub> ἐφ' ἡμᾶς  
when one.NOM gives.OPT bigger.ACC wage.ACC with them.GEN against us.ACC  
ἀκολουθήσουσιν]]].  
they.will.follow  
'For this <war> we do not train ourselves, but we hire people who would follow other  
people against us, if they paid them a higher wage.' (= Isocr. 8.44 [On the peace])

The same structure is exemplified in (19). Observe in passing that this sentence is comparable to the Latin example (13), in that there is an extra phrase (τότ' 'then') intervening between the relative pronoun (ἃ 'which') and the subordinating conjunction (εἰ 'if').

- (19) [<sub>CP1</sub> Πόλλι' ἂν εἰπεῖν ἔχοιεν οἱ Ὀλύνθιοι νῦν, [<sub>CP2</sub> [<sub>CP3</sub> ἃ<sub>i</sub> τότ' εἰ  
much.ACC PRT say.INF.AO have.OPT the Olynthians.NOM now which.ACC then if  
<sub>t<sub>i</sub></sub> προείδοντο]<sub>j</sub>, [<sub>TP2</sub> <sub>t<sub>j</sub></sub> οὐκ ἂν ἀπόλωντο]]].  
they.knew.AO not PRT they.died.AO  
'The Olynthians could now sum up many things which could have prevented them  
from perishing, if they had foreseen them back then.' (= Dem. 9.68 [Against Philip 3])

### 1.2.2 Early Modern English

In a recent paper, Truswell (to appear) examines a phenomenon in Early Modern English which is closely similar to the Latin patterns described above. Many people (probably correctly) assume that the Early Modern English construction was actually borrowed from Latin (see for instance van der Wurff 1988: 142-147), but this is contested by Truswell (to appear). However, since the construction is well attested in the works a number of authors (both literary and non-literary), it is probably correct to state that it was part of those people's grammar (irrespective of the question of it got into that grammar through a language-internal evolution or through external influence). In any event, it seems hard to imagine that people would productively use an ungrammatical construction just because it were 'prestigious'.

I provide two examples from Truswell's study (his (1d)). In (20), the relative PP *with which* is extracted from the fronted temporal *when*-clause, and is left adjacent to the conjunction. In (21), a relative pronoun originates in a non-finite adjunct.

(20) [<sub>CP1</sub> *Receive then [this Draught]<sub>i</sub> [CP2 [CP3 [with which]<sub>i</sub> when thou art refresh'd t<sub>i</sub> ], thou mayst more strongly proceed to other Matters which yet remain]]].  
(= Richard Preston (transl.), *Of the Consolation of Philosophy*)*

(21) [<sub>CP1</sub> *Mr Hoby, my Mother, and my selfe, went to visitt [some freindes]<sub>i</sub> [CP2[CP3 who, t<sub>i</sub> being not at home], we retourned]]].  
(= Lady Margaret Hoby, *Diary*, 1599-1601)*

With respect to such examples, Truswell (to appear) observes that in the majority of the cases, CP2 is an non-restrictive relative clause: in his corpus, out of 404 tokens, 401 involve non-restrictive relatives (cf. section 1.1.4 for similar facts in Latin).

### 1.2.3 Bavarian

A slightly different construction exists in some Southern German dialects (Felix 1985; Lutz 2004). The discussion has received quite some attention in the literature and is illustrated in (22). German (as well as Dutch) relative clauses are introduced by a so called d-pronoun, a relative operator which has the morphological shape of a regular determiner. In the example in (22), the moved pronoun *den* 'whom' surfaces to the left of *wenn* 'if', the subordinator introducing CP3. Furthermore, what I analyze as CP2 (i.e. the consequent of the conditional clause) contains a resumptive pronoun *ihn* 'him' which is coindexed with the gap in the island conditional clause (CP3):

(22) *Das ist der Kerl<sub>i</sub> [CP2 [CP3 den<sub>i</sub> [ wenn ich e<sub>i</sub> erwisch]], erschlag ich ihn<sub>i</sub>].*  
this is the.NOM guy.NOM whom.ACC when I catch beat.up I.NOM him.ACC  
'This is the guy who I will beat (up) if I catch him.' (from Felix 1985: 175, his (3))

Sentences like (22) have a number of peculiar properties which set them apart from (some of) the examples discussed thus far. First, (22) contains a restrictive relative clause, while such cases were seen to be rare in Latin (see (16-17)). Second, the d-pronoun and the conditional conjunction *wenn* must be string adjacent (Felix 1985). Again, as seen this was not necessarily the case in Latin and in Old Portuguese. Third, other ACs (as those introduced by *weil* 'because', *obwohl* 'although', *nachdem* 'after') cannot display this pattern (Felix 1985: 175 fn. 2).

Finally, observe that CP3 the the conditional *wenn* clause in (22) the verb appears in final position, but that the relative clause CP2 displays V2. In fact, in the latter V2 is obligatory (23).

(23) \* [<sub>CP1</sub> Das ist der Kerl<sub>i</sub> [<sub>CP2</sub> [<sub>CP3</sub> den<sub>i</sub> wenn ich e<sub>i</sub> erwisch], ich ihn<sub>i</sub> erschlag]].

In this respect, the relative clause CP2 behaves in a rather puzzling way, in that regular restrictive relative clauses are verb final (24a), the pattern with the verb in second position being ungrammatical (24b) (from Felix 1985: 176, his (8-9)):

(24) a. *Das ist der Kerl<sub>i</sub> [den<sub>i</sub> ich t<sub>i</sub> erschlag].* (✓ verb final in RC)  
 this is the guy.NOM whom.ACC I beat.up

'That is the guy who I beat up.'

b. \* *Das ist der Kerl<sub>i</sub> [den erschlag ich t<sub>i</sub>].* (\* verb second in RC)

Note that the bracketing proposed for (22) leads us to postulate that CP2 is a V2-relative. However, Gärtner (2001) claims that V2-relatives (in colloquial German) can only have indefinite antecedents, which (22) clearly does not have. I have nothing to add on this point.

A slightly more complicated version of (22) has received most attention in the literature and is illustrated in (25). In this example both the conditional *wenn* clause as well as the V2 relative clause lack an overt object, as indicated by the symbol 'ec' for empty category. The empty category in the relative clause (CP2) has traditionally been identified as a parasitic gap (on which see section 1.1 of the present chapter):

(25) [<sub>CP1</sub> *Das ist der Kerl<sub>i</sub> [CP2 [CP3 den<sub>i</sub> wenn ich e<sub>i</sub> erwisch], erschlag ich ec<sub>i</sub>]].*  
 this is the guy.NOM whom.ACC if I catch beat.up I

'This is the guy who I will beat (up) if I catch.' (from Felix 1985: 175, his (3))

With respect to examples such as this, Felix (1985: 177) points out that the case of the relative d-pronoun depends on the predicate of the *wenn*-clause. This is clear in (26): *treffen* ('to meet') takes an accusative object, whereas *helfen* ('to help') assigns dative case to its object. The relative pronoun *den* has accusative case. Thus it seems safe to conclude that the gap inside the *wenn*-clause is the real extraction gap.

(26) [<sub>CP1</sub> *Das ist der Kerl<sub>i</sub> [CP2 [CP3 den<sub>i</sub> wenn ich e<sub>i</sub> treff], werd ich e<sub>i</sub> helfen]].*  
 that is the guy.NOM whom.ACC if I meet will I help.INF

'This is the guy whom I will help if I meet <him>.'

In cases like (25-26), the *wenn*(/*wann*)-clause (= conditional protasis) cannot follow the apodosis (= the clause it is embedded by) (Felix 1985: 176, his (12)):

- (27) \* $[_{CP1}$  *Das ist der Kerl* $_i$   $[_{CP2}$  *den* $_i$  *ich erschlag*  $e_i$   $[_{CP3}$  **wenn** *ich*  $e_i$  *erwisch*]]].  
 that is the guy.NOM whom.ACC I beat.up if I catch  
 'This is the guy who I will beat (up) if I catch <him>.'

In chapter 5, section 3.3.2, I will come back to similar Bavarian data where no relative clause is involved.

### 1.2.4 Old Portuguese

Pied-piping of ACs is also attested in older stages of Portuguese. I give two examples from Cardoso (in prep.). The examples are from the online *Corpus do Português* (CdP)<sup>6</sup>:

- (28) *E emtom a molher disse ao segundo marido que matasse o primeiro*  
 and then the wife said to.the second husband that kill.IMPERF.SUBJ.3SG the first  
*marido e que ella teria a elle por seu marido,  $[_{CP2}$   $[_{CP3}$  o quall como nom*  
 husband and that she have.COND A him as her husband the which since not  
*quisesse fazer tamanha traiçom], a dita molher matou ao dito*  
 want.IMPF.SUBJ make.INF such betrayal the mentioned wife killed to.the mentioned  
*primeiro marido em no çeleiro].*  
 first husband in in.the barn

'And then the wife told the second husband to kill the first husband and that, in that case, she would take him to be her husband. Since he did not want to make such a betrayal, the mentioned wife killed the first husband in the barn.'

(CdP; Crónica da Ordem dos Frades Menores (1209-1285), 15th century-manuscript)

- (29) *Admite além disso a nossa língua com grande elegância, e particular graça as*  
 admits besides that the our language with great elegance and particular grace the  
*metáforas* $_i$ ,  $[_{CP2}$   $[_{CP3}$  *as quais*] $_i$  *como se podem aplicar a tantas cousas], fica uma*  
 metaphors the which since REFL can.3PL pply to so.many things stays a  
*mesma sentença servindo a muitos sentidos].*  
 same sentence serve.GER to many meanings

'With great elegance and particular grace, our language also admits the metaphors. Since the metaphors can apply to many things, the same sentence can get many meanings.' (< CdP; Manuel Severim de Faria, Discursos Vários Políticos, 1631)

## 1.3 Islands vs. non-islands

In this section, I would like to look more closely at the relation between the nature of a given embedded clause and the availability of *relative Verschränkung*. More specifically, I will

<sup>6</sup> <http://www.corpusdoportugues.org>.

show that in the case of some embedded clauses, clausal pied-piping by and long-distance extraction of a relative pronoun are both attested. In other cases, extraction is not attested and pied-piping by the relative pronoun seems to be the only option.

The question thus arises of whether we are dealing with a fairly unrestricted process of clausal pied-piping or, alternatively, with the more narrow phenomenon of island pied-piping, which only takes place as a 'last resort', that is to say: the whole clause, a syntactic island for extraction, is moved because the mere extraction of the wh-phrase as such is not available because the containing CP is an island. To answer this question, I will investigate in the next section which embedded clauses qualify as a (strong) propositional island in Latin. For now, I will only be concerned with the behaviour of relative wh-words, pending the discussion of interrogatives until section 3 of the present chapter.

### 1.3.1 Complement clauses

I will first look at a number of finite and non-finite complement clauses, and I will show that they exhibit a mixed behaviour with respect to relativization. I will conclude that pied-piping of complement clauses by relative pronouns is possible, but not obligatory.

#### 1.3.1.1 Long extraction out of complement clauses

Drawing on the traditional descriptive literature (esp. Kunst 1908a,b) and on my own examination of the corpus material available to me, I have been able to find numerous attested examples of extraction from various types of complement clauses. (30) shows an extraction from an embedded question, (31-32) from an embedded declarative, and (33-35) illustrates extraction from complement clauses introduced by the complementizers *quin* and *ut* ('that') and the negative complementizer *ne* ('that not'). Although I cannot present any detailed (statistical) information about long extractions in Latin, it seems safe to conclude on the basis of these that such clauses are not islands.

Let's have a look at the examples. In (30), the accusative pronoun *quas* ('which') is extracted from an embedded interrogative introduced by the wh-phrase *a quo* ('from whom').

- (30) *Quibus omnibus ita demum similis adolescet, si imbutus [honestis artibus]<sub>i</sub>*  
 by.whic all.ABL so only similar.NOM he.will.grow.up if imbued right skills.ABL  
 *fuerit [CP<sub>2</sub> *quas*<sub>j</sub> plurimum refert [CP<sub>3</sub> [*a quo*] potissimum *t<sub>i</sub> accipiat*]].*  
 will.have been which.ACC most.ADV it.is.important from whom.ABL especially he.receives.SUBJ  
 'He will grow up to be like all of them only if he will be taught the right skills.  
 Concerning those skills, it is of utmost importance by whom they are taught.'  
 (= Pli. Ep. 3.3.2)



Next up are two examples of long relativization out of a declarative complement clause. These are non-finite CPs, not introduced by an overt complementizer (cfr. ch. 3, section 3.1.3):

- (31) *Hic est enim [ille uoltus]<sub>i</sub> semper idem, [CP<sub>2</sub> quem<sub>i</sub> dicitur Xanthippe  
here is PRT that.NOM face.NOM always same.NOM which.ACC is.said X.NOM  
praedicare solita [CP<sub>3</sub> t<sub>i</sub> in uiro suo fuisse Socrate]].*  
proclaim.INF used.to.NOM in husband.ABL her.ABL have.been.INF S.ABL  
'Here we have that typical look, always the same. According to the story, Xanthippe  
used to shout openly that her husband Socrates looked that way.' (= Cic. Tusc. 3.31)
- (32) *Nec uero ea frons erat quae [M. Crassi illius ueteris]<sub>i</sub>, [CP<sub>2</sub> quem<sub>i</sub>  
and.not PRT that.NOM face.NOM was which.NOM M.C.GEN that.GEN old.GEN who.ACC  
semel<sub>j</sub> ait [CP<sub>3</sub> t<sub>i</sub> t<sub>j</sub> in omni uita risisse] Lucilius], sed tranquilla et  
once said in whole.ABL life.ABL have.laughed Lucilius.NOM but peaceful.NOM and  
serena.  
composed.NOM*  
'Nor did he have the expression of the old M. Crassus, about whom Lucilius said that  
he only laughed once in his entire life. Rather, his look was peaceful and composed.'  
(= Cic. Tusc. 3.31)

In (33-34), we have two extractions from finite complement clauses introduced by an overt negative complementizer, viz. *quin* 'that not' in (33) and *ne* 'that not' in (34).

- (33) *[CP<sub>1</sub> Praetermitto illa]<sub>i</sub>, [CP<sub>2</sub> quae<sub>j</sub> nemo est [CP<sub>3</sub> quin grauissime et  
I.disregard those.ACC which.ACC nobody.NOM there.is that.not most.seriously and  
uerissime t<sub>i</sub> conqueri possit]].*  
most.truly complain.INF he.could.SUBJ  
'I leave aside those matters, about which everybody could complain in a most serious  
and sincere fashion.' (= Cic. Leg. Agr. 1.21)
- (34) *Omnia perfecit [CP<sub>2</sub> [quae<sub>j</sub> senatus, <...> [CP<sub>3</sub> ne t<sub>i</sub> fieri possent]]  
everything he.achieved that.NOM senate.NO that.not happen.INF could.SUBJ  
prospexerat].*  
had.foreseen  
approx.: 'He brought about all those things, that the senate had taken care to make  
impossible.' (= Cic. Phil. 2.55)

Finally, (35) illustrates topicalization of the pronoun *hos* ('those, they') out of an *ut*-clause:

- (35) *Hos<sub>i</sub> quoque nuper institutum [ut t<sub>i</sub> saginarent plerumque], [...].*  
them.ACC also recently it.was.established that they.fatten.SUBJ most.usually  
'It also recently became common practice to fatten these.' (= Var. Agr. 3.12.5)

### 1.3.1.2 Pied-piped complement clauses

With the same clause types, pied-piping by a wh-word is attested as well. In the first series of examples given below (36-37), the evidence for this is admittedly not particularly strong, for reasons to be made clear below. However, other examples make a stronger case for clausal pied-piping of non-islands.

Consider first the examples in (36-37). In the first sentence, the nominative relative pronoun *quae* ('which') immediately precedes the interrogative phrase *qualis* ('how').

- (36) [<sub>CP1</sub> *Nihil a me audiet ex [adulescentia sua]<sub>i</sub>*, [<sub>CP2</sub> *quae<sub>i</sub> qualis t<sub>i</sub>*  
 nothing.ACC from me.ABL he.hear.FUT from youth.ABL his.ABL which.NOM how.NOM  
*fuert*, *meministis*]].  
 has.been.SUBJ you.remember.PL  
 'From me, he will hear nothing about his youth: you all know what it was like.'  
 (= Cic. Ver. I.12.32)

On the basis of linear order, it is not possible to tell whether the embedded interrogative in (36) has moved from a preverbal 'discourse neutral' base position. In the example in (37) however, the complement clause introduced by *ne* 'that not', since it surfaces to the left of the subject DP *di immortales* 'the immortal gods':

- (37) [<sub>CP1</sub> *Deteriore autem statu ut simus, unus<sub>i</sub> est [t<sub>i</sub> inferior gradus] aut interitus*  
 worse.ABL PRT situation.ABL that we.are.SUBJ one.NOM is lower.NOM step.NOM or death.GEN  
*aut seruitutis*; [<sub>CP2</sub> *quo ne trudamur*], [<sub>DP</sub> *di immortales*] *nos admonent*]].  
 or slavery.GEN which.ABL that.not we.be.coerced.SUBJ gods.NOM immortal.NOM us.ACC warn  
 'If our situation becomes one degree worse, either death or slavery await us, but the  
 immortal gods warn us not to be crushed by these.' (= Cic. De har. resp. 61)

The only weak indication that these sentences involve clausal pied-piping comes from linear order: CP3 sits in a leftward position in CP2 and the moved relative pronoun occupies the leftmost position in CP3. This would correspond to a schematic representation as in (38), where CP3 is moved to Spec,CP2.

- (38) [<sub>CP1</sub> XP<sub>i</sub> [<sub>Spec,CP2</sub> [<sub>CP3</sub> **wh<sub>i</sub>-** [<sub>IntP3</sub> **wh-** [<sub>C°3</sub> **t<sub>i</sub>** ]]]<sub>j</sub> [<sub>C°2</sub> [<sub>TP2</sub> **t<sub>j</sub>** ]]]]

However, a bracketing as in (39) is equally possible, whereby CP3 is sitting in a fairly high TP-internal position inside CP2 (say through scrambling) and the wh-word is extracted out of the scrambled CP3 to Spec,CP2.

- (39) [<sub>CP1</sub> XP<sub>i</sub> [<sub>Spec,CP2</sub> **wh<sub>i</sub>-** [<sub>C°</sub> [<sub>TP2</sub> [<sub>ForceP3</sub> [<sub>IntP3</sub> **wh-** [<sub>C°3</sub> **t<sub>i</sub>** ]]]]<sub>vP2</sub> ]]]]

As matters stand, there is nothing to decide between the two options. In (0), I give a similar sentence (cf. Mihaileanu 1911: 118 for a list with references to sentences from Cicero exhibiting the same pattern).

- (40) [...], *A. Torquatus*<sub>i</sub>, *uersatur ante oculos*, [[*cuius*<sub>i</sub> **quantum** *studium et quam insigne fuerit erga me*], *scire* [...[*necesse est utrumque uestrum*]].  
 A. Torquatus.NOM circles before eyes.ACC whose how.great.NOM zeal.NOM and how remarkable.NOM has.been.SUBJ to me.ACC know.INF necessary it.is both.ACC you.GEN.PL  
 'I clearly remember Aulus Torquatus, whose exceptional loyalty and devotion towards me must be known to both of you.' (= Cic. Fin. 2.22.72)

The stronger evidence in favour of pied-piping of non-island CPs comes from cases where a fourth CP is embedded in the island clause CP3, as in (41):

- (41) [<sub>CP1</sub> *Is*<sub>i</sub> *etiam praemia postulat*, [<sub>CP2</sub> [<sub>CP3</sub> [<sub>CP4</sub> *quibus*<sub>j</sub> [<sub>FinP4</sub> **ut** *t<sub>i</sub> ignoscatur*]]]<sub>j</sub> those.ABL PRT rewards.ACC he.vindicates which.DAT that he.forgive.SUBJ [<sub>FinP3</sub> **si** *postulet t<sub>j</sub>*]]<sub>k</sub>, *t<sub>k</sub> impudentissimus iudicetur*]].  
 if he.demands.SUBJ very.wicked.NOM he.would.be.judged.SUBJ  
 approx.: 'He even demands rewards for these men: if he demanded they be forgiven, he would be considered most shameless.' (= Cic. Phil. 8.25)

In this example, the relative pronoun *quibus* originates in CP4, a complement clause selected by the directive predicate *postulo* 'to demand'. *quibus* and the entire CP4 surface in the left periphery of the CP3, in front of the conjunction *si*. The most plausible analysis seems to be one in which CP4 has been pied-piped by *quibus*, after which CP3 is moved to the left periphery of CP2. Strictly speaking it cannot be excluded that the remnant of CP4, after extraction of *quibus*, moved on its own to the left periphery of CP3, but this seems quite unlikely.

Roughly the same can be observed in (42), modulo the different nature of CP4. In this example, it is a declarative complement clause (a so called *Accusatiuus cum Infinitiuo*), which is a non-finite clause not introduced by an overt conjunction.

- (42) [<sub>CP1</sub> [<sub>CP2</sub> [<sub>CP3</sub> [<sub>CP4</sub> *Quod*<sub>i</sub> *t<sub>i</sub> per ignotos actum*]]<sub>j</sub> [<sub>FinP3</sub> **cum** *comperisset t<sub>j</sub>*]]]<sub>k</sub>, *doleret t<sub>k</sub>*], [<sub>C°</sub> [*id*<sub>i</sub> *a suis seruis temptatum esse*] *neglegeret?*]]  
 he.deplore.SUBJ that.ACC by his.ABL slaves.ABL tried.ACC be.INF he.overlook.SUBJ  
 'If he were saddened upon learning that this has been accomplished by unknown perpetrators, would he then be indifferent if his own slaves tried to do the same?'  
 (= Cic. pro Cael. 22.54)

Additional examples where a CP is pied-piped to the left periphery of an AC include (111-112) and (175-176) further down in the present chapter, showing pied-piping of an *ut*-clause

(111), an Accusatiuus cum Infinitiuo (112), an embedded constituent question (175) and an embedded yes-no question (176). I will come back to the details of this roll-up derivation in section 2.6.1.2.

## 1.3.2 Strong islands in Latin, and some 'exotic' extractions

### 1.3.2.1 Adverbial clauses

ACs are the most robust class of propositional islands in Latin. In the corpus study that I have conducted (see ch. 3, section 3), I have found only three examples of extraction out of a tensed adjunct: these examples are listed in (43; 46-37). Outside of the corpus, I have found two more extractions ((44-45); (44) is taken from Amacker (1998)). In all of the below examples, the AC which is extracted from is clause-final. Each time, I've underscored the extracted phrase. In (43), a the direct object of a conditional clause is topicalized to a position in the left periphery of the main clause:

- (43) [Id [ego] factum eius]<sub>i</sub> improbus sim, [si defendendo t<sub>i</sub> purgare postulem].  
 that.ACC I.NOM deed.ACC his unprincipled.NOM be.SUBJ if by.defending purify.INF I.claim.SUBJ  
 'If I claimed to clear him by defending his deed, let me be unworthy.'  
 (= Fro. Epi. Haines I.254.1)

Similar examples include (44-46), where a simple DP (44-45) or a clausal complement (46) are extracted out of a clause-final adverbial clause:

- (44) Sic scalas<sub>i</sub>, [...], magis erat quaerendum, [si t<sub>i</sub> appellassent singulari uocabulo].  
 so stairs.ACC.PL more.ADV was to.be.sought if they.call.SUBJ single.ABL word.ABL  
 'Likewise, concerning the word *scalae* 'stairs', the question would be harder to answer if they had called them *scala*, singular.' (= Var. Ling. Lat. 9.69)
- (45) [Commentarios quosdam, inquam, Aristotelios]<sub>i</sub>, [...], ueni [ut t<sub>i</sub> auferrem].  
 commentaries.ACC some.ACC I.said on.Aristotle I.came to I.take.away.SUBJ  
 'I came to take away some commentaries on Aristotle.' (= Cic. Fin. 3.3.10)<sup>7</sup>

<sup>7</sup> Similar grammatical extractions are reported for English in Kirkpatrick (1982: 271). See also Truswell (2007) on violations of the Adjunct Condition in English.

- (i) a. *She bought those white-walls to put on the red car.*  
 b. [*Which car*]<sub>i</sub> did she buy those white-walls to put on t<sub>i</sub>?

- (46) *[[Quid scribam uobis, patres conscripti], aut [quo modo scribam] aut [quid omnino non scribam hoc tempore]], di me deaeque peius perdant quam perire me cotidie sentio, [CP si scio ti].*  
 what.ACC I.write.SUBJ you.DAT.PL fathers listed.VOC or what way.ABL I.write.SUBJ or  
 what.ACC at.all not I.write.SUBJ this time.ABL gods.NOM me.ACC goddesses.NOM-and worse.ADV  
 ruin.SUBJ than perish.INF me.ACC daily I.feel if I.know  
 'Let gods and goddesses ruin me cruelly than I feel myself perishing every day, if I know what I should write to you, senators, or in which manner I should write, or what I should not write at all in a moment like this.' (= Tac. Ann. 6.6.1)

Slightly different is (47), where the extracted phrase is a wh-pronoun introducing a so called *relatif de liaison* (on which see section 4 below):

- (47) *Quae; ille amentissimus fuerit [nisi ti acceperit], praesertim cum impudentissime postulauerit.*  
 which.ACC he.NOM very.stupid.NOM be.SUBJ unless accept.SUBJ especially because  
 insolently he.claim.SUBJ  
 'Unless he accepted those, he would be extremely stupid, especially because he claimed them so shamelessly.' (= Cic. ad Att. 7.17.2)

On the basis of the scarcity of the examples and taking into consideration the discussion in Amacker (1998), I speculate that extraction out of adjuncts is to be considered a stylistic phenomenon<sup>8</sup>.

### 1.3.2.2 Clausal subjects

Another class of potential strong islands is formed by free relatives that fulfill the grammatical function of subject (on the status of subjects as strong islands, see Cinque 1990: ch. 1; Szabolcsi 2006). For such patterns I am only aware of attested examples that look to involve clausal pied-piping (48-49).

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<sup>8</sup> Haegeman (1987: 215), drawing on the data discussed in Jespersen (1932, vol. III.2: 202), lists a number of English examples of similar extractions, all of which were attested in literary prose. It should be clear that sentences as (i-ii) are strictly excluded in every day speech:

- (i) *plays which<sub>i</sub> the committee itself had to turn the public out of the room and close the doors [before it could discuss t<sub>i</sub>].* (= Shaw, *The doctor's dilemma* [1911], 309)  
 (ii) *Such feelings as all men may sympathize with, and such<sub>i</sub> as there is no reason to believe they would be better and more moral beings [if they did sympathize with t<sub>i</sub>].* (= Wordsworth, *Lit.* 10)

- (48) [<sub>CP1</sub> [<sub>CP2</sub> *Cum* [...] *id*<sub>i</sub> [...] *bonum solum sit*, [<sub>CP3</sub> [<sub>CP4</sub> *quo*<sub>i</sub> **qui** *t*<sub>i</sub> *potiatur*]<sub>j</sub>  
because this.NOM good.NOM only is.SUBJ which.ABL who.NOM possesses.SUBJ  
*necesse est t<sub>j</sub> beatus sit*], [...] *qui potest esse quisquam alius alio*  
necessary it.is happy.NOM is.SUBJ how can be.INF somebody.NOM other.NOM other.ABL  
*beatior*?  
happier.NOM  
'... and because that alone is good which makes its possessor happy, how can anyone  
possibly be happier than anyone else?' (= Cic. Fin. 5.28.83)
- (49) [<sub>CP1</sub> *Qualia* [*ista bona*]<sub>i</sub> *sunt*, [<sub>CP2</sub> [<sub>CP3</sub> *quae*<sub>i</sub> **qui** *habeat t*<sub>i</sub> ], *miserrimus*  
how.NOM those.NOM goods.NOM are which.ACC who.NOM has.SUBJ unhappiest.NOM  
*esse possit*]]?  
be.INF can.SUBJ  
'Of what nature are those goods, so that he who possesses them, can be utterly  
unhappy?' (= Cic. Tusc. 5.15.45)

The data suggest that subject free relatives cannot be extracted from, but no systematic corpus research which could confirm or falsify this hypothesis has been conducted.

### 1.3.3 Summary

To sum up, from the data at my disposal I first of all would like to conclude tentatively that ACs are the only class of embedded clauses that unequivocally qualify as islands: their islandhood is probably to be understood as a result of the well known Adjunct Condition (Ross 1967, cf. ch. 1, section 3.4.1.1), which I take to be a primitive, not reduceable to independent factors (like Chomsky's (2001) Phase Impenetrability Condition). In any event, if a wh-element originates inside an AC, only a derivation with pied-piping of the entire island can converge.

(50)

| Nature of the proposition   | Island? | Pied-piping? |
|-----------------------------|---------|--------------|
| adjunct [± Tense]           | YES     | obligatory   |
| wh-complement               | NO      | optional     |
| embedded declarative        | NO      | optional     |
| subjunctive complements:    |         |              |
| - with <i>ut</i> 'that'     | NO      | optional     |
| - with <i>ne</i> 'that not' | NO      | optional     |

Table 1: Islandhood of Latin embedded clauses.

As shown in Table 1, other embedded clauses show a mixed behaviour: both extraction and pied-piping are attested. In the upcoming section, I will show that a parallel can be drawn between optional pied-piping of non-adjunct CPs and of non-adjunct DPs and PPs, where (left branch) extraction and pied-piping also coexist. Before doing so, I will make some general introductory remarks about the phenomenon of pied-piping.

## 2 Clausal pied-piping

Section 2 is organized as follows. I will start with illustrating the phenomenon of pied-piping, concentrating on DPs and PPs (section 2.1). After this, I turn to cases where an entire CP is pied-piped. Having provided some crosslinguistic data (section 2.2), I will give a detailed analysis of the syntax of clausal pied-piping, breaking down the derivation into three steps (section 2.3). In section 2.4, I will look at a proposal for applying the same three-step process of clausal pied-piping in a language without overt wh-movement. I will then briefly look at some alternative proposals (section 2.5). I will wrap up this section with some remarks about the relation between pied-piping and the successive cyclic nature of long distance phrasal movement (section 2.6).

### 2.1 Introduction: on the phenomenon of pied-piping<sup>9</sup>

Pied-piping can be defined as A'-movement of an operator where non-operator material is displaced along with the moved operator itself. This process is not unrestricted: movement of additional material is neither always possible nor always obligatory.

#### 2.1.1 Pied-piping of a DP

One sometimes distinguishes between 'light' pied-piping, where only a (simplex) preposition is moved along (51a) and 'heavy' or 'massive' pied-piping, where more material is pied-piped, for instance when a possessive genitive pied-pipes the noun it modifies (51b,c) (cf. de Vries 2006b). Furthermore, it is generally assumed that crosslinguistically, pied-piping comes in two varieties: the wh-operator can be situated in a specifier (51b) or in a complement (51c) position inside the pied-piped phrase.

- (51) a. *John*,  $[[_{CP} \textit{for who(m)}] \textit{I bought a book}]$   
b. *John*,  $[_{CP} [_{DP} \textit{whose brother}] \textit{I never met}]$

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<sup>9</sup> In two recent studies, Cable (2010a,b) has put forward against the existence of pied-piping as a primitive phenomenon. Mainly on the basis of data from Tlingit, he claims that what looks like pied-piping is actually a side effect induced by agreement of a probe with a Q-feature (for 'Question') with which a constituent containing a wh-word is endowed. However, this novel theory is almost exclusively based on pied-piping by interrogative elements. Cable (2010a) does not discuss pied-piping by relative A'-movement at all. Cable (2010b: 200-209) makes a tentative proposal to extend the Q-analysis to pied-piping in headed relative clauses, free relatives and focus environments, claiming that the Q-feature is not inherently associated with interrogativity. In any event, a reductionist theory along these lines will have to account for the cross-linguistic generalization that pied-piping is more readily available in relative than in interrogative environments.

c. *John*, [<sub>CP</sub> [<sub>DP</sub> *the brother of whom*] *I never met*]

Some languages with overt wh-movement only allow for pied-piping from a specifier position. Latin is one such language: wh-words always appear at the left edge of a pied-piped constituent (see section 2.3.1.2 for illustration and discussion).

Consider the following Latin examples, where a attributive relative pronoun pied-pipes the NP it modifies. In (52), *cuius* ('whose'), the relative wh-word in its left peripheral position, is accompanied by some non-operator material *uictoriam* ('victory'). Instead of the operator *cuius* being extracted out of the DP, the entire DP *cuius uictoriam* is displaced, as would be the case in English too.

- (52) *Ille deos sui sceleris ultores adesse confessus adiecit [...]*  
 that.NOM gods.ACC his.GEN crime.GEN avengers.ACC be.present.INF confessed.NOM added.PF  
*Alexandro<sub>i</sub> propitios, [<sub>CP</sub> [<sub>DP</sub> *cuius<sub>i</sub> uictoriam*]<sub>j</sub> [<sub>TP</sub> *semper etiam hostes t<sub>j</sub> adiuuissent*]].*  
 A.DAT propitious.ACC whose victory.ACC always even enemies.NOM had.helped.SUBJ  
 'He confessed that the gods were present to avenge his crimes, and he added that they were propitious to Alexander, whose victory even his enemies facilitated.'  
 (= Q.-Curt. Hist. Alex. 7.5.25)

However, in an example like (52), one could argue that it is not actually the case that pied-piping has taken place, but that the wh-word *cuius* alone has undergone string vacuous movement out of a scrambled object DP, the remnant of which remaining in TP. Under such a scenario, the string *cuius uictoriam* would not be a syntactic constituent.

Consider now (53), which shows an example of a pied-piped DP in the left periphery of an AC. In an example like this, it is much less likely that the linear adjacency of the genitive and the noun it modifies were accidental. It seems safe to conclude that *praecepta* in (53) did not move on its own to the left periphery of the *si*-clause; rather, it was taken along by *cuius*.

- (53) [<sub>CP</sub> [<sub>DP</sub> *Cuius praecepta*]<sub>i</sub> [<sub>FinP</sub> *si uel temere ab indoctis, dum tamen agrorum*  
 whose precepts.NOM if PRT randomly by uneducated.ABL while PRT fields.GEN  
*possessoribus, antiquo more t<sub>i</sub> administrarentur*]], *minus iacturae paterentur*  
 owners.ABL ancient way.ABL were.applied.SUBJ less.ACC loss.GEN would.suffer.SUBJ  
*res rusticae.*  
 matters agricultural.NOM

'If his precepts were put to practice in the good old way, even if it were by people without any training (but still landowners), the agricultural business would suffer smaller loss.' (= Col. Agr. Praef. 11)



### 2.1.2 (Left Branch) Extraction

In some cases of A'-movement, it is only the word bearing the operator feature that undergoes movement. This type of extraction is disallowed in a number of languages, but is attested in Latin, Ancient and Modern Greek and many Slavic languages. In the literature, this is known as Left Branch Extraction (see a.o. Ross 1967; Bošković 2005a,b; cf. Abels 2003 for a different view). As an example, I give the Latin sentences in (54-55), where wh-genitives are extracted out of the DP in which they originate. In (54), the wh-genitive is extracted from a postverbal direct object:

- (54) *Atque ego satis mirari non possum, quid ita dicendi cupidi  
and I.NOM enough wonder.INF not I.can why so saying.GER.GEN desiring.NOM  
seligant oratorem<sub>i</sub>, [<sub>CP</sub> cuius<sub>i</sub> [<sub>C°</sub> imitentur [<sub>DP</sub> eloquentiam <sub>t<sub>i</sub>]]].  
choose.SUBJ orator.ACC whose they.imitate.SUBJ eloquence.ACC  
'And I can't stop wondering why people who want to speak elegantly are so careful in  
choosing an orator whose eloquence they want to imitate.' (Col. Agr. Praef. 3)</sub>*

In (55), a relative pronoun is extracted to the left periphery of an AC. The wh-prase and the DP-remnant are separated from each other by the conjunction *cum*:

- (55) [<sub>CP</sub> Cuius<sub>i</sub> [<sub>FinP</sub> cum [<sub>DP</sub> aduentu <sub>t<sub>i</sub></sub>] maxime perturbatus esset Antonius]] [...]   
whose when arrival.ABL highly disturbed.NOM was.SUBJ Antonius.NOM  
*declaravit, quam odisset senatum [...].*  
he.declared.PF how he.hated.SUBJ senate.ACC  
'When Antonius was heavily disturbed upon his arrival, he openly showed to what  
extent he despised the senate.' (= Cic. Phi. 9.7)

### 2.1.3 Frequency of pied-piping

Comparing the two possibilities just described, one can say that pied-piping definitely is the more frequent option. With the CD-ROM Hyperbase, I built a small corpus to investigate the pied-piping behaviour of the relative wh-pronoun *qui* when used adnominally. I've looked at occurrences of the form *cuius*, the genitive singular of *qui*, in a corpus with texts from 8 different authors (Sallustius (*Bellum Catilinae*), Caesar (*Bellum Gallicum*), Cicero (*Philippics*), Pliny the Younger (*Panegyricus*), Petronius (*Satyricon*), Seneca (*de Beneficiis*), Quintus Curtius (*Historiae*) and Tacitus (*Historiae*). I only took into account cases where the genitive could be interpreted as a possessor<sup>10</sup>.

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<sup>10</sup> I left out all the cases where (i) *cuius* was used as a complement of a noun (e.g. *usus* 'use'), a verb (e.g. *pudet* 'to be ashamed of'), an adjective (e.g. *avidus* 'eager') or a preposition (e.g. *gratia* 'because of'), (ii) *cuius* and its head noun were only separated by a (second position) clitic, (iii) *cuius* had received genitive case through the

The results are summarized in Table 2. Left Branch Extraction was attested in over 18% of the cases: leftward movement of *cuius* 'whose' strands a remnant DP or PP in a clause internal position, yielding a discontinuous constituent.

(56)

|                    | n = | %       |
|--------------------|-----|---------|
| <b>Total</b>       | 256 | 100,00% |
| <b>Pied-piping</b> | 209 | 81,64%  |
| <b>LBE</b>         | 47  | 18,36%  |

Table 2: frequency LBE as compared to pied-piping of a DP/PP by a genitival relative pronoun.

It is not clear to me whether any discourse-related difference in interpretation is related to the presence or absence of pied-piping<sup>11</sup>.

Thus far, I only considered pied-piping of DPs and PPs. However, in some languages it is possible for operators to pied-pipe even larger constituents, namely entire clauses. I will have a closer look at this phenomenon in the following section.

## 2.2 Clausal/island pied-piping crosslinguistically

It has long been observed that it is possible in some languages for an operator to pied-pipe an entire clause. In some cases, the pied-piped clause itself is an island. Classical references to the relevant literature include Cole (1985) on Imbabura Quechua and Ortiz de Urbina (1989, 1993) and Arregi (2003) on Basque.

### 2.2.1 Imbabura Quechua

In these cases, the pied-piping operators are typically interrogative wh-words. Clausal pied-piping of non-islands is optional, whereas it is obligatory when the constituent to be extracted

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process known as case attraction (i.e. when the wh-pronoun of a (light) headed relative clause inherits the case of its external head).

<sup>11</sup> Heck (2008: 276ff.) suggests that there might be a correlation between the availability of scrambling in a given language on the one hand and optional pied-piping on the other (compare the discussion on the alleged pied-piped infinitives in German in section 2.5.1). The idea is that non-island DPs are always transparent for extraction if they are sitting in their base position. In those cases, pied-piping is not an option. If the same DP has undergone scrambling, a freezing effect arises and the entire category becomes opaque: pied-piping is then not an option, it is the only option. The apparent optionality of pied-piping would then be reduced to independent factors and could perhaps be dispensed with. A different line of reasoning to get rid of the optionality of certain 'free' pied-piping/non-pied-piping alternations is developed in Abels (2003): see Heck (2009: 95-97) for a short summary.

is situated inside an island or generally disallows extraction, as for instance subjects of embedded clauses in Imbabura Quechua. This is illustrated in (57), from Cole (1985: 20). (57a) shows a declarative main (CP1) clause with an embedded declarative (CP2) as the complement of the main clause predicate.

- (57) a.  $[_{CP1} [_{TP1} [_{CP2} \text{Juan wagra-ta randi - shka}] - ta \text{ ya - ni}]]$ .  
           Juan cow-acc buy - nominalizer-acc think - 1  
           'I think Juan bought a cow.'

(58b) shows that the embedded subject resists extraction. However, it is possible to form a matrix question where by pied-piping the entire embedded clause to the left periphery of the main clause (57c):

- b. \*  $[_{CP1} pi_i - \text{taj} \text{ ya-ngui} [_{CP2} t_i \text{ wagra-ta randi-shka}] - ta]$ ?  
           who-INT think-2 cow-acc buy-nominalizer-acc  
           intended: 'Who do you think bought a cow?'  
 c.  $[_{CP1} [_{CP2} pi \text{ wagra-ta randi -shka}]_i - ta - \text{taj} [_{TP1} t_i \text{ ya-ngui}]]$ ?  
           who cow-acc buy - nominalizer - acc -INT think -2  
           'Who do you think bought a cow?'

## 2.2.2 Basque

An other well documented clausal pied-piping language is Basque (Ortiz de Urbina 1989, 1993). In Basque, both adjuncts (58a) and complex NPs (58b) cannot be extracted from:

- (58) a. \* *Zer joan ziren hemen-dik* [ $t_i$  *ikusi ondoren*]?  
           what go aux here-from see after  
           lit 'What did he leave after seeing?' (from Ortiz de Urbina 1989: 252, his (95iii))  
 b. \* *Nori*  $i$  *irakurri duzu* [*Mikelek*  $t_i$  *eman dio-n*] *liburua*?  
           who read have Mikel given aux-comp book  
           lit. 'To whom have you read the book that Mikel gave?'  
           (Ortiz de Urbina 1993: 194, his (14))

However, constituents inside them can freely be questioned, with the embedded question word having matrix scope. Crucially, in such cases rather than the question word as such, it is the entire island which undergoes movement to the left periphery of the main clause. In these examples, pied-piping can thus be considered a strategy to avoid an illicit extraction.

- (59) a. ? $[_{CP1} [_{CP2} \text{Zer ikusi ondoren}]_i [_{C^o} \text{joan ziren hemen-dik } t_i]]$ ?  
           what see after go aux here-from  
           'They left after seeing what?' (Ortiz de Urbina 1989: 249, his (89i))

- (60) [<sub>CP1</sub> [<sub>DP</sub> [<sub>CP</sub> **Nork** *barreiatu du-en*] *zurrumurrua*] [<sub>C°1</sub> *entzun duzu*]]?  
           **who** spread has-COMP rumour heard have  
 'The rumour that who spread have you heard?' (Ortiz de Urbina 1993: 211, his (50a))

Note in passing that in (61), a case of adjunct pied-piping similar to (59), the question word *zer* ('what') is not the leftmost phrase in the pied-piped clause: it is preceded by a topicalized element (examples from Ortiz de Urbina 1993: 195, his (16a)):

- (61) [<sub>CP1</sub> [<sub>CP2</sub> [<sub>TopP2</sub> *Mikeli* [<sub>IntP2</sub> **zer** *esan ondoren*]]] [<sub>C°1</sub> *joan zen etxetik*]]?  
           Mikel.DAT **what** say after go AUX home.from  
 'After saying what to Mikel did he leave home?'

Ortiz de Urbina (1993: 195) goes on to show that a clause containing a wh-word can undergo long movement. In (62), CP3 is the complement of the predicate of CP2, and it is moved all the way up to the left periphery of CP1:

- (62) [<sub>CP1</sub> [<sub>CP3</sub> **Nor** *etorriko d-ela*]<sub>i</sub> [<sub>C°1</sub> *esan du Mirenek* [<sub>CP2</sub> *t'i uste du-ela Peruk*]]]?  
           **who** come aux-that said has Miren think aux-that Peru  
 'That who will come has Mary said that Peter thinks?'

### 2.2.3 Malayalam

Finally, a form of clausal pied-piping has also been argued to exist in Malayalam: it is discussed in Srikumar (2007). The author first shows that question formation in Malayalam involves a process of clefting. It always involves the copula/focus marker (Foc°), with a phrase sitting to its left (in Spec,Foc):

- (63) **aaRA** *aaNA kuTTiy-e nuLLiy-atA*?  
           who FOC child-ACC pinch-NOMNR  
 'Who is it that pinched the child?' (from Srikumar 2007: 53, his (1c))

I will abstract away from issues concerning the syntax of the copula/focus particle *aaNA* in the focus head, and concentrate only on the phrase that is moved to Spec,FocP, and which is always left adjacent to *aaNA* (Srikumar 2007: 54). Throughout this section, I will mark the focalized phrase in boldface.

The author goes on to show that Malayalam possesses two strategies for questioning constituents in finite embedded clauses: long-distance extraction and clausal pied-piping. The former is subject to a specific kind of complement/non-complement asymmetry, which has been familiar in the generative tradition since Huang (1982), but which has not been touched

upon in the present work<sup>12</sup>. The relevant asymmetry concerns the nature of the extracted phrase rather than the domain out of which a phrase is extracted<sup>13</sup>.

The asymmetry is illustrated in (64) (from Srikumar 2007: 57, his (10a,b,c)). (64a) shows that extraction of a direct object is relatively acceptable. On the other hand, extraction of a subject (64b) or an adjunct (64c) out of the same kind of complement clause are completely ungrammatical.

- (64) a. ? *aar-e<sub>i</sub> aaNA* [<sub>CP2</sub> *raaman t<sub>i</sub> kaNTu ennA*] *niŋŋaL paRaññ-atA?*  
 who-ACC FOC Raman saw COMP you said-NOMNR  
 'Who did you say that Raman saw?'
- b. \* *aarA<sub>i</sub> aaNA* [<sub>CP2</sub> *t<sub>i</sub> kuTTiy-e kaNTu ennA*] *niŋŋaL paRaññ-atA?*  
 who FOC child-ACC saw COMP you said-NOMNR  
 int.: 'Who did you say saw the child?'
- c. \* [*enviTe veccA*]<sub>i</sub> *aaNA* [<sub>CP2</sub> *raaman t<sub>i</sub> kuTTiy-e kaNTu ennA*] *niŋŋaL paRaññ-atA?*  
 where at FOC Raman child-ACC saw COMP you said-NOMNR  
 int.: 'Where did you say that Raman saw the child?'

However, if the entire finite embedded clause is fronted to the left of the focus marker *aaNA*, the result becomes perfectly acceptable (from Srikumar 2007: 57, his (11a,b,c)):

- (65) a. [<sub>CP2</sub> *raaman aar-e kaNTu ennA*]<sub>i</sub> *aaNA t<sub>i</sub> niŋŋaL paRaññ-atA?*  
 Raman who-ACC saw COMP FOC you said-NOMNR  
 'Who did you say that Raman saw?'
- b. [<sub>CP2</sub> *kuTTiy-e aarA kaNTu ennA*]<sub>i</sub> *aaNA t<sub>i</sub> niŋŋaL paRaññ-atA?*  
 child-ACC who saw COMP FOC you said-NOMNR  
 'Who did you say saw the child?'
- c. [<sub>CP2</sub> *raaman kuTTiy-e eviTe veccA kaNTu ennA*]<sub>i</sub> *aaNA t<sub>i</sub> niŋŋaL paRaññ-atA?*  
 Raman child-ACC where at saw COMP FOC you said-NOMNR  
 'Where did you say that Raman saw the child?'

Observe however that the interrogative phrases (underscored) in the fronted CP2s in (65) are never situated in a leftward position inside CP2 (just as in the Basque example in (61) in the preceding section)<sup>14</sup>. Arguably, the wh-phrases have not undergone the kind of 'internal wh-movement' to be described shortly (section 2.3.1).

In the following sections, I will provide detailed description of the syntax of clausal pied-piping. As will be seen, this process is decomposed into three independent and more

<sup>12</sup> Both options are freely available for infinitival phrases.

<sup>13</sup> which means that the asymmetry is more a matter of the ECP than of the CED.

<sup>14</sup> see fn. 30 below for further discussion on the position of the pied-piper in a pied-piped CP.

elementary steps: (i) 'internal wh-movement', (ii) feature percolation which transforms the clause into a 'derived' operator, (iii) A'-movement of the derived operator.

## 2.3 The syntax of clausal pied-piping

The first of the three steps to be discussed is so called 'internal wh-movement'. In languages like Latin, this internal movement is a precondition for pied-piping, and it seems to be intimately related to the cyclic nature of long distance A'-dependencies. The second step is the (notoriously elusive) process of feature percolation, whereby a large constituent hosting a wh-element is transformed itself into an operator. The third and final step is the actual A'-movement, by means of which the derived operator reaches its final scope position.

### 2.3.1 Step 1: internal wh-movement

With Heck (2008: 89), I define internal wh-movement negatively as wh-movement that targets an intermediate position which is not its ultimate scope position. I will illustrate this phenomenon with a number of well-documented case studies.

#### 2.3.1.1 Tzotzil genitive possessors

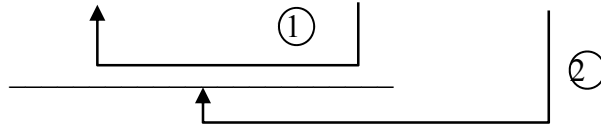
Some languages with overt wh-movement only allow for pied-piping from a specifier position. Data from the Mesoamerican language Tzotzil can illustrate this quite nicely. Tzotzil exhibits a remarkable discrepancy between wh- and non-wh genitival arguments inside DPs. Genitive possessors in Tzotzil obligatorily follow their head noun (examples from Aissen 1996: 454-455, her (22) and (25)):

- (66) a. [<sub>DP</sub> *s-p'in li* [<sub>DP</sub> *Maruch-e*]]  
          A3-pot the Maruch-ENC  
          'Maruch's pot.'  
      b. \* *li Maruch s-p'in ...-e*  
      c. \* *Maruch s-p'in*

The DP in (66a) consists of a noun *sp'in* 'pot' and a genitive possessor *Maruche* 'of Maruch'. The starred examples show that the order 'genitive-noun' is ungrammatical with (66b) or without (66c) overt determiner. However, a Tzotzil wh-genitive (i.e. *buch'u* 'whose') which pied-pipes a DP can only appear in prenominal position (Aissen 1996: 457, her (32)):

(67) a. *Buch'u x-ch'amal i-cham?*  
 who A3-child CP-died  
 'Whose child died?'

b.  $[_{CP} [_{DP} \text{Buch'u}_i [_{D^\circ} \text{x-ch'amal } t_i]]_j [_{C^\circ} \text{i-cham } t_j ]]$ ?



c.  $*[_{CP} [_{DP} \text{X-ch'amal buch'u}_i] [_{C^\circ} \text{i-cham } t_i ]]$ ?



Aissen analyzes the leftward movement of the genitive as movement to Spec,DP (arrow (1) in (66b)). As shown in the examples, this is not the actual relativization operation. Rather, it is an instance of internal wh-movement, after which the entire DP moves to Spec,CP (arrow (2)). The c-example shows that displacement of the DP to Spec,CP without internal wh-movement (i.e. with the wh-genitive in a postnominal position, is ungrammatical. This would be a case of 'brother of whom'-pied-piping (cf. (50b)). The empirical generalization is that in Tzotzil, internal wh-movement is a precondition for pied-piping.

### 2.3.1.2 Latin genitival wh-modifiers

Genitival modifiers in Latin DPs can occur in prenominal (68) and postnominal (69) position, presumably with discourse-related differences in meaning. At least syntactically then, the distribution of such genitival modifiers could be said to be 'free', though much depends on the extent to which discourse related interpretative elements are syntactically encoded:

(68) *patrum memoria*  
 fathers.GEN.PL memory.ABL  
 'in the memory of our fathers' (= Caes. Gal. 6.3)

(69) *memoria rerum gestarum*  
 memory.ABL deeds.GEN achieved.GEN  
 'in the memory of great achievements' (= Cic. ad Fam. 10.32.3)

Differently from the above, the distribution of wh-genitives is not free: they always appear in prenominal position:

(70) a. *cuius res gestae*  
 whose.SG deeds.NOM achieved.NOM  
 \* b. *res gestae cuius*  
 'whose (sg.) great achievements' (= Cic. Balb. 16)

- (71) a. *quorum res gestae*  
 whose.PL deeds.NOM achieved.NOM  
 \* b. *res quorum/quarum*  
 'whose (pl.) great achievements' (= Cic. Rep. 1.13)

It seems reasonable to claim that the Latin cases of pied-piping in (70a) and (71a) display generalized internal wh-movement: a wh-operator is always moved to the left edge of the pied-piped phrase<sup>15</sup>.

<sup>15</sup> As a rule, a wh-genitive is the leftmost element of a pied-piped DP. In PPs, matters are less clear. First, PPs with a bare wh-complement show both the orders 'P-wh' (garden variety) and 'wh-P' (as in (i), less common):

- (i) *deinde leges nobis caras esse [...] propter earum rerum, [[quibus de] scriptum est], utilitatem [...].*  
 then laws.ACC us.DAT dear.ACC be.INF because.of these things.GEN which.ABL about written.NOM is utility.ACC  
 'Moreover, laws are dear to us because of the advantage of those things, about which they are written.'  
 (= Cic. Inv. 2.141)

It is not clear whether in (i) we are dealing with (internal) wh-movement to Spec,PP or with the more general phenomenon known as 'anastrophe', whereby a preposition follows the complement that it case marks. This is especially common when the preposition *cum* 'with' is combined with a personal pronoun, e.g. *mecum* 'with me', *uobiscum* 'with you (pl.)', but other combinations are attested as well (see Kühner-Stegmann 1966<sup>2</sup>: vol. II.1: 585-587). Given the obvious parallel with Greek anastrophe, where anastrophe has a clear prosodic reflex (the accent of oxytonic bisyllabic prepositions shifts to the first syllable under anastrophe), it might be the case that (some cases) of anastrophe in Latin are phonologically driven (cf. also Merchant 2002 on 'swiping', i.e. the order 'wh-P' in sluices in some Germanic languages, where an analysis in terms of phonological reordering is proposed). Second, in PPs whose complement is a DP with a wh-determiner *and* a nominal restriction, the wh-word can either occur in front (ii-iii) of or immediately after P (iv). The former cases stand a better chance of being analyzed as derived by means of internal wh-movement to Spec,PP, with subsequent pied-piping to Spec,CP.

- (ii) *Patriae liberatores urbe carebant ea<sub>i</sub>, [CP [PP cuius<sub>i</sub> [P° a [DP t<sub>i</sub> ceruicibus]]] j iugum servile t<sub>j</sub> deiecerant].*  
 nation.GEN liberators.NOM city.ABL lacked.IMPF that.ABL whose from neck.ABL.PL yoke servile.ACC  
 they.had.thrown.off  
 'The liberators of the country were absent from that city, from whose neck they had thrown off the yoke of slavery.' (= Cic. Phil. 1.6)
- (iii) *[CP [PP Quarum<sub>i</sub> [P° ex [DP t<sub>i</sub> uestigiis]]] j [cum est animaduersum a uenatoribus t<sub>j</sub> [quo se recipere consuerint]]], omnes eo loco aut ab radicibus subruunt aut accidunt arbores tantum ut summa species earum stantium relinquatur.*  
 whose from traces.ABL when it.is noticed.NOM by hunters.ABL where REFL retreat.INF  
 they.are.used.SUBJ all.ACC that place.ABL or from roots.ABL they.dig.under or they.cut trees.ACC so.far that  
 entire from.NOM their.GEN standing.GEN remains.SUBJ  
 'When hunters have spotted their traces and have found out where they usually hide, they dig holes at the roots of all the trees at that place, or they cut them so that it only seems that they're still standing upright.' (= Caes. B.G. 6.27)
- (iv) *Atque ipsis<sub>i</sub>, [CP [PP [P° ad [DP quorum<sub>i</sub> t<sub>i</sub> commodum]]] j t<sub>j</sub> pertinebat], durior inuentus est Caelius.*  
 and the.same.DAT to whose benefit.ACC it.pertained harder.NOM found.NOM was Caelius.NOM  
 'And by the same people, whose interests were at stake, Caelius was found very hard to deal with.'  
 (= Caes. Bel. Ciu. 3.20)



- (72) a. [<sub>DP</sub> cuius<sub>i</sub> [<sub>D°</sub> memoria t<sub>i</sub>]]  
 b. [<sub>DP</sub> cuius<sub>i</sub> [<sub>D°</sub> t<sub>i</sub> memoria]]

The picture is a bit less clear than in Tzotzil, since as such the linear order 'Genitive-NP' is not parasitic on wh-movement. However, the systematicity of wh-genitives occurring in prenominal position strongly suggests that we are dealing with the same phenomenon, modulo a more flexible word order in Latin.

### 2.3.1.3 German pied-piped infinitives

I will now briefly discuss the well known pattern of German infinitives containing a wh-argument, which have been the subject of quite a lively debate in the generative literature. The construction is exemplified in (73-74). The d-pronouns *den* and *das* introducing the relative clauses are located leftmost in these clauses, and the sequence '*zu* + infinitive' are situated to the left of the subject, twice the pronoun *er* 'he':

- (73) *Jetzt hat er sich endlich [den Wagen]<sub>i</sub>, [CP den<sub>i</sub> zu kaufen er sich schon lange vorgenommen hatte], leisten können.*  
 now has he.NOM REFL at.last the.ACC car.ACC which.ACC to buy.INF he.NOM REFL already  
 a.long.time planned had buy.INF be.able.INF  
 'Now he has finally been able to afford the car which he had planned to buy for a long time.' (from Van Riemsdijk 1985: 165, his (1a))

- (74) ... [*das Buch*]<sub>i</sub> ... , [*CP das<sub>i</sub> zu lesen er uns empfohlen hatte*].  
 the.NOM book.NOM which.ACC to read.INF he.NOM us.DAT recommended had  
 'The book, to read which he had recommended to us.' (from van Riemsdijk 1994: 331)

The main difference with the examples discussed thus far is the fact that the infinitivals under discussion are not islands. As the grammaticality of (75) shows, extraction of the relative pronoun from the infinitival clause is perfectly grammatical, without any obvious difference in interpretation:

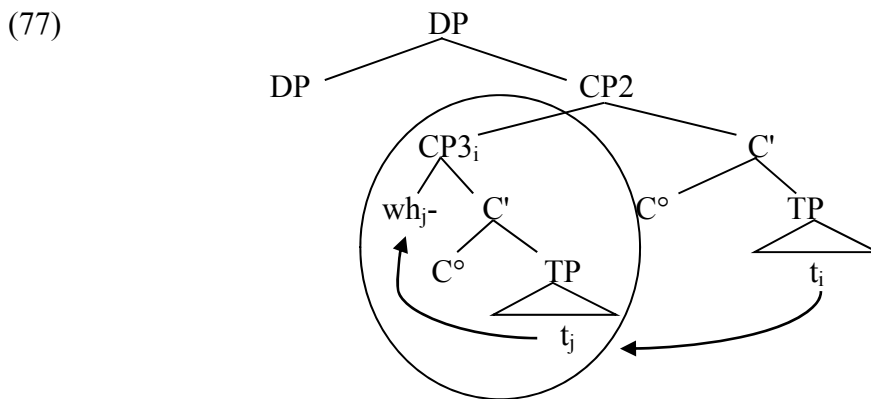
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Concerning (i), there is no real hard proof that the entire PP sits in Spec,CP as one constituent: it is possible that the wh-word is extracted out of the argument-PP, and that the linear adjacency of the wh-word and the remnant PP is accidental. This is less likely for (ii), since all the material of the PP sits in front of the subordinating conjunction *cum*, i.e. clearly in CP. Moreover, the PP is probably a genuine adjunct and thus an island for extraction. The pattern 'wh-P-NP' is also found in the idiom *qua de causa* ('for which reason') and in the fully lexicalized form *quemadmodum* ('how' (interrogative, exclamative or relative)), arguably reanalyzed as one word out of the original phrase [<sub>PP</sub> quem<sub>i</sub> [<sub>P°</sub> ad [<sub>DP</sub> t<sub>i</sub> [<sub>NP</sub> modum]]]] '(lit.) to which manner'. For general discussion of word order in PPs, see Marouzeau (1947), Bendz (1948) and Clackson (2004).

(75) *Das Buch, das<sub>i</sub> er uns [t<sub>i</sub> zu lesen] empfohlen hatte.*

Still, examples like (73-74) have been analyzed as involving pied-piping of the infinitival clause (CP3), most notably by Ross (1967) and by van Riemsdijk (1985, 1994)<sup>16</sup>. (76-77) provide a schematic representation of van Riemsdijks analysis:

- (76) a. [CP<sub>1</sub> Jetzt hat er sich endlich [den Wagen]<sub>i</sub>, [CP<sub>2</sub> [CP<sub>3</sub> den<sub>j</sub>; [TP PRO t<sub>j</sub> zu kaufen]]<sub>i</sub> er sich t<sub>i</sub> schon lange vorgenommen hatte], leisten können].  
 b. [CP<sub>1</sub> .... [DP das Buch [CP<sub>2</sub> [CP<sub>3</sub> das<sub>j</sub> [TP PRO t<sub>j</sub> zu lesen]]<sub>i</sub> er uns t<sub>i</sub> empfohlen hatte]]]



Although at present, there is anything but a consensus about the correct analysis of this construction (cf. also section 5.2.5.1), it can serve to illustrate one important point. As indicated in (76-77), van Riemsdijk (1985) postulates that the relative pronoun has itself undergone movement inside the category it pied-pipes. One argument for such a position comes from the observation of the pair in (78-79). In German, the clitic pronominal *es* ('it') shows a strong preference for the immediately postverbal position in subject first main clauses or for the position right adjacent to the subject in embedded clauses (examples from van Riemsdijk 1985: 167, his (4-5)):

- (78) a. *Ich nehme es [PP mit ihm] auf.*  
 I.NOM take it.ACC with him.DAT up  
 'I challenge him.'  
 b. *?\* Ich nehme [PP mit ihm] es auf.*
- (79) a. *Ich sage das ich es [PP mit ihm] aufnehme.*  
 I.NOM say that I.NOM it.ACC with him.DAT up-take.INF  
 'I say that I challenge him.'  
 b. *?\* Ich sage das ich [PP mit ihm] es aufnehme.*

<sup>16</sup> However, the analysis in terms of (clausal) pied-piping is far from generally accepted (see Haider 1985; Grewendorf 1986; Müller 1995 for criticism, and Heck 2008: 109-115 for an overview of the literature on the topic).

In regular clauses, the order 'PP - pre-subject pronoun' is strongly dispreferred (78b). However, the reverse pattern is shown inside pied-piped infinitives (79). This observation leads van Riemsdijk to the conclusion that the PP itself undergoes movement inside the larger pied-piped CP, as indicated by the bracketing in (80a). He calls this 'internal wh-movement'<sup>17</sup>.

- (80) a. *Mohammed Ali ist ein Mann, [CP<sub>2</sub>[CP<sub>3</sub>[PP mit dem]<sub>j</sub> [C° es t<sub>j</sub> aufnehmen zu wollen]]<sub>i</sub>, reiner Wahnsinn wäre t<sub>i</sub>].*  
M. A. is a.NOM man.NOM with whom.DAT it.ACC take-up.INF to  
want.INF pure.NOM madness.NOM were.SUBJ  
'Mohammed Ali is a man, to challenge whom would be sheer madness.'
- b. *?\* Mohammed Ali ist ein Mann, [CP es [PP mit dem] aufnehmen zu wollen]<sub>i</sub>, reiner Wahnsinn wäre t<sub>i</sub>.*

I will assume that a wh-phrase undergoing internal wh-movement targets the highest possible position in a given cyclic domain, higher than all the specialized functional projections which are associated with particular scope-discourse interpretations. I will label this position EdgeP, and I will assume that it does not lend to the phrases it hosts any specific interpretation. As will be made clear in section 2.6, I consider EdgeP to be identical with the intermediate landing site for phrases undergoing successive cyclic movement. The main motivation for this assumption is the striking similarity between successive cyclic movement and repeated internal wh-movement which will be illustrated in section 2.6.1.1 on the basis of data from Finnish. In the same section, I will discuss the trigger for movement to EdgeP.

### 2.3.1.4 The 'Edge Generalization'

From the above sections, the descriptive generalization emerges that in some languages, pied-piping wh-words end up being located in the highest specifier of the pied-piped category. Heck (2008: 88) subsumes this pattern under the 'Edge Generalization', a not-exceptionless descriptive generalization which is given in (56), whereby '[i]t is quite appropriate to conceive of the 'edge of  $\beta$ ' as a position that is not dominated by any maximal projection except for  $\beta$ ' (ib.):

- (81) Edge Generalization  
I a wh-phrase  $\alpha$  pied-pipes a constituent  $\beta$ , then  $\alpha$  must be at the edge of  $\beta$ .

---

<sup>17</sup> I use this term throughout this thesis, to refer to overt wh-movement to the edge of a phrase which is to be pied-piped. Heck (2008, 2009) uses the term 'secondary wh-movement', which comprises 'both the intermediate steps of successive-cyclic wh-movement and what Van (sic) Riemsdijk (1985) calls *internal wh-movement*' (Heck 2009: 89 n. 30).

(81) seems to capture the Latin facts pretty nicely<sup>18</sup>.

In section 2.6 below, I will return to internal wh-movement, and more specifically to the iterated application of internal wh-movement, and to its relation with successive cyclic wh-movement in general. Before wrapping up the discussion of the first step of our derivation, I will make some remarks about a phenomenon which at first sight shows some similarities with internal wh-movement.

### 2.3.1.5 Partial movement

Questions involving so-called partial movement, also known as the scope marking construction, are interpretively long distance questions where a question word originating in an embedded clause moves no further than the left periphery of the embedded CP. The phenomenon is very productive in German:

(82) *Was glaubst du [CP [DP **mit wem**] er geredet hat]?*  
 what think you.NOM with whom.DAT he.NOM talked has  
 'Who do you think he has talked to?'

The main thing to be observed in (82) is that the embedded clause is not an embedded interrogative, despite the presence of an interrogative term in its left periphery. Evidence for this claim comes from the fact that the matrix predicate *glauben* 'to think, to believe' cannot take a wh-complement clause.

The similarity between partial movement and internal wh-movement resides in the fact that both phenomena involve movement of a wh-phrase to a position which is not its scope position (at LF). Partial movement is also attested in Latin (Kühner-Stegmann 1966<sup>2</sup>: vol. II.2, 500; Staudacher 2000: 197 fn. 4). An example is given in (83), where both the dummy *quid* in the matrix clause and the contentful wh-DP in the embedded are highlighted in boldface:

(83) ***Quid** enim censemus [CP [TopP [DP **superiorem illum Dionysium**] [IntP [DP **quo cruciatu timoris**]<sub>i</sub> [TP *angi t<sub>i</sub> solitum*], [CP *qui cultros metuens tonsorios candente carbone sibi adurebat capillum* ]]]]?*  
 what.ACC PRT we.think older.ACC the.ACC Dionysius.ACC which.ABL  
 torture.ABL fear.GEN be.troubled.INF is.used.to.PART.PF who.NOM knives.ACC fearing.NOM  
 razor-.ACC burning.ABL charcoal.ABL REFL.DAT burnt.IMPF hair.ACC  
 'And what to think about the fear the elder Dionysius must have been terrorized by, who in his fear for razor blades used to scorch off his hair with a glowing piece of charcoal?' (= Cic. Off. 2.25)

---

<sup>18</sup> In cases where the wh-word is not located at the edge of a pied-piped constituent, one could assume (operator or feature) movement in covert syntax.

In (83), the predicate of the main clause, *censeo* 'to rate, estimate', or in a more general sense 'to think', selects a declarative complement clause, which appears as an *Accusatiuus cum Infinitiuo* (AcI), a non-finite structure with an infinitival verb (*solitum*) and an accusative subject (*superiorem illum Dionysium*). In addition, a wh-phrase (*quo cruciatu timoris*) is also present in the left periphery of the embedded clause. Observe that a combination of a matrix direct question and an embedded question is itself not ruled out. However, this can only be possible in cases where the matrix predicate selects a wh-complement clause, which is not the case in (83): *censeo* 'to think' cannot take an embedded interrogative as a complement. This forces us to conclude that the wh-phrase *quo cruciatu timoris* in the embedded clause has undergone only partial movement, and the scope marker *quid* in the higher clause makes sure that the contentful wh-words can be interpreted as having matrix scope (whatever is the correct analysis of the underlying mechanism).

However, a major difference between the two phenomena in Latin is the nature of the landing site of the wh-operator: in all the cases of internal wh-movement known to me, the wh-phrase surfaces as the leftmost element in the constituent inside of which it moves. This in contrast with the partial movement construction exemplified in (83): as indicated, the leftmost constituent in the embedded declarative CP is the accusative subject of the *Accusatiuus cum Infinitiuo*, which I assume to be topicalized to a position to the left of the contentful wh-phrase *quo cruciatu timoris*.

I will now turn to the second step of the pied-piping derivation, in which the internally moved wh-element turns an entire cyclic domain into an operator.

### 2.3.2 Step 2: feature percolation

From a syntactic point of view, the major question concerning pied-piping is the following: how is it possible for a constituent which itself is not a wh-constituent, but which does contain a wh-constituent, to satisfy the requirements of a wh-probe? According to many current proposals, the 'wh-hood' of the embedded phrase somehow is passed on to the larger constituent by means of a mechanism of 'feature percolation'. The relevant generalization is informally stated in (84) (from Heck 2008: 6, his (9)):

(84) **Wh-feature percolation hypothesis**

There is a mechanism of *wh*-feature percolation that enables [WH] to spread across phrase boundaries.

Proposals to formalize this mechanism have been made by van Riemsdijk (1985), Cowper (1987) and Ortiz de Urbina (1993).

### 2.3.2.1 Feature movement via left branches

I will illustrate one explicit theory of feature percolation, namely the one by van Riemsdijk (1985). To make things easy, I will use an English sentence as an example. Consider (85):

- (85) a. *I bought a very big house.*  
 b. I bought [<sub>DP</sub> a [<sub>AP</sub> very [<sub>A'</sub> big] [<sub>NP</sub> house]]].

(85a) shows a declarative sentence with a direct object DP with a noun and a modifying adjective, which itself is modified by a degree expression. If this degree expression is questioned, the complex 'degree phrase + adjective' first moves to the edge of the DP (here called EdgeP, for want of a better term) past the determiner (the indefinite article *a*). This is an instance of internal wh-movement. After this the entire DP, now an operator through feature percolation moves to Spec,CP (86b). (86c) shows that pied-piping without secondary wh-movement is ungrammatical.

- (86) a. *How big a house did you buy?*  
 b. [<sub>CP</sub> [<sub>EdgeP</sub> [<sub>AP</sub> **How** [<sub>A'</sub> **big**]]]<sub>i</sub> [<sub>DP</sub> a *t<sub>i</sub>* [<sub>NP</sub> house]]]<sub>j</sub> [<sub>C'</sub> did you buy *t<sub>j</sub>*]]?

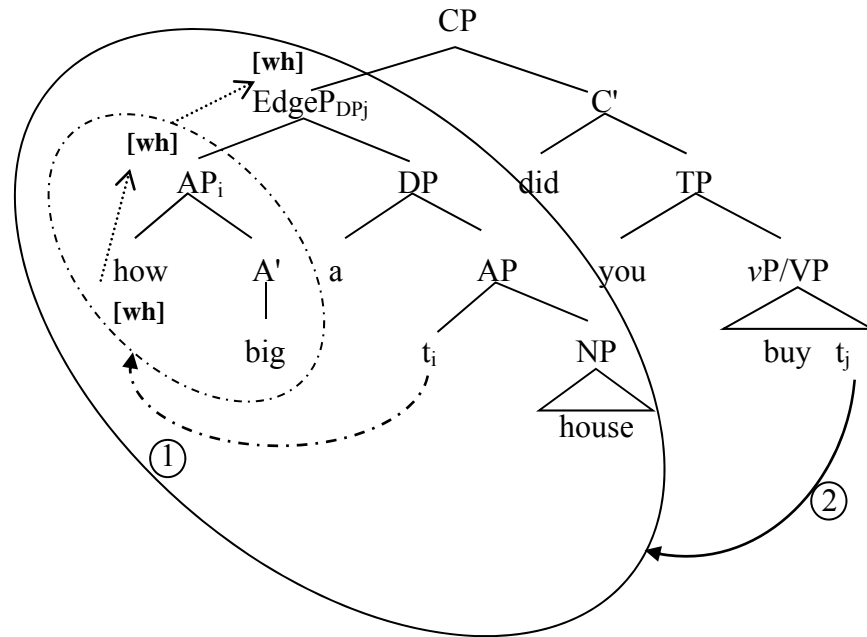


- c. \* *A how big house did you buy?*

Feature percolation and internal wh-movement are related in the sense that internal wh-movement has often been characterized as a precondition for feature percolation, and thus for pied-piping. The idea is that wh-features can percolate upward, but only via left branches in a tree (van Riemsdijk 1985: 178)<sup>19</sup>. If we look at the tree corresponding to (86a,b), we see that the wh-features of *how* can reach up to the highest projection of the entire DP (the path of the percolating wh-features is indicated by the dotted arrows, going from Spec,AP to Spec,EdgeP<sub>DP</sub> to the maximal projection I called EdgeP<sub>DP</sub>, which is the highest maximal projection of the extended projection of the NP *house*):

<sup>19</sup> van Riemsdijk (ib.) adds the *clausula* that 'left branches which dominate a preposition do not count'. I will ignore this PPs for now (but see fn. 15 on Latin).

(87)



The effect of internal wh-movement inside the DP in (87) is that it makes available a long stretch of left branches along which the wh-feature can percolate up.

With Heck (2008: 301ff.), one could say that feature percolation is actually a kind of syntactic movement, viz. feature movement in the sense of Chomsky (1995: 261ff., cf. 'Move F') which is distinct from covert phrasal movement (cfr. Pesetsky 2000). However, it remains unclear whether and how this movement is triggered.

Heck (2008) is only willing to allow for feature percolation in the case of massive pied-piping. On the other hand, he proposes that this mechanism can be dispensed with for cases involving 'light' pied-piping (i.e. pied-piping of a single preposition). This idea is further pursued in Heck (2009).

### 2.3.2.2 Eliminating feature percolation?

Heck (2009), in which massive pied-piping is not dealt with, seeks to dispense with feature percolation as an independent mechanism: the reason for this is that it cannot be reduced to either Merge or Move, and that it is thus in compliance with minimalist desiderata. Using a phase-based model (where spec-head agreement plays no role), he proposes that the operation Agree (Chomsky 2001), supplemented with a violable constraint 'Local Agree' suffices to account for all the instances of internal wh-movement that take place between the launching and landing sites of a given wh-item<sup>20</sup>. Thus Heck (2009: 80):

<sup>20</sup> cf. section 2.6 on recursive internal wh-movement.

I propose the violable constraint in [], which seeks to minimize the distance between probe and goal in terms of intervening phrase boundaries and therefore typically (but not necessarily) forces movement of a goal toward the probe:

(88) **Local Agree (LA)**<sup>21</sup>

If a goal  $\beta$  in  $\Sigma$  matches an active probe  $\gamma$ , then no phrase boundary (XP) dominates  $\gamma$  but not  $\beta$ .

(89) **Active probe**

A probe  $\beta$  is active if and only if (a) or (b) holds.

a.  $\beta$  is part of  $\Sigma$ .

b.  $\beta$  is a single probe in the numeration.

The effect of (88) seems to be that in the course of the derivation a goal moves up past each newly merged phrase boundary intervening between itself and its ultimate Probe. However, it is completely unclear how this should work. Consider for a moment the Tzotzil example in (89), from Heck (2009: 90, his (31-32)):

(89)  $[_{PP} \text{Buch}'u_2 \text{ ta } [_{DP} \text{ t}'_2 \text{ s-na } t_2]_3]_4 \text{ ch-a-bat } t_4?$   
           who    to       A3-house    ICP-B2-go

- a.  $[_{NP} \text{ s-na } \text{ buch}'u] \rightarrow$  (Merge D + Move *buch'u*)
- b.  $[_{DP} \text{ buch}'u_2 \text{ D } [_{NP} \text{ s-na } t_2]] \rightarrow$  (Merge P + Move *buch'u*)
- c.  $[_{PP} \text{ buch}'u_2 \text{ ta } [_{DP} \text{ t}'_2 \text{ D } [_{NP} \text{ s-na } t_2]]] \rightarrow$  (Merge V)
- d.  $[_{VP} \text{ ch-a-bat } [_{PP} \text{ buch}'u_2 \text{ ta } [_{DP} \text{ t}'_2 \text{ D } [_{NP} \text{ s-na } t_2]]]] \rightarrow \dots$

Heck claims that movement of *buch'u* in (89b) and (89c) is triggered by the presence of an 'active' Probe in the sense of (89b): a Probe which is part of the numeration but not yet part of the derivation (i.e. yet to be externally merged). But it is exactly (89b) which seems to be the most problematic part of Heck's proposal, which implies that a Probe can trigger syntactic movement in a phrase marker which it is yet to enter, i.e. long before a Probe-Goal relation can have been established by means of Agree, and thus long before a Goal can have been identified as such.

I conclude that this proposal is by no means superior to the mechanism of feature percolation described above. Instead, I propose that we might as well adopt a mechanism of feature percolation/movement for all cases of pied-piping, since it is part of the theory anyway, viz. in order to account for cases of massive pied-piping.

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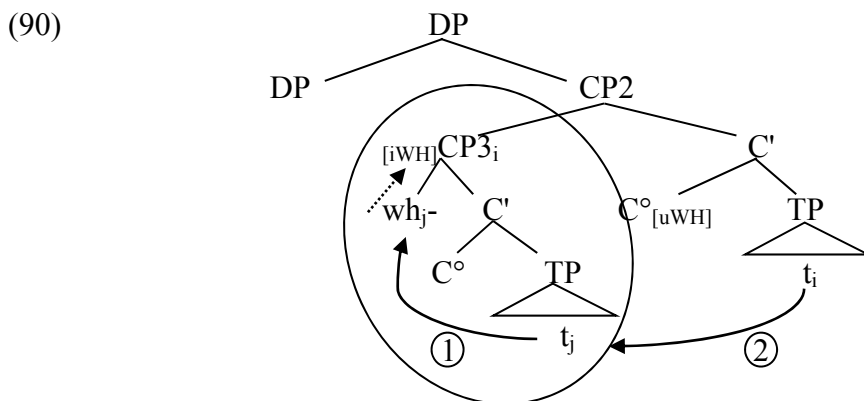
<sup>21</sup> with ' $\Sigma$ ' for 'the current phrase marker of a derivation'.



### 2.3.3 Step 3: movement of the derived operator

The last step in island pied-piping is the actual pied-piping: that is, the movement of the category that contains but is not itself a wh-item and which will (ultimately) become the head of an operator-variable chain once it reaches its final scope position. The target is either an intermediate or the ultimate landing site, i.e. the specifier of the probing head. As we will see below, internal wh-movement can apply recursively (section 2.6.1), but here I will concentrate on the simpler case where there is just one round of internal wh-movement.

In (90), it is shown that the probing head ( $C^{\circ 2}$ ) is endowed with a wh-feature (a so called 'uninterpretable' wh-feature [uWH]), which establishes a Probe-Goal relation with an element endowed with an interpretable wh-feature [iWH], namely the relative pronoun which is embedded in CP3. In order for the uninterpretable wh-feature on  $C^{\circ 2}$  to be 'valued', this head will attract a phrase with the interpretable wh-feature to its specifier. Here it becomes clear that internal wh-movement does not suffice for the derivation to converge: this only targets Spec,CP3, which is not sufficient since  $C^{\circ 3}$  is not the head probing the wh-feature. To way to remedy this is of a course the combination of feature percolation (dotted arrow) and pied-piping (full arrow 2).



For the Latin facts, it is impossible to adduce argument from linear order to prove that the island clauses have undergone movement: Latin embedded clauses can occur in the sentence initial position without hosting a wh-word in its left periphery<sup>22</sup>, or put differently: an embedded clause in Latin is not excluded from the sentence initial position without hosting a wh-word in its left periphery. However, movement of the island clause, possibly string vacuous, needs to be postulated on theoretical grounds, since internal wh-movement, whether it is triggered by a specialized feature or not<sup>23</sup>, is not sufficient to 'value' the wh-feature of the relative pronoun. In other words, the relative wh-word has not reached its final scope position (or its 'criterial' position, i.e. the specifier of the head it is probed by): additional

<sup>22</sup> They can even appear in an LEF-position without having been pied-piped (cfr. ch. 6, section 1.2.2).

<sup>23</sup> cf. McCloskey 2002 on the trigger of intermediate steps of successive cyclic movement.

movement of the entire clause (by necessity, given the islandhood of the clause) to the final scope position is needed to satisfy the requirements of the probing head.

It is quite generally accepted that the derivation just outlined is correct for at least some cases of massive pied-piping. Some - at first sight unexpected - support for the analysis actually comes from certain extraction facts in Japanese (section 2.4). In section 2.5, I will give an overview of some alternative proposals, discussing both their merits and drawbacks.

## 2.4 Island pied-piping in a wh-in-situ language

The covert counterpart of the three-step derivation is defended by Nishigauchi (1990) for Japanese. Languages like Japanese and Chinese do not exhibit overt displacement of wh-elements. A first example is from Chinese: in (91), the wh-phrase *sheme* 'what' remains in its  $\theta$ -position to the right of the verb (from Huang 1982: 247, his (129); see also Carnie 2007: 359ff.):

- (91) a. *ni xiang chi sheme?*  
you want eat what  
'What do you want to eat?'  
b. \* *sheme<sub>i</sub> ni xiang chi t<sub>i</sub> ?*

Languages like Chinese where constituent questions are formed without overt displacement of a wh-phrase are called wh-in-situ languages. For seminal discussion of such patterns see Huang 1982. Japanese, despite its very flexible word order, is such a language as well. In the interrogative sentence in (92), the question word *nani-o* does not undergo overt A'-movement (example from Richards (2001: 113, his (23)):

- (92) *Taroo-wa nani-o katta no?*  
Taroo.TOP what.ACC bought Q  
'What did Taroo buy?'

It is standardly assumed that in wh-in-situ languages languages, there either is no movement at all<sup>24</sup>, or that wh-movement takes place at LF, i.e. in the covert component of the syntactic derivation (assuming for instance a T-model, as sketched in section 1.3 in the introduction).

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<sup>24</sup> It is sometimes assumed (e.g. in Tsai 1999) that wh-dependencies that completely ignore expected island boundaries only involve the non-movement process of Unselective Binding, whereby a base generated operator binds all free variables in its c-command domain (Pesetsky 1987).

Based on the observation that most of the syntactic domains which in English count as islands can be freely extracted from in Chinese, it was proposed that at least certain<sup>25</sup> instances of LF-movement are not subject to familiar locality constraints on movement (see again Huang 1982). However, Japanese provides us with a more interesting pattern, in that only some propositional islands can be violated.

A (grossly oversimplifying) summary of the attested cross-linguistic variation is given in Table 3, from Tsai (2003: 331):

(93)

|                                  | <b>English-type</b> | <b>Japanese-type</b> | <b>Chinese-type</b> |
|----------------------------------|---------------------|----------------------|---------------------|
| <b>Complex-NP island effects</b> | yes                 | no                   | no                  |
| <b>Wh-island effects</b>         | yes                 | yes                  | no                  |

Table 3: parametrization of Complex-NP and Wh-island effects.

Let's have a look at the Japanese data (see Nishigauchi 1990; Richards 2000; Watanabe 2003 for detailed discussion). In Japanese, the Complex Noun Phrase Constraint and the Adjunct Condition can apparently be freely violated (94-95). The constituent *dokoni* 'where' and *darega* 'who' can be successfully questioned, yielding a reading where these words have matrix scope:

(94) *Taroo-ga [doko-ni itta kara] umaku it-ta no?*  
 Taroo-NOM **where**-DAT went because well went Q  
 lit.: 'Things went well because Taroo went where?' (from Richards 2000: 187, his (1))

(95) *Kimi-wa [[dare-ga kai-ta] hon-o] yomimasi-ta ka?*  
 you-TOP **who**-NOM wrote book-ACC read Q  
 lit.: 'A book that who wrote did you read?' (from Nishigauchi 1990: 40, his (57))

The sentences in (94-95) are each headed by a question particle in C°, *no* and *ka* respectively. Wh-phrases in Japanese (in boldface in the above examples) are analyzed as indefinites bound by the question operator in C. Nishigauchi argues that the operator acts as an unselective binder, binding all the indefinite variables it c-commands.

However LF-extractions from wh-islands do result in ungrammaticality, as can be concluded from the data in (96), from Watanabe (2003: 521, his (3)):

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<sup>25</sup> In general, adjunct extraction is less readily available (Huang 1982).

- (96) *Tanaka-wa* [<sub>CP</sub> *dare-ga nani-o tabeta-ka*] *oboeteiru no?*  
 Tanaka.TOP who.NOM what.ACC ate - Q remember Q  
 i. 'Does Tanaka know who ate what?'  
 ii. ??'For which x, x a person, does Tanaka remember what x ate?'  
 iii. \*'For which y, y a thing, does Tanaka remember who ate y?'  
 iv. ??'For which x, x a person, and which y, y a thing, does Tanaka remember whether x ate y?'

The same failure to question an item in a wh-island can be observed with an embedded yes-no question (from Richards 2000: 195, his (19)):

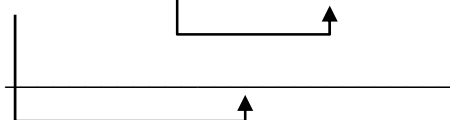
- (97) \* *John-wa* [<sub>CP</sub> *Mary-ga nani-o katta ka dooka*] *siritagatteiru no?*  
 John.TOP Mary.NOM what.ACC bought whether wonder Q  
 'What<sub>i</sub> does John want to know whether Mary bought t<sub>i</sub> ?'

This last observation leads Nishigauchi (1990) to the claims that in Japanese (i) all wh-dependencies involve LF-movement and that (ii) LF-movement is in all cases constrained by conditions on locality<sup>26</sup>. The reasoning is that if movement were either unconstrained or altogether absent, the ungrammaticality of (96-97) would be mysterious.

To explain away unexpected island extractions as in (94-95), the author proposes that sometimes, locality violations can be circumvented by the application of a number of local covert movement operations coupled with pied-piping of syntactic islands. This makes it possible to successfully question elements inside e.g. adjunct islands (94) or complex noun phrase islands (95). The indefinite wh-phrases are claimed to undergo movement at LF (viz. Quantifier Raising): first the embedded wh-indefinite moves inside the island (Nishigauchi 1990: 60), then a process of wh-feature percolation takes place (ib. 75ff), after which the derived operator undergoes covert movement as well. For (95), Nishigauchi assumes an LF-representation as in (98), glossed in English as in (99):

- (98) [<sub>DP</sub> [<sub>DP</sub> *dare-ga*] [<sub>CP</sub> t<sub>i</sub> *kai-ta*] *hon-o*]<sub>j</sub> *Kimi-wa* t<sub>j</sub> *yomimasi-ta ka?*  
 who-NOM wrote book.ACC you-TOP read Q

- (99) [You read y] [<sub>NP</sub> [<sub>CP</sub> [<sub>CP</sub> X wrote] WHO<sub>x</sub>] books]<sub>y</sub>

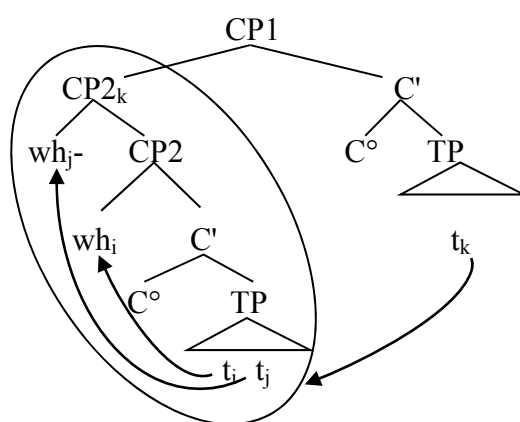


<sup>26</sup> In Nishigauchi's framework, the main locality constraint is the by now largely obsolete condition of Subjacency (see also Richards 2001).

The gist of Nishigauchi's pied-piping proposal is adopted by Tanaka (1999a,b) and Richards (2000) among others. Criticism is put forward by Fiengo, Huang, Lasnik & Reinhart (1988) and von Stechow (1996)<sup>27</sup>.

However, one still has to account for the impossibility in Japanese to circumvent a wh-island violation by means of clausal pied-piping (as illustrated in (96-97))<sup>28</sup>. Richards (2000: 194ff) seems to assume that in a representation as in (100) below, the wh-phrase in Spec,CP2 can bind into CP1 (under a Kayne-style definition of c-command, where XP, specifier of YP, has the same c-command domain as YP). This would yield a non-sensical reading whereby the the highest embedded interrogative phrase wh<sub>j</sub> would have both matrix and embedded scope simultaneously (by c-commanding both CP1 and CP2).

(100)



Alternatively, one could argue with Watanabe (2003: 522-523) that internal movement of the wh-word which is intended to have matrix scope (wh<sub>j</sub> in (100)) to the edge of the embedded question is blocked, either because the matrix and the embedded question word compete for the same position, or because the wh-word undergoing internal movement targets a position higher than the wh-word with embedded scope, but fails to reach that high position due to a Relativized Minimality effect.

<sup>27</sup> von Stechow 1996 contests some of Nishigauchi's empirical data and he criticizes a number of his theoretical claims. He does not reject the pied-piping analysis as such, but he argues that it cannot yield a well-formed LF-structure. He proposes that pied-piping takes place at an additional level of representation in between S-Structure and LF, which he calls WH-Structure. According to von Stechow, pied-piping is undone at LF. Reconstruction of (non-operator) pied-piped material is claimed to be obligatory in cases of Basque clausal pied-piping (Arregi 2003).

<sup>28</sup> Observe in passing that the same ban on pied-piping wh-islands can be observed in Basque (from Watanabe 2003: 523, his (6a)):

- (i) \**[<sub>CP</sub> Nor etorriko d-en] galdetu duzu?*  
       who come aux-Q asked aux  
       intended: 'Who<sub>i</sub> have you asked whether t<sub>i</sub> has come?'

## 2.5 Two alternative analyses and their problems

### 2.5.1 CP-scrambling followed by subextraction

Grewendorf (1986) objects to the pied-piping analysis proposed by van Riemsdijk (1985) for infinitival relatives in German. He observes that it is possible for German infinitival clauses to scramble on their own to a position to the left of the subject (the examples are based on Grewendorf 1986: 414). (101a) shows an embedded clause with the basic constituent order S-O-V-Aux. In (101b) the order O-S-V-Aux is exemplified, where the object-CP has scrambled past the subject:

- (101) a. *weil Hubert [CP die Ratten zu fangen] sich vorgenommen hatte.*  
because Hubert the.ACC rats.ACC to catch.INF REFL planned had  
(lit.) 'because Hubert is determined to catch the rats.'  
b. *weil [CP die Ratten zu fangen]<sub>i</sub> Hubert t<sub>i</sub> sich vorgenommen hatte.*

Capitalizing on this observation, Grewendorf proposes the derivation sketched in (102) for the relativization cases introduced in section 2.3.1.3. In (102), the relative pronoun *die* is extracted from the scrambled infinitival CP. The most important result is that the string *die zu fangen* does not form a constituent:

- (102)  $[DP\ die\ Ratten, [CP\ die_j\ [CP\ t_j\ zu\ fangen]_i\ Hubert\ t_i\ sich\ vorgenommen\ hatte]]$ .  
the.NOM rats.NOM which.ACC zu catch.INF Hubert REFL planned had  
(lit.) 'the rats, to catch which Hubert is determined.'

Recall first of all (section 2.3.1.3) that the German infinitivals are not islands: extraction is always an option (see example (75)).

Grewendorf's analysis with relative extraction from a scrambled infinitive can only be viable if one is willing to assume that scrambled infinitives, as opposed to various other types of scrambled constituents do not count as derived islands. However, the opacity of scrambled phrases has repeatedly been reported in the literature (Diesing 1992: 129; Müller 1998). The examples in (103), show that an in situ object DP can be successfully extracted from (103a), whereas its scrambled counterpart becomes opaque (103b) ((103) and (104) below from Putnam 2007: 82-83):

- (103) a.  $[PP\ Worüber]_i\ hat\ keiner\ [DP\ ein\ Buch\ t_i]\ gelesen?$   
what.about has no.one a book read  
b. \*  $[PP\ Worüber]_i\ hat\ [DP\ ein\ Buch\ t_i]_j\ keiner\ t_j\ gelesen?$   
what.about has a book no.one read  
'About what (topic) has no one read a book?'

The same is illustrated with (104), which involve the phenomenon known as *was für*-split:

- (104) a. *Was<sub>i</sub> hat [IP Otto immer [VP [DP t<sub>i</sub> für Romane] gelesen]]?*  
 what has Otto always for novels read  
 b. \* *Was<sub>i</sub> hat [IP Otto [IP [DP t<sub>i</sub> für Romane]<sub>j</sub> immer t<sub>j</sub> gelesen]]?*  
 what has Otto for novels always read  
 'What kind of novels has Otto always read?'

If scrambled infinitives are islands, by analogy with other scrambled constituents, then Grewendorf's analysis is no longer tenable. With respect to the island status of infinitives, some authors have claimed that '*zu* + infinitive'-complexes do not freeze in their leftward position (e.g. Müller 1995: 75 ((105) is his (114a)). In (105), the CP-complement of *leugnen* 'to deny' is scrambled past the subject *der Frank*, from where the question word *was* can be extracted felicitously:

- (105) *Was<sub>i</sub> hat [TP [CP t<sub>i</sub> repariert zu haben]<sub>j</sub> [TP der Frank t<sub>j</sub> geleugnet]]?*  
 what has fixed to have the Frank denied  
 'What has Frank denied to have fixed?'

However, in Heck (2008: 111 n. 103) examples like (106-107), from Trissler (1999), are provided, which show that some infinitival domains which are opaque for phrasal extraction, like the subject-CP in (106), can still, at least for some speakers, be pied-piped (cf. (107), where the pied-piper is an interrogative wh-word):

- (106) \* *[Welches Angebot]<sub>i</sub> hätte [TP [CP sorgfältig t<sub>i</sub> zu prüfen] in ihrem Interesse  
 which.ACC offer.ACC had carefully to check in their.DAT interest.DAT  
 gelegen]?*  
 lain  
 intended: 'Which offer should they have been interested in checking carefully?'

- (107) *[CP Welches Angebot sorgfältig zu prüfen]<sub>i</sub> hätte [TP t<sub>i</sub> in ihrem Interesse gelegen]?*  
 which.ACC offer.ACC carefully to check had in their.DAT interest.DAT lain  
 intended: 'Which offer should they have been interested in checking carefully?'

To conclude, it is hard to prove that the German infinitival CPs have indeed been pied-piped<sup>29</sup>. However, it is important to observe that the matter is fundamentally different for cases where the pied-piped CPs are syntactic islands. In such cases, extraction is not available in any case. For the Basque, Imbabura Quechua and Latin examples, an analysis in terms of clausal pied-piping seems the only available option.

<sup>29</sup> Compare Heck (2008: 114):

As matters stand, there are no knock-down arguments against either view. The proper analysis of examples like [...] thus remains an open issue.

## 2.5.2 CP3 base generated in a leftward position

Recall that Truswell (to appear) analyses Earlier Modern English sentences like (20), repeated here for convenience, which show striking similarity with the Latin data discussed here (cf. section 1.2.2):

- (20) [<sub>CP1</sub> Receive then [<sub>this Draught</sub>]<sub>i</sub> [<sub>CP2</sub> [<sub>CP3</sub> [<sub>with which</sub>]<sub>i</sub> when thou art refresh'd t<sub>i</sub> ], thou mayst more strongly proceed to other Matters which yet remain]].  
(= Richard Preston (transl.), *Of the Consolation of Philosophy*)

Truswell proposed that such examples be analyzed as involving an island base generated in a leftward position and fronting of an E-type pronoun (on which, see section 4.4.1 below) inside this island. He calls such patterns 'Relatives with a Leftward Island' (RLIs), to reflect the linear position of an adjunct island inside a relative clause. In his footnote 15, the author signals the absence of 'Relatives with a Rightward Island', which would be a relative clause with a clause-final adjunct island (cf. the left-right asymmetry first introduced in section 1.1.3.1). An example of such a 'Relative with a Rightward Island' would be (108), which I tentatively conclude would be ungrammatical:

- (108) \* [<sub>CP1</sub> Receive then this Draught, [<sub>CP2</sub> thou mayst more strongly proceed to other Matters which yet remain [<sub>CP3</sub> [<sub>with which</sub>]<sub>i</sub> when thou art refresh'd t<sub>i</sub> ]]].

Truswell's account faces two major problems. The first is that fronting is predicted to be impossible in domains which are known to generally disallow MCP (ACs are obviously a point in case). The second problem is that it is not clear why fronting is impossible if CP3 is in a rightward position. The categorical left-right asymmetry mentioned in section 1.1.3.1 remains thus unaccounted for. I will revisit this Truswell's proposal in the next chapter (section 4).

## 2.6 Discussion: internal wh-movement and successive cyclicity

After the original proposal in Chomsky (1977) and the subsequent empirical and theoretical work, many scholars now agree that at least a subset of A'-dependencies involve so-called successive cyclic movement: operator movement across sentence boundaries does not take place in 'one-fell-swoop' but in a series of local steps, without skipping the edge of any cyclic domain on its way. The intermediate steps are either completely invisible or only indirectly detectable, e.g. through morphological reflexes on verbs or C-particles in between the foot and the head of the syntactic chain (see section 3.2.4.1 in the introductory chapter).



The data in the following section show cases of long extraction with recursive internal wh-movement and pied-piping at each intermediate step: these data lend further support to the claim that the long movement does indeed proceed in a cyclic way, in small local steps.

## 2.7 Recursive internal wh-movement

### 2.7.1.1 Finnish

The phenomenon of internal wh-movement also exists in Finnish: it is discussed in Huhmarniemi (2009, 2010) and Brattico (2010). In this language, some cyclic domains are characterized as 'snowball domains': they are extraction-islands, but internal wh-movement and pied-piping can occur as an alternative for extraction. (109-110), from Huhmarniemi (2010, her (1)), shows that intermediate movement can apply recursively: internal wh-movement targets the edge of every cyclic domain, after which the entire subtree is pied-piped to the edge of the next higher cyclic domain. (109) shows the basic declarative sentence with the order gerund (CP<sub>adj</sub>)-preposition-Genitive-NP.

- (109) *Pekka kaatui* [<sub>CP<sub>adj</sub></sub> *kävellessään* [<sub>PP</sub> *kohti* [<sub>DP</sub> *Merjan* [<sub>NP</sub> *taloa*]]].  
 Pekka fell walking towards Merja's house  
 'Pekka fell when walking towards Merja's house.'

In the interrogative in (110), the linear order is (wh-)Genitive-NP-preposition-gerund (CP<sub>adj</sub>). This order can be derived if we assume that the wh-word *kenen* 'whose', moves in a successive cyclic way without ever being extracted. Rather, it moves to the edge of every cyclic domain (i.e. DP, PP and CP<sub>adj</sub>), where it freezes and pied-pipes the entire subtree. Thus, in (110), DP, PP and CP<sub>adj</sub> undergo this type of 'snowball-movement' to eventually end up in Spec,CP to form a matrix question.

- (110) [[<sub>CP<sub>adj</sub></sub> [<sub>PP</sub> [<sub>DP</sub> *Kenen*<sub>l</sub> *t<sub>l</sub>* [<sub>NP</sub> *taloa*]]]<sub>k</sub> *kohti* *t<sub>k</sub>*]<sub>j</sub> *kävellessään* *t<sub>j</sub>*]<sub>i</sub> [<sub>C°</sub> *Pekka kaatui* *t<sub>i</sub>*]?  
 whose house towards walking Pekka fell  
 'Whose house was Pekka walking towards when he fell?'

### 2.7.1.2 Latin

In the material that I have used, I have found a number of cases of 'clausal roll-up pied-piping' in Latin (see also section 1.3.1.2). In both examples below, a complement clause CP<sub>4</sub> (a volitive complement introduced by *ut* 'that' in (111), and an *accusatiuus cum infinitiuo* in (112)) in which a wh-pronoun originates sits in the left periphery of an adverbial clause (CP<sub>3</sub>, as usual).

In (111), the string forming CP4, *quibus ut ignoscatur* 'that he should forgive them', is found at the very left of edge of CP3, the conditional clause *si postulet* 'if he were to demand'. Observe that the predicate *postulo* 'demand' selects the *ut*-clause as a complement: since the latter is arguably base generated as a sister of the selecting predicate. It seems thus correct to conclude that CP4 has been pied-piped to the edge of CP3 by the relative pronoun *quibus*. After this, the entire CP3 undergoes movement to Spec,CP2, the actual relative clause:

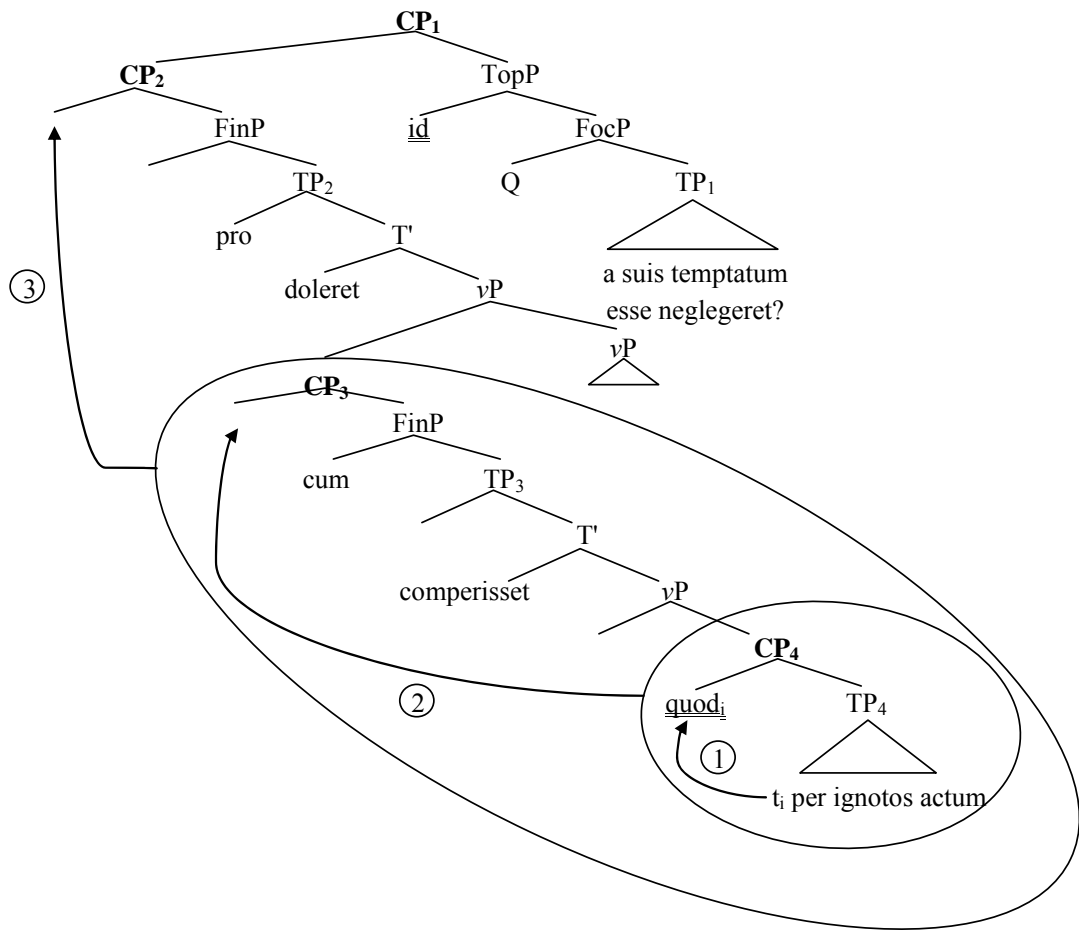
- (111) [<sub>CP1</sub> *Iis<sub>i</sub> etiam praemia postulat*, [<sub>CP2</sub> [<sub>CP3</sub> [<sub>CP4</sub> *quibus<sub>i</sub> [FinP4 ut t<sub>i</sub> ignoscatur]]]<sub>j</sub>  
 those.ABL PRT rewards.ACC he.vindicates which.DAT that he.forgive.SUBJ  
 [<sub>FinP3</sub> *si postulet t<sub>j</sub>*]]<sub>k</sub> *t<sub>k</sub> impudentissimus iudicetur*]].  
 if he.demands.SUBJ very.wicked.NOM he.would.be.judged.SUBJ  
 approx.: 'He even demands rewards for these men: if he demanded they be forgiven,  
 he would be considered most shameless.' (= Cic. Phil. 8.25)*

(112) is quite similar. The entire structure is a correlative, with a left-dislocated wh-clause introduced by the relative operator *quod* ('what', neut. sg.) and a resumptive demonstrative pronoun *id* ('that', neut. sg.) in a fronted position in the main clause. The extraction site of the relative pronoun is located inside a declarative complement clause which itself is located in a syntactic island, i.e. a temporal adverbial clause introduced by *cum* 'when, as'.

- (112) [<sub>CP1</sub> [<sub>CP2</sub> [<sub>CP3</sub> [<sub>CP4</sub> *Quod<sub>i</sub> t<sub>i</sub> per ignotos actum*]]<sub>j</sub> [<sub>FinP3</sub> *cum comperisset t<sub>j</sub>*]]<sub>k</sub>  
 what.ACC by unknown.ACC done.ACC when he.had.learned.SUBJ  
*doleret t<sub>k</sub>*], [<sub>C°</sub> [*id<sub>i</sub> a suis seruis temptatum esse*] *neglegeret?*]]  
 he.deplore.SUBJ that.ACC by his.ABL slaves.ABL tried.ACC be.INF he.overlook.SUBJ  
 'If he were saddened upon learning that this has been accomplished by unknown  
 perpetrators, would he then be indifferent if his own slaves tried to do the same?'  
 (= Cic. pro Cael. 22.54)

- (112') [<sub>CP1</sub> [<sub>CP2</sub> [<sub>CP3</sub> [<sub>CP4</sub> *Quod<sub>i</sub> ~~quod<sub>i</sub>~~ per ignotos actum*]]<sub>j</sub> [<sub>CP3</sub> *cum comperisset* ~~[<sub>CP4</sub> *quod<sub>i</sub>*  
~~*per ignotos actum*]]<sub>j</sub>]]<sub>k</sub>, *doleret* ~~[<sub>CP3</sub> *cum comperisset* [<sub>CP4</sub> *quod<sub>i</sub>*  
~~*per ignotos actum*]]<sub>j</sub>]]<sub>k</sub>, *id<sub>i</sub> a suis serui) temptatum esse neglegeret?*]~~~~~~~~

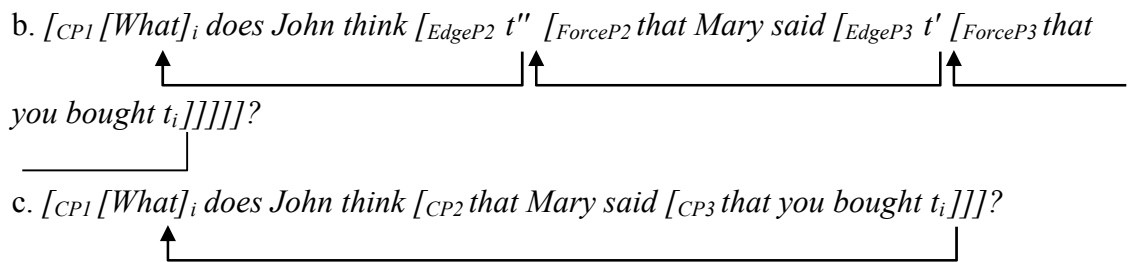
(112")



### 2.7.2 Concluding remarks

Let me conclude with some final considerations about 'classic' successive cyclic movement and (recursive) internal wh-movement. As I said earlier (ch. 1, section 3.2.4.1), there is a broad consensus that a sentence like (113a) is derived as in (113b) and not as in (113c) (Chomsky 1973).

(113) a. *What does John think that Mary said that you bought?*



In English, the successive cyclic nature of long phrasal extraction does not have any overt (morphological) reflex: it remains so to speak invisible and can only be postulated on

theoretical grounds (like island effects, as in Chomsky 1973). However, languages which show *wh*-agreement, like Chamorro (Chung 1982, 1998) and Irish (McCloskey 2002), provide strong empirical support in favour of the hypothesis that long distance movement proceeds in a successive cyclic fashion. Repeated internal *wh*-movement coupled with roll-up pied-piping, could be considered another argument in favour of the 'successive cyclicality' hypothesis. In the 'snowball' examples from Finnish and Latin discussed above, the cyclic steps are so to speak 'visualized' in overt syntax through the fact that each application of internal *wh*-movement is frozen in situ. These examples can hardly be interpreted as not involving successive cyclic movement.

The main question to be answered, especially if one adopts a derivational model of syntax, is whether, and, if yes, how instances of intermediate movement (i.e. non-final movement to Spec,CP) are triggered. One possibility is to say that they are caused by the need to check some generalized EPP-feature, as in Chomsky (2001). Alternatively, one can postulate some genuine *wh*-features, as in McCloskey (2002). On the basis of the Latin material, I have nothing to contribute to this important question.

On the other hand, note that the Latin data do seem to provide evidence for the hypothesis that the 'stop-off point' of successive cyclic movement is the edge of CP rather than the edge of *v*P. Indeed, it has recently been proposed by den Dikken (2009) that in long distance phrasal movement, the 'cyclic' action takes place in the lower (*v*P) phase of the clause, and never in the C-domain<sup>30</sup>. den Dikken claims that A'-movement to a projection in the C-domain is always terminal, yielding instances of so-called partial movement or *wh*-scope marking. This is hard to reconcile with examples like (111-112) above and (175-176) below (section 4.3.3). These strongly suggest that at least in some cases, extraction does proceed through the edge of CP<sup>31</sup>.

In now turn to the third part of this chapter, where I will discuss some constraints on movement due to considerations of locality.

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<sup>30</sup> see esp. den Dikken's fn. 26 on Basque, where topics can precede the *wh*-word in alleged clausal pied-piping configurations (as in (61) in the present chapter). He interprets this as evidence that the pied-piping *wh*-words is not actually at the edge of the CP-phase, and that alleged cases of pied-piping are better analyzed as an instance of scope marking.

<sup>31</sup> In all the Latin cases of 'relative *Verschränkung*' known to me, the *wh*-word is the very first word of the entire relative clause.

### 3 A relative/interrogative asymmetry

#### 3.1 The behaviour of Latin interrogative wh-

In Latin, different wh-elements show distinct behaviour with respect to pied-piping. The rough descriptive generalization is that relative wh-words can pied-pipe a wider range of syntactic domains than interrogative wh-words. In the present section, I will show that both the properties of the pied-piper and the pied-pipee should be taken into account if one wants to explain the distributional pattern.

##### 3.1.1 Recap: pied-piping by relative wh-

As has been argued for extensively, Latin relative pronouns can pied-pipe finite embedded clauses. An example with a pied-piped AC is repeated here for convenience:

- (1)  $[_{CP1} \text{An } eum \text{ discere } \underline{ea}_i \text{ } maus] [_{CP2} [_{CP3} \text{quae}_i \text{ } cum \text{ plane } perdidicerit \ t_i]_j [_{TP2} \ t_j \text{ } nihil \text{ } sciat]]?$   
PRT him.ACC learn.INF those.things.ACC you.prefer which.ACC when thoroughly  
internalize.SUBJ.PF nothing.ACC he.knows.SUBJ  
'Do you want him to learn the type of things that give him no knowledge, even when he knows them in and out?' (= Cic. Fin. 5.76)

Recall that relative pronouns can also pied-pipe non-finite adjuncts (cf. (5-8) above). An example where an ablative absolute is pied-piped is shown in (6):

- (6)  $[_{CP1} [Cetera \ illa]_i \text{ } adhibebat, [_{CP2} [_{CP3} \text{quibus}_i \text{ } demptis]_j [_{TP2} \ t_j \text{ } negat \ se \ Epicurus \ intellegere \ quid \ sit \ bonum]]]$ .  
other.ACC those.ACC he.supplied.IMPF which.ABL taken.away.ABL denies REFL  
Epicurus.NOM understand.INF what.NOM is.SUBJ good.NOM  
'He also mentioned these other elements, without which Epicurus denied he could understand what is good.' (= Cic. Fin. 2.64)

It is clear that Latin relative pronouns can pied-pipe both finite and non-finite CPs.

##### 3.1.2 Pied-piping by interrogative wh-

Consider now (114) and (115), which show examples of untensed adjuncts being pied-piped. (114) contains a *participium coniunctum*:

(114) [<sub>CP1</sub> [<sub>CP2</sub> *Quam utilitatem aut quem fructum petentes*]<sub>j</sub> *t<sub>j</sub> scire cupimus*  
 which.ACC use.ACC or which.ACC benefit.ACC searching.NOM know.INF we.desire  
*illa, quae occulta nobis sunt?*  
 those.ACC that.NOM hidden.NOM us.DAT are  
 'With which goal or benefit do we desire to know those things which are hidden for us?' (= Cic. Fin. III.11.37)

Pied piping of ablative absolutes by interrogative pronouns is attested as well. The example in (115) is slightly complex because it contains two coordinated ablative absolutes. Both of conjuncts, with the participles *gestis* and *superato* respectively, contain a wh-word (sc. *quibus* and *quo*).

(115) [<sub>CP1</sub> *Tu uero* [<sub>&P</sub> [<sub>CP2</sub> *quibus rebus gestis*][<sub>&°</sub> , [<sub>CP2bis</sub> *quo hoste superato*]]]<sub>j</sub> *t<sub>j</sub>*  
 you.NOM PRT which.ABL deeds.ABL done.ABL which.ABL enemy.ABL defeated.ABL  
*contionem aduocare ausus es?*  
 assembly.ACC convoke.INF dared.NOM you.are  
 'Which deeds have been accomplished, which enemy has been defeated so that you dared to convoke the assembly?' (= Cic. Ver. III.80.185)

In contrast, there is no convincing evidence that finite complement clauses could be pied-piped by interrogative phrases as well. The only potential example that I have found is (116):

(116) *Hinc et hortari milites Scipio orsus est: [<sub>CP1</sub> *ipsos claudendo portas*  
 there also exhort.INF soldiers.ACC S.NOM set.out.NOM is self.ACC by.closing gates.ACC  
*indicasse Hispanos, [<sub>CP2</sub> quid *ut* *t<sub>i</sub> timerent meriti essent*].*  
 have.indicated Hispani.ACC what.ACC that they.feared.SUBJ deserved.NOM they.were.SUBJ  
 'There Scipio started to incite his soldiers: 'by closing the gates, the Hispani themselves have demonstrated what they deserve to fear'.' (= Liv. aUc 28.19.6)*

As the reader can observe, the bracketing of (116) is not complete. Since the sentence is structurally ambiguous, I did not indicate the boundaries of CP3. This is because the *caueat* outlined in section 1.3.1.2 also applies to (116): it cannot be determined whether the linear order in (116) was derived through clausal pied-piping or by movement of *ut*-clause followed by subextraction of the question word *quid* 'what?'. In any event, the *ut*-clause is a complement to the verb *mereor* 'to deserve' and thus not a syntactic island (see section 1.3.1.1, esp. example (35)).

Crucially, though, pied-piping of a tensed adjunct clause by an interrogative pied-piper is not attested<sup>32</sup>. Using this as an *argumentum ex silentio*, I tentatively conclude that sentences like

<sup>32</sup> Truswell (to appear) makes a similar observation for Early Modern English, only gaps of relative pronouns appear in propositional islands: gaps of interrogative wh-phrases are not attested (not even in non-finite adjuncts).

the (constructed) example in (117), where an AC is pied-pipe by the interrogative *quis* 'who' to form a matrix question, would have been ungrammatical:

- (117) \* $[_{CP1} [_{CP2} \textit{Quis}_i \textit{si} t_i \textit{se cum fratre coniunxisset}] \textit{nullum iam nomen esset}$   
 who.NOM if REFL with brother.ABL unite.SUBJ no.NOM PRT name.NOM be.SUBJ  
*populi Romani], [...]* *obstitistis*?  
 people Roman.GEN you.opposed.to.PL  
 intended: 'If who had managed to join his brother, would the entire Roman people have been destroyed?' (≈ Liv. aUc 26.41.13), cf. (3) above.

### 3.1.3 Summary

The relevant patterns discussed above are summarized in Table 4:

(118)

| Pied-piper:       | Pied-pipee: |            |
|-------------------|-------------|------------|
|                   | finite      | non-finite |
| Relative wh-      | OK          | OK         |
| Interrogative wh- | *           | OK         |

Table 4: what can pied-pipe what in Latin?

The explanandum can be formulated as follows: why can tensed adjuncts only be pied-piped by relative wh-words and not by interrogative wh-words? In the remainder of this section, I will try to account for this gap in the pied-piping paradigm.

## 3.2 Asymmetries between relative and interrogative wh-

First of all, I would like to show that apart from the Latin pied-piping facts just described, there are other domains in which relative and interrogative wh- show a different behaviour. The elements that I will discuss are extraction asymmetries (3.2.1), different behaviour with respect to the the obligatoriness of displacement to the C-domain (3.2.2) and crossover asymmetries (3.2.3). Having done this, I will proceed to (section 3.3).

### 3.2.1 Extraction asymmetries

The asymmetry between interrogative wh-constituents and relative ones with relation to Latin Pied-piping and which is summarized in Table 2 is not an isolated phenomenon. As has often been noted, questioning out of weak islands tends to give rise to more severe ungrammaticality than relativization out of the same island.

Recall from section that syntactic island come in different strengths (Cinque 1990; Szabolcsi 2006; see also the discussion in chapter 1, section 3.4.1). Oversimplifying somewhat, we can

say that extraction out of a strong island (like adjuncts) always leads to ungrammaticality, whereas extraction out of a weak island (like wh-complements) is only degraded. It has been observed that the extent to which a weak island violation is degraded partially depends on the nature of the extracted phrase. I will first illustrate this with English examples.

### 3.2.1.1 English

First of all, extraction of a relative pronoun (119a) gives rise to a weaker island violation than extraction of an interrogative (119b):

- (119) a. ? *The car which<sub>i</sub> I don't know [who can fix t<sub>i</sub>].*  
 b. \* *What<sub>i</sub> don't you know [who can fix t<sub>i</sub>]?*

Secondly, the ungrammaticality of interrogative extraction is mitigated when the wh-word comes with a lexical restriction, i.e. when the extracted phrase is more D-linked (as in (120b))<sup>33</sup>:

- (120) a. \* *What<sub>i</sub> don't you know [who can fix t<sub>i</sub>]?*  
 b. ?? *Which<sub>i</sub> car don't you know [who can fix t<sub>i</sub>]?*

### 3.2.1.2 Bulgarian

The same asymmetry has been reported for Scandinavian languages (Maling 1978), Slavic languages (Rudin 1988) and many others (e.g. Cinque 1990: 53). The following Bulgarian examples from Rudin (1988: 457) also illustrate the asymmetry. As seen, the Bulgarian data pattern just like in English. Relative pronouns can more easily escape from weak islands than interrogative ones as shown by the contrast between (121a) and (121b):

- (121) a. *Vidjah edna kniga, [kojato<sub>i</sub> se čudja [koj znae [koj prodava t<sub>i</sub>]]].*  
 saw.1s a book which wonder.1s who knows who sells  
 'I saw a book which I wonder who knows who sells (it).'
- b. \* *Kakvo se čudiš [koj znae [koj prodava t<sub>i</sub>]]?*  
 what wonder.2s who knows who sells  
 'What do you wonder who knows who sells?'

Moreover, the contrast between (122a) and (122b) shows that interrogative wh-words are not all alike. The presence of a nominal restriction (i.e. an NP) generally facilitates extraction out of wh-islands.

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<sup>33</sup> On the difference in operator status between bare quantifiers and quantified nominals, see Cinque (1986), van Craenenbroeck (2010) and references cited there.



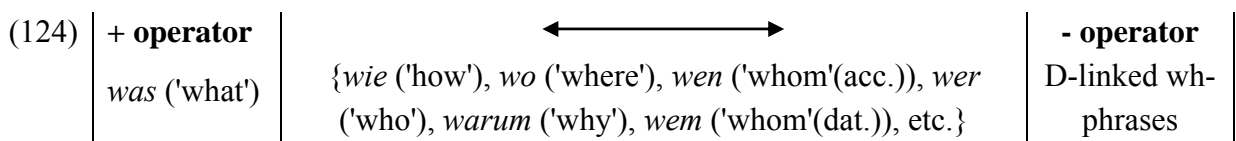
- (122) a. ? [*Koja ot tezi knjigi*]<sub>i</sub> se čudiš [*koj znae [koj prodava t<sub>i</sub>]]*?  
 which of these books wonder.2s who knows who sells  
 'Which of these books do you wonder who knows who sells?'  
 b. \* *Kakvo se čudiš [koj znae [koj prodava t<sub>i</sub>]]*?  
 what wonder.2s who knows who sells  
 'What do you wonder who knows who sells?'

### 3.2.1.3 German

Thirdly, this varying operator status of interrogatives is discussed in detail in Grewendorf (2008): On the basis of German data, he shows that the more D-linked a given wh-phrase is, the less operator-behaviour it exhibits and the more it behaves like a topic. The phrases that are most strongly D-linked typically consist of a noun and an attributive wh-determiner. One relevant contrast is illustrated in (123), where it is shown that movement of a complex wh-phrase over a coindexed possessive pronoun does not give rise to a weak crossover effect (123a), whereas such an effect does arise (at least for some speakers) when a bare wh-pronoun undergoes the same movement (123b):

- (123) a. [*Welchen Studenten*]<sub>i</sub> hat [*seine<sub>i</sub> Mutter*] *t<sub>i</sub> nach Berlin begleitet*?  
 which student.ACC has his mother.NOM to Berlin accompanied  
 Which student did his mother accompany to Berlin?  
 b. ? *Wen<sub>i</sub> hat [seine<sub>i</sub> Mutter] t<sub>i</sub> nach Berlin begleitet*?  
 who.ACC has his mother.NOM to Berlin accompanied  
 'Who(m) did his mother accompany to Berlin?'

On the basis of this and other syntactic tests, Grewendorf (2008) establishes the following hierarchy of wh-elements (his (32)):



The elements located to the right in (124) cluster together with respect to a number of parameters. For instance, they themselves constitute a strong barrier for extraction if located in the left periphery of an embedded interrogative. Put differently, the more to the right of the hierarchy in (124) a wh-phrase is located, the less easily a topic can be long moved over it:





- (132) *Però che furon [cose notevoli]<sub>i</sub>; [le quali]<sub>i</sub> ne' loro principi nullo le<sub>i</sub> vide*  
 for COMP they.were things remarkable the which in their beginnings no-one them saw  
*certamente come io.*  
 clearly as I  
 'For they were remarkable things; which nobody saw in their beginning as clearly as I did.' (= Dino Compagni, Cronica, I.1)

### 3.3 The feature make-up of wh-phrases

Recall the system of feature based Relativized Minimality discussed in the introductory chapter (section 3.3.2). The basic formulae are repeated in (133-134):

- (133) a.  $*\alpha \quad \alpha \quad \epsilon$   
           ↑           |  
 b.  $*\alpha \quad \alpha\beta \quad \epsilon$   
           ↑           |

- (134)  $\alpha\beta \quad \alpha \quad \epsilon\beta$   
           ↑           |

Adopting this feature based reinterpretation of Relativized Minimality, let us return to the Latin pied-piping patterns discussed in this chapter. I would like to reinterpret the various asymmetries between wh-phrases discussed in sections 3.2 by proposing that the more D-linked a given phrase is, the richer feature set it is endowed with. Haegeman (in prep.) proposes a feature  $\delta$  to represent D-linking (in a broad sense, subsuming referentiality, givenness,...). Furthermore, with Haegeman (2007, 2010), I assume that the operator that ACs are derived by movement of a clause typing operator to the left periphery. I assume that this operator is of the 'bare' quantificational type (see ch. 2, section 3.2.3). Simplifying somewhat, we get the following picture<sup>35,36</sup>:

<sup>35</sup> See also den Dikken (2003: 84) for a proposal to decompose different kinds of wh-words into the following sets of features:

- |     |                           |                    |                       |
|-----|---------------------------|--------------------|-----------------------|
| (i) | a. regular question words | [+Wh, $\pm$ Focus] | (single questions)    |
|     | b. echo-question words    | [+Wh, +Focus]      | [+Wh] not attractable |
|     | c. indefinite wh-words    | [+Wh, -Focus]      | [+Wh] not attractable |
|     | d. relative wh-words      | [+Wh, -Focus]      |                       |

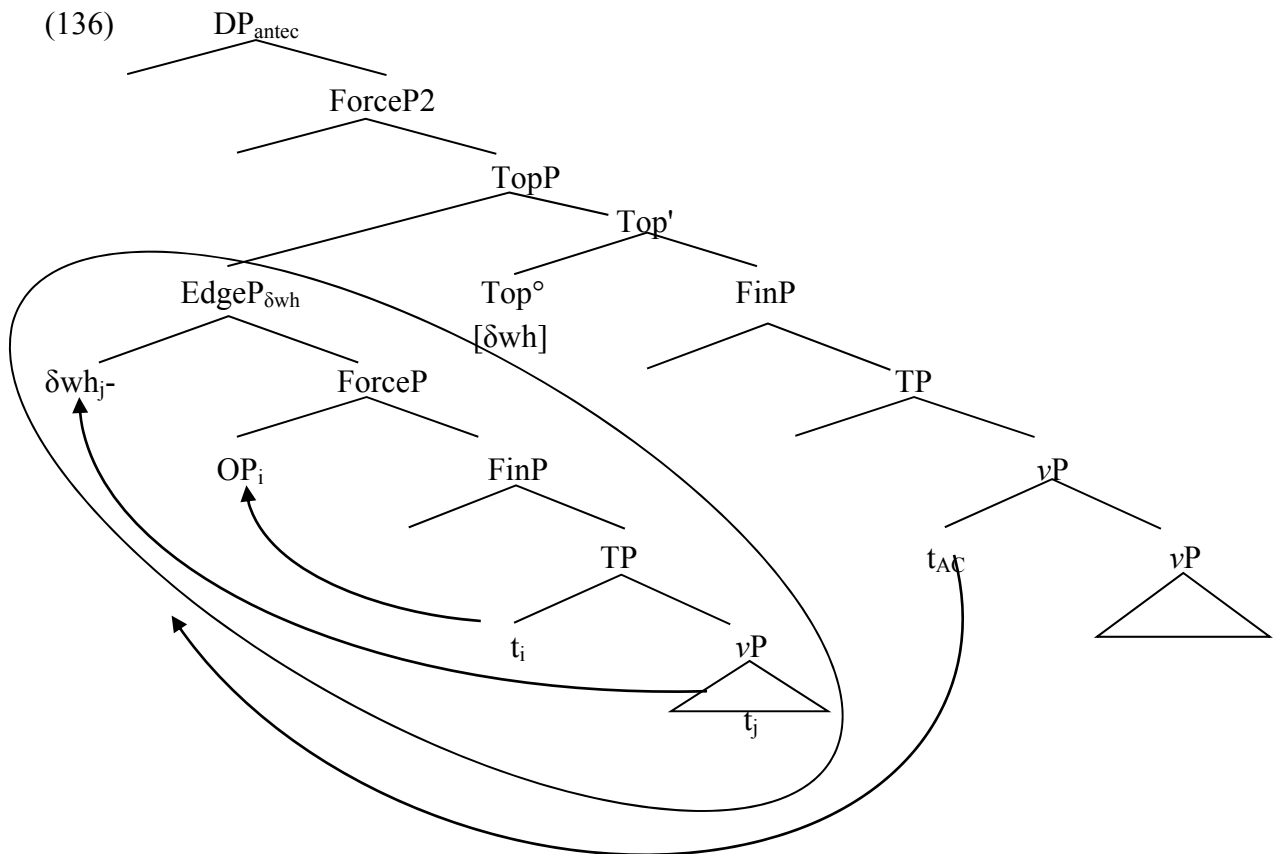
<sup>36</sup> The different feature compositions for relative and interrogative wh-words might be morphologically visible in a language like Bulgarian. The interrogative pronoun 'who' in Bulgarian is *koj*, and the relative pronoun who is *kojto*. The extra morpheme -to is identical to the (neuter) definite article (Rudin 1990-'91: 436 n. 6):

- |     |                  |                          |
|-----|------------------|--------------------------|
| (i) | a. <i>koj</i>    | interrogative [wh-]      |
|     | b. <i>koj-to</i> | relative [wh- $\delta$ ] |

- (135) relative wh- = [+ Wh, +  $\delta$ ]  
 interrogative wh- = [+ Wh]  
 OP<sub>AC</sub> = [+ Wh]

### 3.4 The derivation of Latin *relative Verschränkung*

Given the feature compositions proposed in (135), feature based RM as schematically represented in (133-134) correctly predicts that the featurally enriched relative wh-operator will be able to pass the pure operator 'OP' in the left periphery of the AC. The derivation for the grammatical relativization is given in (135):



I would like to conclude that all phenomena related to Latin *relative Verschränkung* can be successfully accounted for if we assume a derivation including clausal pied-piping. In the remainder of this chapter, I will extend this analysis to sentences which only have one level of embedding.

## 4 Extending the pied-piping analysis to cases with 2 CPs

The subject of the final section of this chapter is the *relatif de liaison*, a specific kind of non-restrictive relative clause which in many respects is structurally very similar to a root clause. I will argue that although this structure only involves two CPs instead of three, exactly the same process of clausal pied-piping as the one discussed in the previous chapter is at work here. The wh-phrase introducing the non-restrictive relative clauses will be characterized as a quasi-topic.

### 4.1 More on the nature of the relative clause in LEF1

#### 4.1.1 Introducing the *relatif de liaison*

As shown in Table 6 below, there are 296 cases where a relative pronoun sits at the left edge of an embedded clause. In all of these 296 cases, this relative pronoun introduces a non-restrictive relative clause. In section 1.1.4, I have discussed a number of examples where the relative clause CP2 was not non-restrictive, but they were all found outside my corpus.

(137)

| Author        | Date       | Work                  | qu-<br>#   |
|---------------|------------|-----------------------|------------|
| Cato          | 160 BC     | <i>De agricultura</i> | 0          |
| Cicero        | 50-40 BC   | <i>Ad Atticum</i>     | 104        |
| Anonymus I    | ± 40 BC    | <i>Bellum Afr.</i>    | 11         |
| Anonymus II   | ± 40 BC    | <i>Bellum Hisp.</i>   | 12         |
| Anonymus III  | ± 40 BC    | <i>Bellum Alex.</i>   | 15         |
| Varro         | 36 BC      | <i>Res rustica</i>    | 20         |
| Velleius Pat. | 30 AD      | <i>Historiae</i>      | 25         |
| Columella     | 40-50 AD   | <i>De agricultura</i> | 42         |
| Plinius minor | 90-110 AD  | <i>Epistulae</i>      | 26         |
| Plinius minor | 90-110 AD  | <i>Panegyricus</i>    | 1          |
| Tacitus       | 100-110 AD | <i>Annales</i>        | 7          |
| Tacitus       | 100-110 AD | <i>Historiae</i>      | 5          |
| Fronto        | 150-170 AD | <i>Epistulae</i>      | 6          |
| Apuleius      | 170-180 AD | <i>Florida</i>        | 1          |
| Apuleius      | 170-180 AD | <i>Magia</i>          | 21         |
| <b>Total:</b> |            |                       | <b>296</b> |

Table 6: number of wh-elements appearing in LEF per text.

I will argue that many of the 296 relative clauses from the corpus are best analyzed as a specific kind of headed relative clauses, in the traditional literature known as *relativischer*

*Anschluss* (e.g. Kühner & Stegmann 1966<sup>2</sup>: vol II.2, 319-323) or *relatif de liaison* (e.g. Touratier 1980: 408-452). An example of this phenomenon is given in (138):

- (138) *Deinceps explicatur [differentia rerum]<sub>i</sub>. [Quam<sub>i</sub> [si [CP t<sub>i</sub> non ullam esse] diceremus]], confundetur omnis uita.*  
 next is.explained difference.NOM things.GEN which.ACC if not any.ACC be.INF  
 we.say.SUBJ will.be.confused whole.NOM life.NOM  
 'Next follows an exposition of the difference between things; for if we maintained that all things were equal, the whole of life would be thrown into confusion.'  
 (= Cic. Fin. 3.15.50)

As suggested by the full stop right before the wh-pronoun, the relative clause introduced by *quam* seems to have a rather independent status. Consider now (139):

- (139) *lyra [...] Orpheo<sub>i</sub> est tradita, qui, Calliopes et Oeagri filius, eius rei maxime studiosus fuit. Itaque existimatur suo artificio feras etiam ad se audiendum adlicuisse.*  
*Qui<sub>i</sub> querens uxoris Eurydices mortem, ad inferos descendisse existimatur.*  
 who.NOM complaining.NOM wife.GEN E.GEN death.ACC to lower.ACC.PL to.have.descended.INF  
 is.considered  
 'The lyre was given to Orpheus<sub>i</sub>, who, as a son of Calliope and Oeager, showed great enthusiasm for the instrument. It is said that with his art, he attracted even wild animals, who would come and listen to him. It is also said that, in mourn for his deceased spouse Eurydice, he descended in the underworld.' (= Hyg. Ast. 2.7.1)

The antecedent of the wh-pronoun *qui* ('who') is *Orpheo* ('Orpheus' (dat.)). Observe that this DP does not occur in the clause immediately preceding the relative clause but in the one before that. We do note that *qui* is coreferential with the non overt subject of the verb *existimatur* 'he is thought' in the intervening sentence, but in a language like Italian, such null subjects cannot serve as antecedents for relative clauses:

- (140) a. *Questo studente arriva sempre in ritardo.*  
 this student arrives always in delay  
 'This student always arrives late.'  
 b. *pro arriva sempre in ritardo.*  
 'He always arrives late.'
- (141) a. *Questo studente, che non conosco bene, arriva sempre in ritardo.*  
 this student who not I.know well arrives always in delay  
 'This student, who I don't know well, always arrives late.'  
 b. \**pro, che non conosco bene, arriva sempre in ritardo.*  
 c. \**pro arriva sempre in ritardo, che non conosco bene.*

Clearly the relation between the relative pronoun *qui* and its antecedent *Orpheo* is not like that in the unmarked relative clause pattern, spanning across sentence boundaries. Intuitively, one has the impression that in examples such as (139), the *wh*-pronoun introduces a new main clause rather than a real embedded clause. This intuition is reflected in many modern text editions, where it is common practice to put a full stop in between a *relatif de liaison* and its antecedent. (138) shows an example where such a relative pronoun, *quam*, appears at the edge of an initial conditional adjunct clause introduced by the conjunction *si*. Bianchi (1999: 138) describes the relation between the *relatif de liaison* and its antecedent as an instance of 'intersentential anaphora', whereby the anaphoric element and its fully spelled out referent do not appear in the same sentence.

In a way, the relative clauses under consideration could be considered 'headed', in the sense that an antecedent is available in the context, whether overt or implicit. In this way they differ from genuine headless relatives or free relatives that lack an antecedent altogether and do not relate to a contextual available antecedent. On the other hand, the relation between the antecedent head and the relative pronoun appears to be quite loose. This was the case in (139), where the relative pronoun and its antecedent were separated by an entire sentence. Below, I will analyse this and other instances of the *relatif de liaison* as a non-integrated non-restrictive relative clause (in the sense of Cinque 2008), and I will adopt the view that they involve a structure with two rather than with three CPs. I will start by introducing a first argument in favour of this position, namely the observation that the fronted *wh*-phrase can come with a nominal restriction. In this case the *A'*-moved phrase seems to behave more like a *Topic* fronted for reasons of information structure rather than like a *wh*-phrase that moves in order to 'clause-type' a relative clause.

#### 4.1.2 *Relatif de liaison* and LEF

In (142), the relative pronoun *quem* appears on the edge of a temporal clause introduced by *ut*: this is of course an instance of LEF.

(142) *Hunc sequi se iubet et id, quod in praesentia uestimentorum fuit, arripit. His in ignem eiectis flammae uim transiit.*

[<sub>CP</sub> *Quem*<sub>i</sub> [*ut* barbari [<sub>CP</sub> *t*<sub>i</sub> incendium effugisse] uiderunt]], *telis* *eminus*  
 whom.ACC when barbarians.NOM fire.ACC flee.from.INF saw.PF missiles.ABL from.afar  
*missis* *interfecerunt.*  
 thrown.ABL they.killed.PF

'He (sc. Alcibiades) ordered to follow him, and he grabbed whatever cloths could be found near. He threw these in the fire and ran through the raging flames. When the barbarians noticed that he had escaped the fire, they threw missiles at him from a distance and killed him.' (= Cor. Nep. Alc. 10.6)

The relative pronoun refers to Alcibiades, who is not mentioned *uerbatim* in the previous bit of text. However, Alcibiades is the referent of the *pro*-subject of all three main verbs in the



two preceding sentences (viz. *iubet* ('he ordered'), *arripit* ('he grabbed') and *transiit* ('he crossed')).

### 4.1.3 Bare vs. attributive wh-pronouns

All the Latin relative clauses discussed thus far involved a bare wh-word. However, there are numerous cases where the wh-word functions as a determiner-like element modifying an NP (see also below, section 4.2.4). For instance in (143), the relative pronoun is used attributively: it functions as a determiner modifying a noun, with which it agrees in  $\phi$ -features and which is pied-piped to the left periphery of the relative clause:

(143) [Context: a letter by Metellus has just been read to the judges and commented upon by Cicero.]

[<sub>CP1</sub> [<sub>CP2</sub> [<sub>DP</sub> *Quas litteras*]<sub>i</sub> [<sub>FinP2</sub> *cum ad omnis ciuitates prope suppliciter t<sub>i</sub> misset Metellus*]]<sub>j</sub> [<sub>TP1</sub> *t<sub>j</sub> tamen antiquum modum sationis nulla ex parte adsequi potuit*]].

which.ACC letter.ACC when to all.ACC cities.ACC almost beggingly he.had.sent.SUBJ Metellus.NOM PRT old.ACC way.ACC sowing.GEN no.ABL from side.ABL obtain.INF could.PF

'Although Metellus had sent this letter, with an almost begging tone, to all the cities, still he could by no means obtain that corn was sown like it used to be.'

(= Cic. Ver. act. sec. 3.46)

In (143), the fronted DP seems to behave like a quasi-topic. An number of factors contribute to this. First of all, as was argued in section 3.2.3 above, the presence of an antecedent makes a wh-phrase in a headed relative clause automatically 'D-linked': this wh-phrase automatically refers to an already established discourse referent. Second, the topichood of wh-phrases arguably is even stronger if the relative pronoun is used attributively (cf. sections 3.2.1 and 3.2.3)<sup>37,38</sup>.

But in any event, both (142-143) are cases of LEF: the wh-expressions surface at the edge of an embedded clause, i.e. an AC. Below, in section 4.3.2, I will propose that these examples as well involve a process of clausal pied-piping, very similar to the one proposed for the cases where three CPs were involved. Before proceeding to discuss the structure of the Latin *relatif*

<sup>37</sup> Bianchi (1999: 191-192), who defends the raising analysis of headed relative clauses (cf. Kayne 1994 and references cited there) proposes that the derivation of a(n English) *which*-relative clause involves movement of the complex 'wh- + NP' to Spec,TopP in the left periphery of the relative clause (for the assumption that the wh-word is base-generated as a determiner modifying the antecedent 'head' of the relative clause, see Kayne (1994)). After this, the NP-complement of the wh-determiner moves to Spec,ForceP of the relative clause (Bianchi 1999). For a slightly different proposal, see Bianchi (2000a: 60-65).

<sup>38</sup> on the D-linking effect induced by adding a NP-restrictor to a wh-phrase, see also Rizzi (2000).

*de liaison* in some more detail I will briefly present an overview of Cinque's recent proposals concerning the structure of relative clauses.

## 4.2 Two types of non-restrictive relative clauses

Cinque (2008) makes a distinction between integrated and non-integrated non-restrictive relative clause. In Italian, the two can be easily distinguished by virtue of the fact that they are introduced by a different element, as shown in (144-145) (examples from Cinque 2008).

(144) a. *Inviterò anche Giorgio, **che**/\*cui abita qui vicino.*

I.will.invite also Giorgio that lives here nearby

'I will invite also Giorgio, that/who lives nearby.'

b. *Inviterò anche Giorgio, [<sub>PP</sub>di **cui**]/\*che avete certamente sentito parlare.*

I.will.invite also Giorgio about who you.have.PL certainly heard speak.INF

'I will invite also G., of whom/that you have certainly heard.'

(145) *Inviterò anche Giorgio, **il quale** abita lì vicino.*

I.will.invite also Giorgio the which lives here nearby

'I will invite also Giorgio, who lives nearby.'

Integrated non-restrictives, illustrated in (144), are introduced by the same kind of relativizers which are used for restrictive relative clauses, viz. *che* (the 'bare' relative complementizer) or *cui* (as the complement of a preposition) whereas the non-integrated ones, illustrated in (145), require the more complex relativizer *il quale* (lit. 'the which'), which has as its leftmost element the determiner *il*. On the basis of their syntactic properties, Cinque (2008) concludes that the relatives of the *il quale*-type can be characterized as quasi-main clauses, some evidence for this will be provided presently (see sections 4.2.1-4.2.6, where it will be shown among other things that non-integrated relative clauses (can) have independent illocutionary force).

Typologically, the full inventory of non-restrictive relative clauses is not available in all languages. Some languages lack non-restrictives altogether (e.g. Gungbe (Niger-Congo, Benin), Bunun (Austronesian, Taiwan), Supyire (Niger-Congo, Mali)). While both types are available in Standard Italian, many North-Italian dialects don't have the non-integrated type, whereas in English only the non-integrated type is available (I refer to Cinque's (2008) paper for illustration and discussion).

Given that we need to base our work on corpus material any conclusion about the typology of non-restrictive relatives in Latin will have to remain provisional. Still, what we can say is that some Latin non-restrictive relative clauses exhibit characteristics which in terms of Cinque's (2008) classification are only associated with the non-integrated type. Below, I will illustrate

this with a number of examples. However, since all headed relative clauses are introduced by a form of the relative pronoun *qui* ('who, which'), the relativizer cannot be used as a cue for the different type of relatives. Cinque's classification relies primarily on a distinction by which non-integrated relatives may display properties that are not available to integrated non-restrictive relatives, but the absence of such properties does not necessarily entail that the relevant relative is of the integrated type. The absence of the salient properties of non-integrated relatives in some of the examples does not lead to the conclusion that these must be integrated, and so at this point, it is impossible to tell whether Latin has both types of non-restrictives, or only the non-integrated ones, like English. In the sections below I go over some of the properties that are characteristic of non-integrated relative clauses.

#### 4.2.1 Independent illocutionary force

A non-integrated relative clause can have independent illocutionary force, and does not depend on the illocutionary force of its main clause. The Italian relative clause introduced by *il quale* in (146) has the illocutionary force of a matrix yes-no question:

- (146) *L'unico che potrebbe è [tuo padre]<sub>i</sub>, [il quale]<sub>i</sub> / \*? che potrà, credi, perdonarci per quello che abbiamo fatto?*  
 the only.one that could is you father the which that will.be.able.to you.think forgive-us  
 for that what we.have done  
 'The only one who could is your father, by whom will we ever be forgiven, you think, for what we have done?'

In the two Latin examples below (147-148), the predicates of the relative clauses introduced by *quam* and *quos* respectively are imperatives, whereas the main clauses containing the antecedent head of the relative clause are both declarative (see also Lehmann 1989):

- (147) *Facio quod saepe maiores asperis bellis fecere, uoueo dedoque me [PP pro I.do what.ACC often elder.NOM rough wars.ABL did.PF I.offer I.give.over-and me.ACC for [DP re publica]<sub>i</sub>],[CP quam<sub>i</sub> deinde [CP cui t<sub>i</sub> mandetis] circumspicite].*  
 republic.ABL which.ACC then whom.DAT you.trust.SUBJ look.around.IMPTF.PL  
 'I do what often our ancestors did in times of hard war: I consecrate and offer myself to the republic. You should then find someone to whom you can trust the state.'  
 (= Sal. Fragm. Hist. 3.7-13)

- (148) *Multas ad res peritiles [Xenophontis libri]<sub>i</sub> sunt, [CP quos<sub>i</sub> legite, quaeso, studiose, ut facitis].*  
 many.ACC for things.ACC very.useful.NOM X.GEN books.NOM are which.ACC read.IMPTF.PL  
 I.beg with.zeal.ADV as you.do.PL  
 'Xenophons books are very useful for many purposes, so read them, I ask you, read them eagerly, as you do.' (= Cic. Sen. 59)

The *relatif de liaison* may also occur in matrix interrogatives. In (149), the relative pronoun sits to the left of the interrogative operator. This word order is of course reminiscent of examples discussed earlier (ch. 1, section 5.3.2), where non-wh-topics occur to the of similar question operators:

- (149) *Quae quousque tandem patiemini, o fortissimi uiri?*  
 these.ACC until.how.long in.the.end you.will.endure o strongest.VOC men.VOC  
 'After all, how long will you tolerate this, o strongest of men?' (= Sall. Cat. 20.9)

In other cases, a wh-pronoun is found in a matrix yes-no question, marked by the particle *-ne*, which cliticizes to the first word of the sentence:

- (150) *Ain tu te illius inuenisse filiam? // Inueni, et domi est. [...]*  
*Quam-ne hodie per urbem uterque sumus defessi quaerere?*  
 which.ACC-Q.PRT today over city.ACC both.NOM we.are tired.NOM look.INF  
 'Did you say that you have found his daughter. Yes, I've found her, and she is at home.  
 Do you mean the girl that we've both been looking for all over the city?'  
 (= Pl. Ep. 719)

In all of these examples, the evidence for the main clause status of the non-restrictive relative clause in the *relatif de liaison* seems particularly compelling.

#### 4.2.2 Category of the antecedent

While the antecedent of an integrated relative clause is invariably a DP, the antecedent of a non-integrated relative clause can but need not be a DP, it can also be an event (represented by a (possibly extended) VP), like *frondem superuacuum decerpere* 'to remove superfluous foliage' in (151), a proposition (a CP, (152)) or a whole situation (expressed through a set of CPs in the preceding context, (153)). In most of the latter cases, the pronoun used is either *quod* 'this situation' or *quae* 'these circumstances, these words,...'.

- (151) *Itaque non solum [DPfrondem superuacuum]<sub>i</sub> debet [VPt<sub>i</sub> decerpere], quod semper  
 PRT not only foliage.ACC superfluousACC he.must remove.INF which.NOM always  
 faciendum est, uerum interdum partem aliquam fetus decutere [...].  
 to.be.done.NOM is but sometimes part.ACC some.ACC fruit.GEN shake.off.INF  
 'And so he doesn't only have to remove the superfluous foliage, which always needs to  
 be done, but from time to time, he should also shake off a part of the fruit.'  
 (= Col. Agr. 4.27.5)*

- (152) *Ita continens flamma copias omnes repente a conspectu textit Romanorum.  
 Quod ubi accidit, barbari uehementissimo cursu refugerunt.*  
 which when happened.PF barbarians.NOM impetuous.SUP.ABL course.ABL retreated.PF

'Thus a large fire suddenly covered all the troops from the sight of the Romans. When this happened, the barbarians retreated at a very high speed.' (= Hirt. Bel. Gal. 8.15)

(153) *Non nemo culpa eius imprudentiaeque adsignabat quod neque circum loca gubernatoribus praefectisque quid peterent praeceperat, neque ut more ipsius consuetudo superioribus temporibus fuerat, tabellas signatas dederat, ut in tempore his perlectis locum certum peterent uniuersi.*

**Quod minime Caesarem fefellerat.**

which.NOM not.at.all Caesar.ACC had.passed.by.unnoticed

'Some criticized him for not taking the necessary measures. For he had not instructed his local officers and chiefs where to go, and he had not, as had been his habit previously, given them sealed instructions, so that upon reading them they could all make it in due time to a specific location. But it was by no means the case that Caesar had forgotten to do this.' (Anon. Bel. Afr. 3)

#### 4.2.3 'Preposability': wh-words in parentheticals

Observe that the example below also doesn't have a DP 'antecedent': rather, the 'antecedent' of the relative pronoun *quod* ('what') is the entire sentence within which the wh-parenthetical occurs.

(154) *Ceterum - quod non prouiderunt - et loco graui et tempore anni*

Furthermore which.ACC not they.foresaw and place.ABL heavy.ABL and time.ABL year.GEN

*(medium enim aestatis erat), ad hoc insolito odore ingruere morbi*

middle.NOM PRT summer.GEN was to this.ACC unusual.ABL smell.ABL entered.PF diseases.NOM

*uulgo, maxime in remiges, coeperunt.*

widely especially in rowers.ACC began.PF

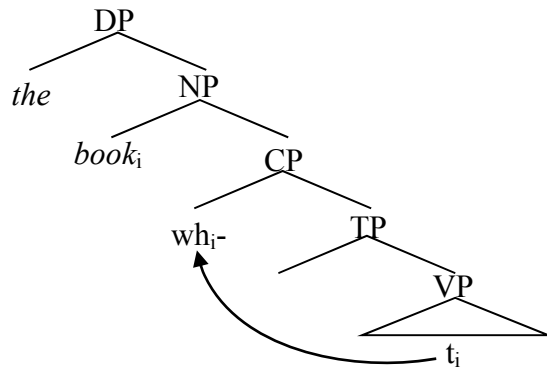
'Furthermore, - circumstance they hadn't foreseen -, due to the unhealthy country and the time of the year (it was midsummer), and on top of this through the unaccustomed smell, diseases began to spread widely, especially among the rowers.'

(= Liv. aUc 37.23.2)

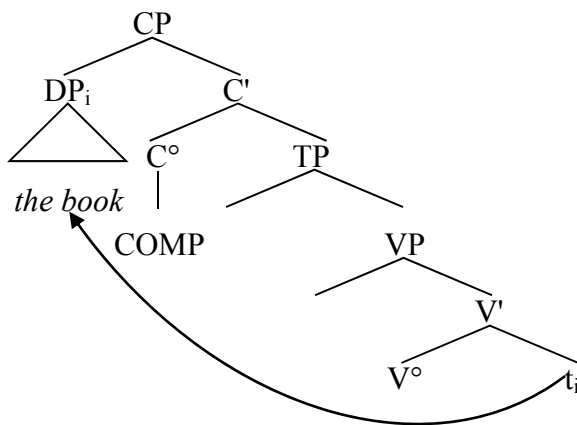
#### 4.2.4 Non-identity of external and internal head

With respect to the syntactic representation of relative clauses there is a longstanding debate between those who adopt an analysis according to which the antecedent is external to the relative clause at all points of the derivation (the 'matching' analysis, cf. Chomsky 1965), schematically represented in (155), and the so called promotion or raising analysis according to which the 'antecedent' originates within the relative clause and is moved to the edge or even outside of it ((166), cf. Schachter 1973; Vergnaud 1975; Kayne 1994; Bianchi 1999, 2000). In the former case the antecedent could be said to be an external head, in the latter case it is internal.

(155)

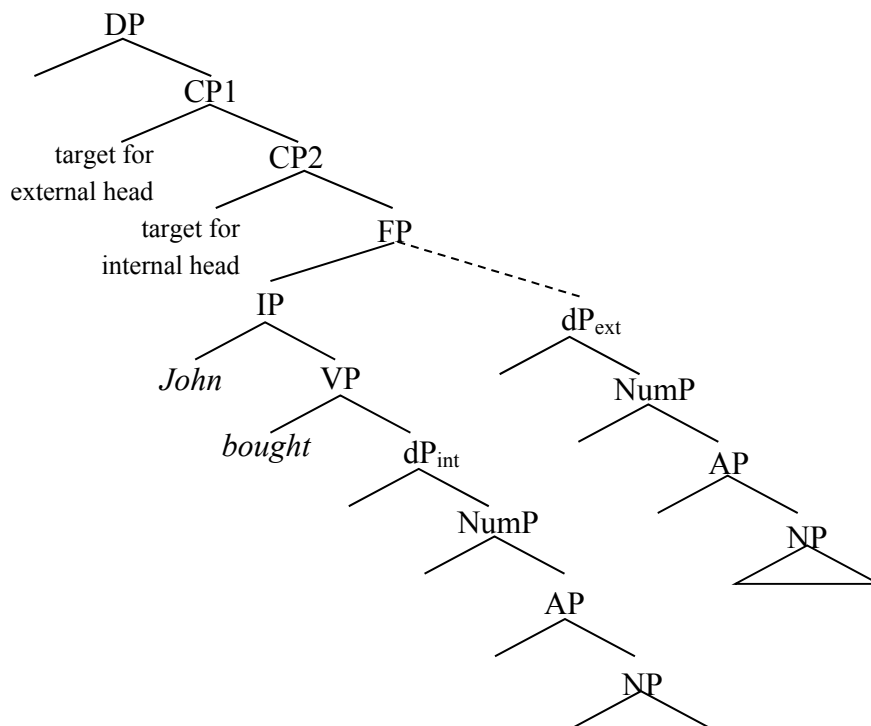


(156)



Resolving the tension between these competing analyses, Cinque (in prep.) proposes that headed relative clauses have both an internal and an external head, most often a bare NP, optionally modified by adjectives and weak determiners (i.e. not with the full array of functional superstructure, whence the labels dP in (158)).

(158)



Both the external and the internal head can either stay in situ or undergo movement to a designated landing site (as indicated in (158)). According to Cinque, the different combinations can account for all the cross-linguistic variation. In most cases, either the internal head or the external head undergoes deletion under identity<sup>39,40</sup>. Only in non-integrated non-restrictives is it possible for the internal head to be non-identical with the external head (usually, the former is like a generic term that paraphrases the latter). An Italian example is given in (159):

- (159) *Ha raggiunto la fama con [Il giardino dei Finzi-Contini]<sub>i</sub> [il quale/\*che [romanzo]]<sub>i</sub>*  
 he.has obtained the fame with the gardener of.the F.-C. the which which novel  
*ha poi anche avuto una riduzione cinematografica.*  
 has then also had an adaptation cinematographic  
 'He became famous with *Il giardino dei Finzi-Contini*, which novel was then also made into a film.'

This use is very well attested in Latin: see (160-161). In both cases, the relative pronoun is used adnominally, to modify an NP which is semantically similar but not identical to the antecedent of the relative clause (here left implicit twice).

- (160) [context: *maiores instituerent ut* ('our ancestors established the rule that...' (a speech should start with prayers)).]  
*[DP Qui mos] cui potius quam consuli [...] magis usurpandus*  
 which.NOM custom.NOM who.DAT rather than consul.DAT more to.be.used.NOM  
*colendusque est [...]?*  
 to.be.observed-and is  
 'By whom should this custom more duly be taken into account and observed than the consul?' (= Pl. Pan. 1.1-2)

<sup>39</sup> Only in non-integrated , as in Italian (i). I could find similar examples in Latin.

- (i) *[Quel tale farmaco]<sub>i</sub> [col quale farmaco]<sub>i</sub> il Ministero intendeva iniziare la sperimentazione, era il frutto di molti anni di lavoro.*  
 that such medicine with.the which medicine the ministry inteded begin.INF the experiment was  
 the fruit of many years of work  
 'That medicine, with which medicine the Ministry intended to begin the experiment, was the result of many years' work.

<sup>40</sup> For cases where a non-integrated non-restrictive is introduced by a bare wh-element without nominal restrictor, compare the process of NP-ellipsis proposed in Elbourne (2001). I will discuss this more in detail below (section 4.2.6).

(161) [context: description of a battle scene] [...] *et pauci de nostris cadunt.*

*[DP Quo proelio] sublatis Helvetii, quod quingentis equitibus*  
 which.ABL battle.ABL elevated.NOM Helvetians.NOM because 500.ABL horsemen.ABL  
*tantam multitudinem equitum propulerant, audacius subsistere [...] coeperunt.*  
 so.great.ACC multitude.ACC horsemen.GEN they.had.driven.away more.boldly resist.INF they.began  
 '... and few men of ours died. The Helvetians were encouraged by this battle, because  
 they had managed to chase away such a host of enemies with only 500 horsemen, and  
 they started to put up a sterner opposition' (= Caes. BG 1.15)

#### 4.2.5 Binding into relative clauses

Recall that English only has non-restrictives of the non-integrated type (as mentioned in section 4.2). (162) illustrates that it is impossible to bind into English non-restrictive relative clauses: the quantified matrix subject *every student* cannot bind the pronoun in the non-restrictive in (162a), whereas this is possible in the case of a restrictive relative clause (162b). The examples in (162) are from Authier & Reed (2005: 640, their (17)), who attribute this point to Safir (1986).

- (162) a. *[Every student]<sub>i</sub> forgave a man who he<sub>i</sub> liked.*  
 b. \**[Every student]<sub>i</sub> forgave John, who he<sub>i</sub> liked.*

On the basis of the English facts, we cannot be sure whether the opaque character of the non-integrated non-restrictive tells us something about the difference between restrictive and non-restrictive relative clauses or between integrated and non-integrated relative clauses. However, if we look at Italian, language which has all three types, we can see that it is actually possible to bind into integrated non-restrictive relative clauses (Guglielmo Cinque p.c.), as well as into restrictives (163a): in (163b), the referent of the clitic pronoun *l'* (*lo*) can be understood as covarying with (and thus being bound by) the quantified DP *ogni studente* 'each student'. Such a bound reading is excluded in (163c)<sup>41</sup>.

- (163) a. *[Ogni studente]<sub>i</sub> ha perdonato [un uomo]<sub>j</sub> che<sub>j</sub> pro<sub>i</sub> amava.*  
 each student has forgiven a man that he.liked  
 'Each student has forgiven a man who he liked.'
- b. *[Ogni studente]<sub>i</sub> ha perdonato [sua<sub>i</sub> madre]<sub>j</sub>, che<sub>j</sub> l'<sub>i</sub> amava molto.*  
 each student has forgiven his mother that him.CL loved a.lot
- c. ?\* *[Ogni studente]<sub>i</sub> ha perdonato [sua<sub>i</sub> madre]<sub>j</sub>, [la quale]<sub>j</sub> l'<sub>i</sub> amava molto.*  
 each student has forgiven his mother, the which him.CL loved a.lot  
 intended: '[Each student]<sub>i</sub> has forgiven his mother, who liked him<sub>i</sub> a lot.'

<sup>41</sup> Guglielmo Cinque (p.c.) informs me that object relatives of the *il quale*-type are always slightly degraded: to control for this factor, I used subject relatives in (163b,c).



From these binding facts we can conclude once more that non-integrated non-restrictives should be set apart from restrictives and integrated non-restrictives.

#### 4.2.6 Pied-piping

Important for the current discussion is the observation that *wh*-words introducing non-integrated relative allow for massive pied-piping (see also Heck 2008: 336ff.), i.e. pied-piping of more than a preposition. This is illustrated in Italian (164) in which *il quale* ('who', lit. 'the which') is the complement of the N *fratello* and pied pipes the containing DP to the left periphery.

- (164) *Inviterò anche Giorgio, [DP il fratello del quale/\*di cui]<sub>i</sub> non ho mai visto t<sub>i</sub>.*  
 I.will.invite also G. the brother of.the whom of whom not I.have ever seen  
 'I will also invite G., the brother of whom I have never seen.'

Such pied piping is far more restricted in integrated non-restrictives and in restrictive relative clauses (i.e. no heavy pied-piping by Italian relative *che* and 'preposition + *cui*' (the ungrammaticality of the latter is illustrated by the starred variant of (164)).

To account for the observed asymmetry *qua* massive pied-piping, Heck (2008: 336-337) capitalizes on the fact that relativizers of the *il quale* type contain the determiner *il* ('the'). He proposes that such relativizers are endowed with a DP-shell<sup>42</sup>. The structure of the phrase *il quale* might be as in (165), with DemP for DemonstrativeP; following Elbourne (2001), I am assuming a phonologically null NP below in the structure.

- (165) [DP il [DemP quale [NP ~~NP~~ ]]]

Heck (2008: 336-337) argues that the fact that these relativizers project a DP means that they are phases. In his proposal, the phasehood of these relativizers allows the *wh*-feature of the (potential) pied-piper that they contain to be visible for higher probes, by virtue of the fact that it can undergo feature-movement to the edge of the DP-phase, at which place it can remain active in the next step of the derivation.

Given the representation in (165), the two cyclic domains that have to be crossed on the way from DemP to CP are the two DPs, that is the 'relative DP' headed by *il* and the 'antecedent'

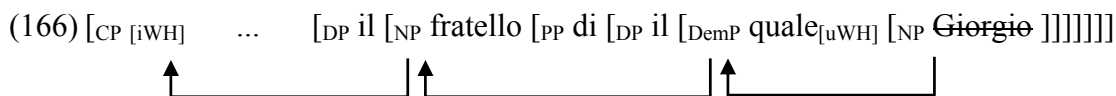
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<sup>42</sup> Zamparelli (2000: 141-142) suggests that Italian *il quale* should be analysed as in the layered representation in (i), with SDP for 'Strong DP', PDP for 'Predicative DP' and KIP for 'Kind DP':

(i) [SDP Det [PDP Quantifier [KIP ... N ]]]

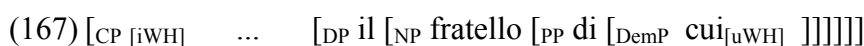
Similarly, Sportiche (2008) suggests that *wh*-paradigms can be analyzed along the lines of the typology of structural deficiency proposed by Cardinaletti & Starke (1999). Similarly, Boeckx & Grohmann (2004a) propose that some *wh*-elements have a DP-shell ([D [WH]]), with a definite determiner, overt or phonologically null.

DP headed by the higher determiner associated with *fratello*. The grammatical derivation of (164) would look like (166):



The wh-feature of the relative pronoun *quale* moves covertly to the edge of the highest DP, after which this entire complex is pied-piped in overt syntax to a specifier in the CP-domain of the relative clause. The hypothesis is that the specifier of *di* provides an escape hatch to allow the feature to move.

On the other hand, in the alternative version of this sentence with the pronoun *cui*, no DP is projected around the relativizer and hence no such an escape hatch is present for the wh-feature to move higher. The wh-feature would so to speak be trapped inside the DemP, thus not being accessible for the Probe in C.



As we have seen many times in the previous and present chapter, Latin wh-pronouns can pied-pipe DPs, PPs and CPs.

### 4.3 Two patterns in clausal pied-piping

Thus far, I have tried to show that clausal pied-piping by a wh-element can also take place in structures where only one embedded clause is present, namely the one which is pied-piped. This would mean that the following two patterns need to be distinguished:

(168)

| <b><u>Pattern 1: clausal pied-piping by a 'real' relative operator (3 CPs)</u></b> | <b><u>Pattern 2: clausal pied-piping by a <i>relatif de liaison</i> (2 CPs)</u></b> |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| - restrictive RCs<br>- integrated non-restrictive RCs                              | - non-integrated non-restrictive RCs                                                |

Table 7: 2 patterns in clausal pied-piping.

#### 4.3.1 Early Modern Dutch

There is interesting evidence that suggests that both the tricausal and the biclausal pattern do indeed exist. Both patterns seem to be attested in Early Modern Dutch (16<sup>th</sup> and 17<sup>th</sup> century), as reported in Ackema & Neeleman (2007: 88-89; (169-170) below are their (13) and (16), bracketing mine). This article actually deals with cases of subject omission ('pro drop') in Early Modern Dutch, which was only possible under very limited conditions (Ackema & Neeleman 2007: 86):

If the first position of a main clause is occupied by an absolute participial clause, the matrix subject can be dropped under identity with the subject of the participial clause.

I am interested in cases where the clause-initial absolute participial phrase contains a relative wh-word, in other words, cases where the participial phrase has been pied-piped to the left periphery of its superordinate clause, and not so much in the phenomenon of pro drop this is accompanied by (in the below examples, I will mark the omitted subject as *pro*). Furthermore, it is important to bear in mind that at this stage of the Dutch language, the verb second requirement was already generalized in main clauses, whereas the verb stayed low down in embedded clauses.

In example (169), CP2 is not a root V2 clause but rather it is a genuine embedded clause: it has the verb (in boldface) in third position, separated from the wh-operator (= CP3) by a PP-adjunct<sup>43</sup>.

- (169) [<sub>CP1</sub> ... *om hem te dooden, en 't lijck in eenen kuil te worpen*; [<sub>CP2</sub> [<sub>CP3</sub> *waer tegens*  
to him to kill and the body in a pit to throw where against  
*zich Ruben<sub>k</sub>, d' outste broeder, zettende*]<sub>i</sub>, *pro<sub>k</sub> t<sub>i</sub> [<sub>PP</sub> by hen]* ***aenhiel*** [*de handen met*  
REFL Ruben the older brother putting with them insisted the hands with  
*zijn bloet niet te besmetten*]].  
his blood not to stain.INF  
'... to kill him and throw the body into a pit; turning against which plan, Ruben, the  
oldest brother, insisted that they should not stain their hands with his blood.'  
(= Joost van den Vondel, contents of *Joseph in Donath*, 1640)

The second example displays a different pattern: in this example CP2 exhibits the verb second phenomenon: it is a non-restrictive relative clause of the non-integrated type.

- (170) [<sub>CP1</sub> *soo is de Belegeringe eenighe daghen uytghestelt*]:  
like.that is the siege some days postponed  
[<sub>CP2</sub> [<sub>CP3</sub> *twelck* [<sub>DP</sub> *die van Leyden*]<sub>j</sub> *vernemende*]<sub>i</sub>, ***hebben*** *pro<sub>j</sub> t<sub>i</sub> om haere Stadt te*  
which those of Leyden hearing have for their city to  
*beter te mogen bewaren, tegen de bedeckte aenloopen ende listige aenslaghen [...]* better  
to may protect.INF against the concealed assaults and cunning attacks  
*doen af branden ...]*  
make down burn  
'Thus the siege was postponed for a couple of days. When those of Leyden heard about  
this, they have, in order to be able to better protect their town against the cunning  
assaults [...] set fire to...' (= Jan Jansz. Orlers, *Beschrijvinge der stad Leyden*, 1641)

<sup>43</sup> Note that the VO-order is orthogonal to the point at issue: the direct object is a heavy infinitival complement, which has to follow the main verb in any event (as in Modern Dutch).

Given the V2 pattern in (170), I conclude that the participial clause labelled CP3 in (170) is not to be analysed as a (derived) *wh*-operator which introduces an embedded clause, but rather that, given the position of the finite verb, it is to be seen as the initial constituent in a main clause (labelled as CP2 in (170)). In other words, the participial phrase headed by *vernemende* 'hearing' sits in the slot that precedes the inflected verb, which itself has undergone V-to-C movement.

### 4.3.2 Latin

Additional evidence that the biclausal pattern from (168) does indeed exist can also be gleaned from the Latin data, and more specifically from the behaviour of the non-restrictive relative clauses in indirect speech.

Recall from ch. 2, section 4.4 that embedded declaratives are infinitival clauses in Latin (sc. the *Accusatiuus cum Infinitiuuo* or 'AcI'), whereas embedded clauses remain finite (with subjunctive mood). Above, I gave a number of examples of AcI in peripheral ACs. Another exception to the general rule is the appearance of the AcI-pattern in non-restrictive relative clauses (cf. Hofmann & Szantyr 1965: 570; Kühner & Stegmann 1966<sup>2</sup>: vol. 1, 137). Two examples of this last pattern are given in (169-170) ((170) from Bolkestein 1996a: 555)<sup>44</sup>:

- (169) *Trepidus ad haec Vitellius pauca purgandi sui causa*  
 trembling.NOM to these.ACC V.NOM little.ACC purifying.GER.GEN REFL.GEN in.order.to  
*respondit, [CP1 culpam in militem conferens [CP2 cuius nimio ardori*  
 answered.PF fault.ACC to soldier.ACC bringing.NOM whose.SG excessive.DAT eagerness.DAT  
*imparem esse modestiam suam [...]]].*  
 unequal.ACC be.INF modesty.ACC his.ACC  
 'Heavily upset, Vitellius only gave a short reply to these words in order to excuse himself, putting the blame on his soldiers, whose excessive ambition, he said, was too much for his own modesty.' (= Tac. Hist. 3.70)

In (170), the infinitive appears as a bare future tense participle (agreeing with the accusative subject *qua* case morphology); the infinitive of the auxiliary, namely *esse* 'be', has been suppressed.

- (170) *[CP1 Magnopere sese confidere demonstrat, si eius rei sit potestas facta, fore, ut aequis*  
*condicionibus ab armis discedatur].*  
*[CP2 Cuius rei magnam partem laudis atque existimationis ad Libonem*  
 whose.SG thing.GEN big.ACC part.ACC praise.GEN and respect.GEN to Libo.ACC  
*peruenturam, [si illo auctore atque agente ab armis sit*

<sup>44</sup> Bolkestein (1996a: 557-558) observes that the historical infinitive is not attested in relative clauses. This together with the accusative morphology of the subject confirms that we are dealing with genuine *Accusatiuus cum Infinitiuuo*.

go.PART.FUT.ACC if that.ABL advizor.ABL and doing.ABL from arms.ABL were.SUBJ  
*discessum*]].

gone.away.NOM

'He argued that he was confident that if he was granted this occasion, both parties would lay down arms on equal terms. A good share of the praise and credit for this achievement would go to Libo, is peace were brought about because of his advice and actions.' (= Caes. Civ. 1.26)

The same can also be observed in relative clauses in which the relative pronoun originates inside an AC, i.e. when we have LEF:

(171) *Itaque Persea hereditarium <a> patre relictum bellum [...] alere ac fovere omnibus consiliis. florere praeterea iuventute, quam stirpem longa pax ediderit, florere opibus regni, florere etiam aetate.*

[<sub>CP2</sub>[<sub>CP3</sub>*Quae*<sub>i</sub> [*cum* corporis robore ac uiribus uigeat]], [<sub>C°2</sub>animum esse  
which.NOM because body.GEN power.ABL and forces.ABL flourishes.SUBJ mind.ACC be.INF  
*inueteratum diutina arte atque usu belli*]].

grown.old.ACC long-lasting.ABL skill.ABL and experience.ABL war.GEN

'And so, Perseus was feeding and nursing in all possible ways a war that he had inherited from his father. His strong points were the number of young men he could count on, - a generation brought forth by a long period of peace -, the resources in his kingdom and his own vigorous youth, which was not only strong physically, but also endowed with a mind trained in theory and practice of war.' (Liv. aUc 42.11.5-6)

(172) *moram uoto publico Licinius pontifex maximus attulit, qui negauit ex incerta pecunia uoueri debere, quia <ea> pecunia non posset in bellum usui esse seponique statim deberet nec cum alia pecunia misceri.*

[<sub>CP2</sub>[<sub>CP3</sub>*Quod* [*si* factum esset]], [<sub>C°2</sub>uotum rite solui non posse]].  
which.NOM if done.NOM is.SUBJ oath.ACC duly be.pledged.INF not be.able.INF

'Licinius, the pontifex maximus, caused a delay concerning this public vow: he said that it was appropriate that a unlimited sum of money be promised, because that money could then not be used for warfare. It should be set aside and not be mixed with other money. If this would happen, the vow could not be fulfilled as it should'  
(= Liv. aUc 31.9.7)

The clauses that are labelled 'CP2' in (171-172) are relative clauses introduced by a wh-element (CP3), but the fact that they pattern with direct speech main clauses rather than with direct speech embedded clauses when appearing in indirect speech suggests that they are relative clauses of the non-integrated type. I would like to conclude that the latter can be characterized as 'quasi-main clauses'.



Another strong piece of evidence in favour of the claim that the *relatif de liaison* can act as a clausal pied-piper comes from the fact that clausal pied-piping in non-integrated relative clauses can apply recursively (a property shared with 'regalur' relative pronouns, cf. sections 1.3.1.2 and 2.6.1.2 above).

In (175), the predicate of the island clause CP2 selects an embedded question (CP3) as its complement. The *relatif de liaison quod* originates in the subject position of CP3: it moves first to the edge of CP3 (past *quale*, the interrogative that introduces the embedded question) and passes on its *wh*-feature to the entire CP2. Subsequently, CP3 moves as a whole to the edge of CP2, and lands to the left of *ut* ('so that'), the conjunction that introduces CP2. Finally, after yet another round of feature percolation, CP2 moves to the left periphery of CP1, and we have derived an non-restrictive relative clause.

(175) *Reliqua pars epistulae est illa quidem in utramque partem, sed tamen non nullos interdum iacit igniculos uirilis.*

[<sub>CP1</sub> [<sub>CP2</sub> [<sub>CP3</sub> Quod<sub>i</sub> quale<sub>j</sub> t<sub>i</sub> t<sub>j</sub> tibi uideretur]<sub>k</sub> [<sub>FinP2</sub> **ut** posses  
which.NOM how.NOM you.DAT seems.SUBJ so.that you.could.SUBJ  
*interpretari* t<sub>k</sub>]]<sub>l</sub>, *misi ad te exemplum<sub>i</sub> epistulae* t<sub>l</sub>].  
interpret.INF I.sent.PF to you.ACC copy.ACC letter.GEN

'The rest of the letter goes in two directions, but nevertheless at some points it shows some sparks of virility. To give you the opportunity to judge for yourself what you think of it, I sent you a copy of the letter.' (= Cic. ad Att. 15.26.2)

A similar case is (176), but this example displays an additional peculiar phenomenon, namely a(n apparent?) violation of the Coordinated Structure Constraint (ch. 1, section 3.4.1.1) of the type to be discussed at the end of chapter 6. Under my analysis of (176), the relative pronoun *cui* 'who (dat.)' is only extracted from the first of two coordinated IntP's (on 'IntP' cf. Rizzi 2001; chapter 3, section 2.1.2):

(176) *Redditae mihi tandem sunt a Caesare litterae satis liberales, et ipse opinione celerius uenturus esse dicitur;*

[<sub>CP1</sub> [<sub>CP2</sub> [<sub>CP3</sub> cui<sub>i</sub> [<sub>IntP3</sub> *utrum* [<sub>TP3</sub> t<sub>i</sub> *obuiam procedam*]]], [<sub>IntP3'</sub> *an* [<sub>TP3'</sub> *hic eum*  
who.DAT whether in.the.way I.go.forward.SUBJ or here him.ACC  
*expectem*]]], [<sub>FinP2</sub> **cum** *constituero*]], *faciam te certiozem*].  
I.await.SUBJ when I.will.have.decided I.will.make you.ACC surer.ACC

'I finally received a letter from Caesar, which was rather nice. He is said to be arriving personally, quicker than was expected. I will let you know when I have decided whether I'll go ahead to meet him or whether I'll wait for him here.'

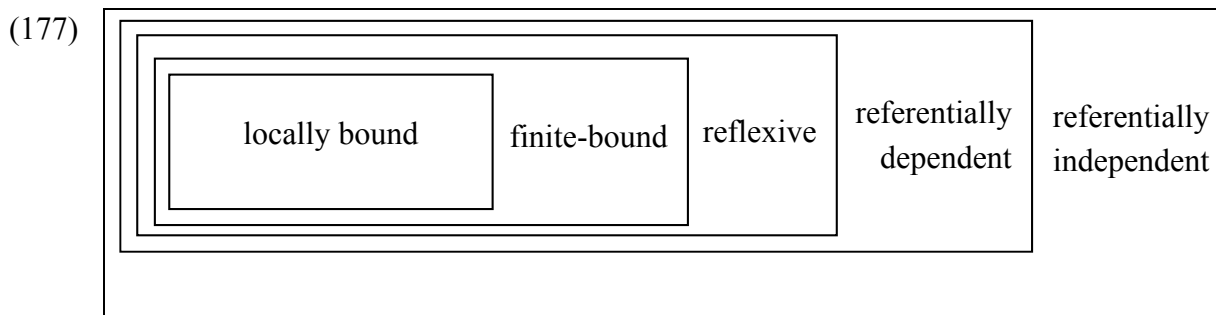
(= Cic. ad Fam. 14.23.4)

## 4.4 On the pronoun introducing non-restrictive RCs

In this section, I will look at typology of pronouns proposed by Kiparsky (2000). There are many parameters along which a taxonomy of pronouns can be established (see for instance the typology proposed by Cardinaletti & Starke (1999a), which was briefly discussed in ch. 2.). I will look at Kiparsky's proposal, because it makes a classification of pronouns on the basis of the relation between a pronoun and its antecedent.

### 4.4.1 Referential dependency and E-type pronouns

Kiparsky (2002) distinguishes five different classes of pronouns, which differ from each other in the structural relation they bear with respect to their 'antecedent'<sup>45</sup>. More specifically, Kiparsky proposes that all pronouns have an antecedent, by virtue of which their reference can be fixed, but pronouns imposes different constraints on the domain in which this antecedent has to occur. The five categories of pronouns are schematically represented in (177):



The boxes in (177) should be understood as constraints imposed on the domain in which a given pronoun requires its antecedent to be located. The lower the constraint in the hierarchy in (177), the smaller the domain in which a pronoun (which is subject to that constraint) and its antecedent need to be contained, or, in other words, the more local the relation between a pronoun its antecedent needs to be.

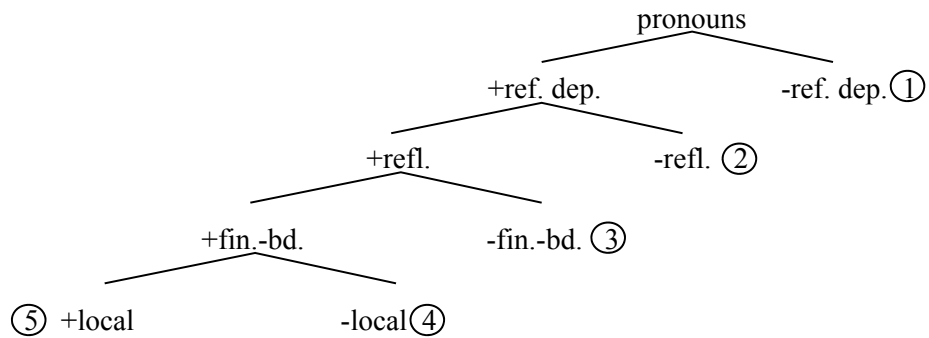
This system with four binary divisions (viz. [ $\pm$  referentially dependent], [ $\pm$  reflexive], [ $\pm$  finite-bound], [ $\pm$  locally bound]) is also (and perhaps more transparently) represented in (178), where it is shown that the taxonomy yields five different types of pronouns<sup>46</sup>.

<sup>45</sup> The term 'antecedent' is used in a broad sense to refer to both textual and non-textual referents of pronouns.

<sup>46</sup> In the original paper, Kiparsky (2002: 201) further specifies that each of the pronouns in (177-178) can be obviative or non-obviative. If a given pronoun can have the same referent as one of its coarguments (i.e. arguments of the same predicate), then it is non-obviative. If a pronoun and its coarguments obligatorily have disjoint reference, it is obviative (Kiparsky 2002: 179-180). All this yields ten possible pronouns. According to Kiparsky, at least 8 of these are attested in natural languages (Kiparsky 2002: 201). Since it is not crucial for the point at issue, I leave the [ $\pm$  obviative] parameter aside, and I refer to the original paper for discussion.



(178)



Now where does the Latin *relatif de liaison* fit in this typology? I would like to submit that it is a (i) referentially dependent, (ii) non-reflexive pronoun. I will briefly comment upon both of these properties.

First, for a pronoun to be referentially dependent means that this pronoun cannot introduce a new entity into the discourse, viz. by deictically referring ('pointing', cf. ch. 5, section 2.2) to a physically present person or object<sup>47</sup>. This holds for the Latin *relatif de liaison*: it can only refer to an entity which is already part of the universe of discourse (cf. Bolkestein 1996a, 2000).

Second, the *relatif de liaison* is non-reflexive. According to Kiparsky's (2002: 200) definition, a pronoun is reflexive iff it necessarily needs a syntactic binder, i.e. c-commanding antecedent. No such purely syntactic relation has to hold between the Latin *relatif de liaison* and its antecedent. An example where a relative clause clearly is not c-commanded by its antecedent is the 'preposed' parenthetical non-integrated relative clause in (154) (section 4.2.3), repeated here for convenience:

(154) *Ceterum - quod non prouiderunt - et loco graui et tempore anni*

Furthermore which.ACC not they.foresaw and place.ABL heavy.ABL and time.ABL year.GEN  
(*medium enim aestatis erat*), *ad hoc insolito odore ingruere morbi*  
middle.NOM PRT summer.GEN was to this.ACC unusual.ABL smell.ABL entered.PF diseases.NOM  
*uulgo, maxime in remiges, coeperunt.*

widely especially in rowers.ACC began.PF

'Furthermore, - circumstance they hadn't foreseen -, due to the unhealthy country and the time of the year (it was midsummer), and on top of this through the unaccustomed smell, diseases began to spread widely, especially among the rowers.'

(= Liv. aUc 37.23.2)

<sup>47</sup> see also Enç (1983, 1989) on Turkish *kendisi* ≈ 'he'.

Some other examples are discussed in Pennell Ross (1996: 517) and Bolkestein (1996a: 563). Consider for instance (179):

- (179) [...] [*decuriones Auximi*]<sub>i</sub> ad Attium Varum [...] conueniunt. docent sui iudicii rem non esse; neque se neque reliquos municipales pati posse C. Caesarem [...] tantis rebus gestis oppido moenibusque prohiberi; proinde habeat rationem posteritatis et periculi sui. **quorum**<sub>i</sub> oratione permotus Varus praesidium quod introduxerat ex whose.PL speech.ABL moved.NOM V.NOM garrison.ACC which.ACC he.had.brought.in out oppido educit ac profugit.  
town.ABL led.out and fled  
'The decurions of Auximum gathered to meet Attius Varus. They explained that the matter did not fall under their authority. They and their fellow citizens could not tolerate that Gaius Caesar after such exploits be prevented from entering the walls of the town. Varus should therefore take into account the future and his own peril. Moved by their speech, Varus, led out the garison that he had brought in left.'  
(= Caes. Civ. 1.13)

The antecedent of *quorum* is *decuriones* 'decurions' in the first line, which is also the referent of the pro-subject of *docent* 'they argued'. The three sentences that intervene between the clause that contains the antecedent *decuriones* and the relative pronoun *quorum* together form one stretch of indirect discourse it seems that the relative pronoun is not c-commanded by its antecedent. Instead, it seems to be the case that the process that mediates between a *relatif de liaison* and its antecedent belongs to the realm of Discourse Grammar rather than to Sentence Grammar (in the sense of Williams 1977): perhaps this process is to be equated to the phenomenon of R-binding from Safir (1986).

Kiparsky goes on to observe that referentially dependent non-reflexive pronouns to some extent form a heterogeneous class. Not all of them are 'functionally equivalent', in that some seem to be interpretively more like topics, whereas others are closer to foci. For instance, the Modern Greek pronoun *ο ίδιος* (≈ 'the same, he himself', cf. Iatridou (1986) and Varlokosta & Hornstein (1993)), illustrated in (180), always bears some degree of emphasis or contrast, which (or perhaps a contrastive topic), but it has all the properties of referentially dependent non-reflexive pronouns described above:

- (180) *Ο Γιάννης<sub>i</sub> μας συμβούλεψε να φύγουμε αμέσως.*  
the.NOM Yanis.NOM us.ACC advised.AO that we.leave.SUBJ immediately  
*Ο ίδιος<sub>i\*</sub> θα έφευγε αργότερα.*  
the.NOM self.NOM FUT leave.ABL later.ADV  
'Yanis advised us to leave immediately. He himself would leave later.'

However, the Latin *relatif de liaison* does not seem to bear any contrastive force (cf. Bolkestein 1996a, 2000). Rather, it is more akin to the type of pronouns mentioned by

Kiparsky (2000: 208) at the end of his discussion of 'referentially dependent non-reflexive pronouns':

[m]any pronouns which have been described as requiring "topic" antecedents probably belong here. For example [...] Dogrib *we-* [...] seems to be appropriate only in situations where its referent has some status as a discourse topic; and for Korean *caki* it has been claimed that there are no syntactic constraints on the antecedent, but it is normally the discourse topic [...]; *caki* itself cannot apparently introduce a new discourse topic<sup>48</sup>.

This seems to be more in line with the characterizations of the *relatif the liaison* offered by Pennell Ross (1996) and Bolkestein (1996a, 2000). Moreover, as I argued above (section 4.1.3), the *wh*-phrase itself seems to behave like a topic.

The above characterization of Latin 'non-integrated' *qui* is very compatible with the widespread view that (non-integrated) non-restrictive RCs are introduced by an E-type pronoun (cf. de Vries 2006a: 260; Cinque 2008), rather than by a syntactically bound pronoun (Demirdache 1991).

E-type pronouns were first discussed by Evans (1977, 1980), and they are defined by Kratzer (1995: 142), as being 'anaphorically related to quantifier phrases that don't c-command them' and by Authier & Reed (2005: 639) as 'pronouns whose denotation is fixed by a description recoverable from the clause containing the quantifier antecedent'<sup>49,50</sup>. Their reference is strictly determined by their antecedent, although this coreference relation is not established by means of syntactic binding proper. Consider for example (181), from Evans (1980: 339, his (7)):

(181) *Few congressmen admire only Kennedy, and they are very junior.*

where *they* = *all the congressmen (how happen to be few in number) who like Kennedy*

Under standard definitions of c-command (cf. ch. 1, section 1.2), *few congressmen* does not c-command *they* in the second of the two conjoined CP. Still, the DP *few congressmen* and *they*

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<sup>48</sup> I refer to the original paper for references omitted in the fragment.

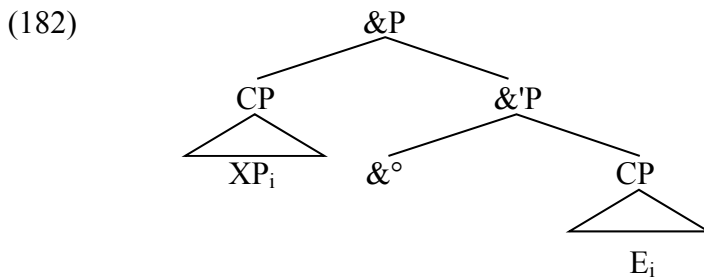
<sup>49</sup> For the analysis of E-type pronouns, one could adopt the analysis of Elbourne (2001), who proposes that E-type pronouns should be analyzed as determiners whose NP is elided under identity with a discourse antecedent. Under this approach, the referent of the pronoun is fixed by the phonologically null NP (see also fn. 40 for remarks on Elbourne's theory).

<sup>50</sup> A Latin example with a quantifier antecedent (boldface) and a (probably non-integrated) relative clause is given in (i):

(i) **Multi**<sub>i</sub> praeterea armis exuti fugerunt, quorum<sub>i</sub> scuta sunt relata LXXX.  
many.NOM moreover arms.ABL deprived.of.NOM fled.PF whose.PL shields.NOM are brought.back.NOM 80  
lit. 'Moreover, many fled without their weapons, eighty shields of whom were gathered.'  
(= Anon. Bel. Hisp. 9)

refer to exactly the same group of people (at least if the pronoun is not interpreted deictically): *they* can felicitously be paraphrased as 'those same congressmen (who admire only Kennedy).

I will conclude this section with some considerations about the relation between non-integrated relative clauses and the discourse they are preceded by. Cinque (2008) suggests that the syntactic structure underlying non-integrated non-restrictives might be as in (182), where two CPs are joined by means of an empty head, perhaps a paratactic coordinator (cf. Koster 2000; de Vries 2006a ('specifying coordination')):



On the one hand, this conjunction analysis explains the tight interpretive link between the two clauses, and on the other hand, it creates a boundary that explains why it is impossible to bind into non-integrated non-restrictive relative clauses.

#### 4.4.2 Interpretive similarity with 'coordinating conjunction + pronoun'

Let's return now to the Latin *relatif de liaison*, the main issue at hand here. At this point an interesting parallel can be drawn. In traditional handbooks, it is often said that the *relatif de liaison* can be paraphrased as a combination of a coordinating conjunction (*et* 'and' or *sed* 'but') and an anaphoric pronoun (a form of *hic* or *is*, on which see below)<sup>51</sup>. Example (139) which I gave above would be roughly equivalent to (139') (I have replaced the original *qui* for *et is*):

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<sup>51</sup> Kühner & Stegmann (1966<sup>2</sup>: 319): 'Der Adjektivsatz drückt eine Erweiterung aus; *qui* ist für uns alsdann soviel als *et is*, *et ego*, *et tu* usw.' Note in passing that the idea that a silent conjunction is part and parcel of the *relatif the liaison* receives some support if we consider the fact that it is incompatible with an overt conjunction:

- (i) a. \* *et qui* ('and who' (masc. sg.))
- b. \* *sed quae* ('and which' (neut. pl.))

(139') *lyra [...] Orpheo<sub>i</sub> est tradita, qui, Calliopes et Oeagri filius, eius rei maxime studiosus fuit. Itaque existimatur suo artificio feras etiam ad se audiendum adlicuisse. Et is<sub>i</sub> querens uxoris Eurydices mortem, ad inferos descendisse existimatur.*

'The lyre was given to Orpheus<sub>i</sub>, who, as a son of Calliope and Oeager, showed great enthusiasm for the instrument. It is said that with his art, he attracted even wild animals, who would come and listen to him. It is also said that, in mourn for his deceased spouse Eurydice, he descended in the underworld.' (≈ Hyg. Ast. 2.7.1)

Just equating non-integrated non-restrictives to a sequence of the type *et is* is definitely not completely accurate (see Bolkestein 1996a for discussion of pragmatic differences between the two), but given the above characterization of the relatif de liaison as fronted topic, there is definitely a certain similarity with topicalized pronouns. In the next, chapter I will actually suggest that there is evidence that some Latin anaphoric pronouns, namely *is* and *hic*, can also act as clausal pied-pipers in much the same way as the relatif de liaison. An example is given in (183):

(183) [*Eum<sub>i</sub> [cum t<sub>i</sub> uidero]]*, *Arpinum pergam.*

him.ACC when I.will.have.seen to.Arpinum I.will.proceed

'When I have seen him, I'll move on to Arpinum.' (= Cic. ad Att. 9.15.1)

The main reason for assuming that this is indeed the case will be the fact that the same left-right asymmetry concerning the position of the embedded clause hosting a fronted element in its very left periphery can be observed in the case of fronted pronouns.

## 5 Summary

The empirical focus of this chapter is the Latin phenomenon illustrated in examples such as (1) in which a relative pronoun is left adjacent to the adverbial clause in which it originates.

(1) [<sub>CP1</sub> *An eum discere ea<sub>i</sub> mauis* [<sub>CP2</sub> [<sub>CP3</sub> *quae<sub>i</sub> cum plane*  
PRT him.ACC learn.INF those.things.ACC you.prefer which.ACC when thoroughly  
*perdidicerit t<sub>i</sub>]<sub>j</sub> [<sub>TP2</sub> *t<sub>j</sub> nihil sciat*]]]?*

internalize.SUBJ.PF nothing.ACC he.knows.SUBJ

'Do you want him to learn the type of things that give him no knowledge, even when he knows them in and out?' (= Cic. Fin. 5.76)

Summarizing the discussion in this chapter, I have argued that such data discussed can be captured elegantly if one assumes a derivation involving clausal pied-piping of adverbial clauses. This approach has the advantage that at no point does one need to postulate an extraction out of a syntactic island. Furthermore, the pied-piping analysis can account for the systematic absence of *wh*-words in rightward embedded clauses. The discussion of the observed discrepancy *qua* pied-piping behaviour between interrogative and relative pronouns lends further support to the a feature-based approach to minimality effects in syntax. Finally, I extended the analysis to cases where the *wh*-pronoun introduces a so-called non-integrated non-restrictive relative clause. This structure was characterized as involving two instead of three clauses. It was shown that the *wh*-phrase introducing such a relative clause can either be a bare *wh*-word or a full DP: the latter can be considered a quasi-topic.

In the next chapter, I will move on to discuss non-*wh* phrases, especially pronouns, sitting in the left periphery of embedded clauses. These are mostly personal or demonstrative (anaphoric) pronouns, and will be characterized as topics. Since they are exclusively found in lefthand clauses, I will argue that topicalized constituents can pied-pipe an entire clause as well.

## Chapter 5.

# Clausal pied-piping by topics

In this chapter I will be concerned with LEF of pronouns (or of constituents containing a pronoun). I will show that these are constrained by the same left-right restriction that we also encountered in the previous chapter. After having presented the *explananda* (section 1), I will first elaborate on the nature of Latin third person 'pronouns' (section 2). In section 3, I will analyze the pronominal LEF-variety in terms of clausal pied-piping, supporting the analysis with some cross-linguistic parallels. In section 4, I will say some concluding words about the syntax of clausal pied-piping, mainly focusing on issues regarding locality. I will conclude that the *wh*- and the pronominal variety of LEF which are subject to the left-right constraint are realizations of one and the same phenomenon, which I call LEF1. In section 5, I will look at clauses with more than one LEF-constituent, concentrating on the question of whether there can be more than one LEF1-constituent in one clause. The answer to this question will be negative. To reconcile the non-recursivity of LEF1 with the fact that multiple LEF exists, I will propose that a second type of LEF should be distinguished, which I will call LEF2.

### 1 Non *wh*-words undergoing LEF: the data

The main subject of this chapter are sentences in which a pronoun undergoes LEF in clause-initial embedded clauses (ACs), as in the *cum*-clause in (1):

- (1) *Cum dedissem ad te litteras ut scires Caesarem; Capuae VII Kal. fore, adlatae mihi Capua sunt eum; hic VI et in Albano apud Curionem V Kal. fore.*

[<sub>CP1</sub> [<sub>CP2</sub> *Eum*<sub>i</sub> [*cum* *t<sub>i</sub>* *uidero*]], *Arpinum* *pergam*].

him.ACC when I.will.have.seen Arpinum.ACC I.will.proceed

'When I had sent a letter to you to inform you that Caesar would be in Capua on the 26th, I received a letter saying that he would be here on the 27th, and with Curio in Alba on the 28th. When I have seen him, I'll move on to Arpinum.'

(= Cic. ad Att. 9.15.1)

Just like their wh-counterparts, the pronouns under discussion can appear with (2) or without (1) a nominal restriction.

- (2) [Context: the consul Fabius is waiting until favourable omens allow him to lead his army across the river Volturnus.]

[<sub>CP1</sub> [<sub>DP</sub> *Eae causae*]<sub>i</sub> [<sub>CP2</sub> *cum* *t<sub>i</sub>* *Fabium tenerent*]], *Sempronius in obsidione erat* [...].

these.NOM reasons.NOM when F.ACC kept.busy.SUBJ S.NOM in siege.ABL was

'While these reasons prohibited Fabius from moving on, Sempronius was besieged.'

(= Liv. aUc 23.37.1)

On a par with the fronted wh-phrases in non-integrated non-restrictive relative clauses, I will characterize the LEF-constituents in (1-2) as topics. The difference between the two LEF-variants is not very big, as suggested by the minimal pair in (3-4), both from the same author and in a very similar context. The wh-word in (3) and the pronoun in (4) are both old information, picking up an already established discourse referent (namely an event described in the previous sentence):

- (3) [...] *quoniam in id tempus ab aestiuo solstitio conuenit inter peritos rei rusticae non esse arandum, nisi si magnis, ut fit nonnumquam, ac subitaneis imbribus quasi hibernis pluuiis terra permaduuerit.*

[*Quod* [*cum* *accidit*]], *nihil prohibet quo minus mense Iulio*

which.NOM when happens nothing.NOM prohibits that month.ABL July.ABL

*ueruacta subigantur.*

fallow.lands.NOM be.broken.SUBJ

'For it is agreed upon among experts in agriculture that from the summer solstice until this time, no land should be ploughed, unless, as sometimes happens, it has been soaked with heavy and sudden winter-like showers. When this happens, nothing prohibits fallow land from being broken.' (= Col. Agr. 2.4.4-5)

- (4) *Necnon etiam ille morbus maxime est conspicuus qui horridas contractasque carpit, cum frequenter aliae mortuarum corpora domiciliis efferunt, aliae intra tecta, ut publico luctu, maesto silentio torpent.*

[*Id* [*cum* *accidit*]], *harundineis infusi canalibus offeruntur cibi* [...].

this.NOM when happens of.reed.DAT poured.into.NOM channels.DAT are.offered foods.NOM

'(talking about bees Id) Moreover, the following disease is also particularly remarkable: it is one which renders its victims hideous and shrunk. Some bees carry



the bodies of the dead out of the hive, whereas others remain unmoved inside in sad silence, as if in public mourn. When this happens, food is offered to them which is poured into little troughs made of reed.' (= Col. Agr. 9.13.7)

In the present section, I will offer a full schematic overview of the entire range of data of LEF involving non-wh-phrases. As hinted at above (ch. 3, section 3.2.1), I will eventually split up the class of non-wh- LEF constituents in two subgroups: the first group contains LEF where (a phrase containing a) pronoun is fronted (LEF1), in the second group such a pronoun is lacking (LEF2).

Moreover, I will make a distinction between cases where one and cases where more than one constituent is fronted, which I will call single and multiple LEF respectively. In the case of multiple LEF, I will pay special attention to the nature of the fronted phrase (wh-, pronoun, or neither of these) and to the order in which they can appear. A full overview of all the attested and unattested combinations will be provided (sections 1 and 5.1).

## 1.1 Type A: single LEF

With the term 'single LEF' I refer to those instances of LEF where only one constituent is found to the left of a subordinating conjunction. As will become clear, I use this term as a descriptive label for a certain word order sequence: I will propose that two fundamentally different types of 'single LEF' should be distinguished, although both types yield the same surface string.

### 1.1.1 Patterns attested

In the previous chapter I discussed sentences which display the linear pattern in (5):

(5) [wh [Sub [... **LEF1**

We have seen that the wh-word cannot be interrogative (6c), it can only be relative. Wh-words introducing a restrictive relative clause (6a) are attested but not very frequently (cfr. ch. 4, section 1.1.4). In the majority of the examples where a wh-word has undergone LEF1, the wh-word is a *relatif de liaison*, and the relative clause it introduces is a non-integrated non-restrictive ((6b), ch. 4, section 4).

(6) a. [ (R)RC [Sub [... **LEF1**  
 b. [ RL [Sub [... **LEF1**  
 c. \* [ Int [Sub [...

This first kind of non-wh LEF is schematized in (7), where 'IS' is to be understood as some kind of meta-expression standing for all (independent or attributive) forms of *is* or *hic*. For reason to be made clear below, I will assume that these pronominal expressions are interpretively topics<sup>1</sup>.

(7) [IS [**Sub** [...]]] **LEF1**

It is important to note that the topic-like pronominal elements which precede the conjunction introducing an AC are exclusively found in clause-initial embedded clauses. We never find sentences of the form exemplified in (8b):

(8) a. [<sub>CP1</sub> [<sub>CP2</sub> IS<sub>i</sub> [<sub>FinP2</sub> **Sub** [<sub>TP2</sub> *t*<sub>i</sub> ]]]] [<sub>TP1</sub> [<sub>vP/VP</sub> ]]]  
 b. \* [<sub>CP1</sub> [<sub>TP1</sub> [<sub>vP/VP</sub> ] [<sub>CP2</sub> IS<sub>i</sub> [<sub>FinP2</sub> **Sub** [<sub>TP2</sub> *t*<sub>i</sub> ]]]] ]]

In sections 3 and 4 of the present chapter, I will analyse the pattern in (8a) as involving the by now familiar phenomenon of clausal pied-piping.

The second group of non-wh LEF, contains all the cases of single LEF where an XP is fronted which is not a wh-expression or a form of IS<sup>2</sup>:

(9) [XP [**Sub** [...]]] **LEF2**

This pattern will be called LEF2, and is to be discussed in chapter 6. Importantly, the left-right asymmetry characteristic for LEF1 now vanishes: LEF2 is attested in clause-initial (10a) as well as in clause-final (10b) embedded clauses:

(10) a. [<sub>CP1</sub> [<sub>CP2</sub> XP<sub>i</sub> [<sub>FinP2</sub> **Sub** [<sub>TP2</sub> *t*<sub>i</sub> ]]]] [<sub>TP1</sub> [<sub>vP/VP</sub> ]]]  
 b. [<sub>CP1</sub> [<sub>TP1</sub> [<sub>vP/VP</sub> ] [<sub>CP2</sub> XP<sub>i</sub> [<sub>FinP2</sub> **Sub** [<sub>TP2</sub> *t*<sub>i</sub> ]]]] ]]

In the present chapter, I will focus on the pattern exemplified in (10). I will start by giving some relevant figures that emerged from the corpus study that I conducted.

<sup>1</sup> See also the interpretive similarity between the *relatif de liaison* and the combination 'et ('and') + demonstrative pronoun' that was pointed out in ch. 4, section 4.4.2.

<sup>2</sup> This is not quite accurate: although I did not find any convincing instances, I predict that forms of IS should in principle be able to occur as LEF2 constituents. However, given that the latter will be characterized as presentational foci which most often (but not always) convey new information and that IS is typically old information, it is probably just quite unlikely that IS would every be attested in an LEF2 position.

### 1.1.2 Table and figures

Table 1, repeated here from ch. 3 (section 3.2.1), shows the distribution of wh-words and other pronouns which surface in an LEF-position. Recall from that section that the 424 ACs in Table 1, form a subset of the 788 clause-initial ACs displaying (any sort of) LEF from the corpus that I have studied. Given the non-attestation of these wh- and non-wh pronouns in clause-final ACs, I suggested that all these instances of LEF form one coherent class, namely LEF1.

(11)

| Author               | Date       | Work                  | is<br>#   | hic<br>#  | iste<br># | ille<br># | qu-<br>#   | Tot.<br>#  |
|----------------------|------------|-----------------------|-----------|-----------|-----------|-----------|------------|------------|
| <b>Cato</b>          | 160 BC     | <i>De agricultura</i> | 1         | 3         | 0         | 0         | 0          | 4          |
| <b>Cicero</b>        | 50-40 BC   | <i>Ad Atticum</i>     | 22        | 14        | 0         | 5         | 104        | 145        |
| <b>Anonymus I</b>    | ± 40 BC    | <i>Bellum Afr.</i>    | 1         | 1         | 0         | 0         | 11         | 13         |
| <b>Anonymus II</b>   | ± 40 BC    | <i>Bellum Hisp.</i>   | 2         | 3         | 0         | 0         | 12         | 17         |
| <b>Anonymus III</b>  | ± 40 BC    | <i>Bellum Alex.</i>   | 0         | 3         | 0         | 0         | 15         | 18         |
| <b>Varro</b>         | 36 BC      | <i>Res rustica</i>    | 6         | 4         | 0         | 1         | 20         | 31         |
| <b>Velleius Pat.</b> | 30 AD      | <i>Historiae</i>      | 3         | 2         | 0         | 0         | 25         | 30         |
| <b>Columella</b>     | 40-50 AD   | <i>De agricultura</i> | 27        | 15        | 0         | 0         | 42         | 84         |
| <b>Plinius minor</b> | 90-110 AD  | <i>Epistulae</i>      | 0         | 3         | 0         | 0         | 26         | 29         |
| <b>Plinius minor</b> | 90-110 AD  | <i>Panegyricus</i>    | 0         | 2         | 0         | 0         | 1          | 3          |
| <b>Tacitus</b>       | 100-110 AD | <i>Annales</i>        | 0         | 0         | 0         | 1         | 7          | 8          |
| <b>Tacitus</b>       | 100-110 AD | <i>Historiae</i>      | 0         | 0         | 0         | 0         | 5          | 5          |
| <b>Fronto</b>        | 150-170 AD | <i>Epistulae</i>      | 2         | 0         | 0         | 1         | 6          | 9          |
| <b>Apuleius</b>      | 170-180 AD | <i>Florida</i>        | 0         | 2         | 0         | 0         | 1          | 3          |
| <b>Apuleius</b>      | 170-180 AD | <i>Magia</i>          | 0         | 2         | 0         | 2         | 21         | 25         |
| <b>Total:</b>        |            |                       | <b>64</b> | <b>54</b> | <b>0</b>  | <b>10</b> | <b>296</b> | <b>424</b> |

Table 1: occurrences of third person pronominals to the left of subordinating conjunctions introducing clause-initial ACs.

The same table shows us that most frequently attested in an LEF1 configuration are forms of the pronouns *is*, *ea*, *id* and *hic*, *haec*, *hoc*. As above, I will use the symbol IS as a cover term for the category of Latin third person 'pronouns'<sup>3</sup>, but from now on, this will only stand for forms of *is* and *hic*. On the other hand, there are a number of other pronouns which are less often or not at all found in LEF contexts, viz. forms of *iste* and *ille*: I will represent this subtype of pronouns with the 'meta-expression' ILLE. The main reason why I think IS-pronouns and ILLE-pronouns should not be put on a par is their different distribution in multiple LEF sequences: I will deal with this particular issue in section 5.

<sup>3</sup> In section 2, I will discuss the exact nature of this type of pronouns.

## 1.2 Type B: Multiple LEF

I will now briefly introduce the phenomenon of 'multiple LEF', i.e. those instances of LEF where more than one constituent is fronted to the left of a subordinating conjunction.

### 1.2.1 Patterns attested

Maintaining the distinction between the by now four different kinds of LEF constituents, namely (i) wh-pronouns, (ii) IS, (iii) ILLE and (iv) all other XPs, it turns out that not all logically possible combinations are attested. The combinations that are attested are listed in (12):

- (12) a. [wh ILLE [**Sub** [...  
 b. [IS ILLE [**Sub** [...  
 c. [wh XP [**Sub** [...  
 d. [IS XP [**Sub** [...

In section 5.1 below, I will also give a full overview of the different combinations that are not attested, and I will try to draw a number of conclusions from that. My main concern will be the nature of ILLE and XP: are they an instance of LEF1 or LEF2?

### 1.2.2 Table + figures

Table 2 shows how frequently multiple LEF was attested in my corpus (first column). In addition, it provides information about the nature of the first phrase of the LEF-sequence. Under the category 'other' are subsumed all the cases of multiple LEF where (full) DPs, PPs, APs or even CPs are fronted, without a pronoun being present.

(13)

|             | # multiple LEF | first phrase is or contains of form of: |           |            |             |             |       |
|-------------|----------------|-----------------------------------------|-----------|------------|-------------|-------------|-------|
|             |                | <i>qui</i>                              | <i>is</i> | <i>hic</i> | <i>iste</i> | <i>ille</i> | other |
| <i>cum</i>  | 53             | 26                                      | 3         | 5          | 0           | 0           | 19    |
| <i>ut</i>   | 3              | 2                                       | 0         | 0          | 0           | 0           | 1     |
| <i>si</i>   | 14             | 7                                       | 0         | 3          | 0           | 0           | 4     |
| <b>Tot.</b> | 70             | 35                                      | 3         | 8          | 0           | 0           | 24    |

Table 2: absolute frequency of multiple LEF per kind of AC;  
nature of the first fronted phrase.

In exactly half of the cases (35/70), the first phrase bears wh-morphology. Of the pronominal forms, only forms of *is* and *hic* are attested: I will consider these to be clear members of the class that I called IS above. Together, the tokens with IS and wh- as a first LEF-phrase add up to 46 of the 70 cases of multiple LEF (65,7%). On the other hand, no forms of *iste* and *ille* are attested in first position of an LEF-sequence.

Finally, something should be said about the distribution in clause-initial and clause-final embedded clauses. Multiple LEF is mostly found in initial clauses (all 68 out of 70 instances of multiple LEF in my corpus are found clause-initially), and only marginally so in clause final clauses: I will have more to say on these alleged cases of multiple LEF in clause-final embedded clauses in ch. 6, section 1.1.3.

### 1.3 A note on ILLE

Outside my corpus one can also find cases where a form of *ille* has undergone LEF. Examples of simple LEF with ILLE are given in (14-15).

- (14) [context: summary of recent letters from Bibulus to Cicero. The latter complains that Bibulus did not inform him about the Parthian war, writing only about a position as augur for his son.]

*[Ille<sub>i</sub> [si t<sub>i</sub> <in> omnis est maleuolus]], quod numquam existimaui, minus  
he.NOM if towards all.ACC is nasty.NOM which.ACC never I.thought less.ADV  
offendor in me.*

I.am.vexed in me.ACC

'If it is true that he is ill-disposed towards everybody, which I never thought to be the case, I feel less inclined to take it as a personal offence.' (= Cic. ad Fam. 2.17.7)

- (15) *Hic Quinctium<sub>i</sub> simul pugnantem hortantemque suos incautum hasta transfigit.*

*[Ille<sub>i</sub> [ut t<sub>i</sub> praeceps cum armis procidit ante proram]], [...], repente et  
he.NOM when headlong.NOM with weapons.ABL fell.down.PF before prow.ACC suddenly and  
alia a puppe triremis hostium apparuit.*

other.NOM from stern.ABL trireme.NOM enemies.GEN appeared.PF

'He (sc. Nico) killed him (sc. Quinctius) with a spear while he was off guard, fighting and encouraging his troops. When he fell headlong with his weaponry over the bow, suddenly another of the enemies' triremes appeared from behind.'

(= Liv. aUc. 26.39.17)

At first sight, the data in (14-15) look very similar to the basic pattern exemplified in (1), not in the least because the familiar left-right asymmetry seems to be respected: also outside of my regular corpus, I could not find a single instance of ILLE in an LEF-position in a clause-final embedded clause. The question now naturally arises of whether instances like (14-15) should also be analyzed in terms of clausal-pied-piping. In other words, can ILLE act as a clausal pied-piper?

Although we know that the overall frequency of ILLE in LEF is fairly low (I counted only 10 tokens, cf. Table 1 in (11)), all of the attestations of *ille* in LEF are in clause-initial ACs. This seems to suggest that ILLE should be considered a form of IS. However, data concerning the

position of ILLE in multiple LEF-constellations suggest the opposite. In 6 of the 10 cases where a form of *ille* appears at the edge of an AC, the form of *ille* is not the only LEF-constituent, and in all of these 6 sentences, the form of *ille* is not the first LEF constituent: in 5 cases it is preceded by a wh-expression, and in 1 case by of form of *hic*. ILLE thus exhibits a behaviour which is conspicuously than that of the genuine members of IS, namely forms of the pronouns *is* and *hic*. My eventual (tentative) suggestion will be that all instances where ILLE occurs in an LEF position, it probably is a case of LEF2.

Having outlined the main elements that I will discuss in the present chapter, I will now have a closer look at the properties of Latin pronouns, so as to give a clear picture of the position that IS- and ILLE-type pronouns occupy in the overall Latin pronominal system. After this, I will return to the analysis of pronominal LEF.

## 2 Excursus: Latin pronouns

### 2.1 The system of Latin personal pronouns

#### 2.1.1 *pro* drop

It is well known that in Latin, personal pronouns functioning as subjects need not be expressed overtly. In (16), no first and second person pronouns of the predicates *peto* and *cures* are present in the PF-signal.

- (16) *Peto abs te, ut haec diligenter cures.*  
 I.ask from you.ABL that these.ACC carefully you.care.SUBJ  
 'I ask you to take great care of this.' (= Cic. ad Att. 1.9.2)

Still, these clauses are understood as having a subject and this subject is syntactically active in that it controls, among others, the flexion of the verb and may in the relevant case determine binding relations for reflexives etc. The understood subject which is syntactically active is taken to be a non overt pronoun, i.e. a pronoun which lacks phonetic features, but which does have the other grammatical features associated with a pronoun, and is commonly represented by the abbreviation *pro*. In Latin as in many other *pro*-drop languages, the number and person features of *pro* can be identified by virtue of the fact that finite verbs display rich agreement.

Latin has null objects as well, on which see van der Wurff (1994) and Luraghi (1997). In the example in (17), from van der Wurff (1994: 89, his (23)), the null object is located in the final

relative clause (following the generative literature, I have represented it as *pro*). Given the parallel structure of the two sentences in the example, the referent of the omitted argument is easily recoverable from the preceding context (cfr. *me* 'me' in the relative clause in the first sentence).

- (17) *Ut iam sit in iis culpa, qui me<sub>i</sub> non defenderunt. Non minor est in iis, [CP qui pro<sub>i</sub> reliquerunt].*  
 so.that PRT is.SUBJ in those.ABL fault.NOM who.NOM me.ACC not defended.PF not smaller.NOM  
 is in those.ABL who.NOM.PL forsaken.PF  
 'The net result is that the people who did not defend me are to blame, but no lesser fault I find in those who forsaked me.' (= Cic. ad Fam. 1.19.3)

It is well established that in Latin zero anaphora, i.e. the use of null pronouns as subjects and objects, is not unconstrained: a number of functional constraints favours the use of an overt pronoun (see a.o. Pinkster 1987), I will examine some of these in the next section.

### 2.1.2 Overt pronouns: paradigms

Zero anaphora is typically dispreferred in complex discourse contexts with multiple participants. In such cases, explicit pronouns can be used in order to avoid possible ambiguities. However, as the reader can verify in Table 3, Latin did not have lexicalized personal pronouns to (non-reflexively) refer to third person entities<sup>4</sup>:

(18)

|            | Singular           |                    |                    |           | Plural                      |                            |                    |           |
|------------|--------------------|--------------------|--------------------|-----------|-----------------------------|----------------------------|--------------------|-----------|
|            | 1 <sup>st</sup> p. | 2 <sup>nd</sup> p. | 3 <sup>rd</sup> p. |           | 1 <sup>st</sup> p.          | 2 <sup>nd</sup> p.         | 3 <sup>rd</sup> p. |           |
|            |                    |                    | refl.              | non-refl. |                             |                            | refl.              | non-refl. |
| <b>NOM</b> | <i>ego</i>         | <i>tu</i>          | /                  | /         | <i>nos</i>                  | <i>uos</i>                 | /                  | /         |
| <b>ACC</b> | <i>me</i>          | <i>te</i>          | <i>se</i>          | /         | <i>nos</i>                  | <i>uos</i>                 | <i>se</i>          | /         |
| <b>GEN</b> | <i>mei</i>         | <i>tui</i>         | <i>sui</i>         | /         | <i>nostrum/<br/>nostrum</i> | <i>uestrum/<br/>uestri</i> | <i>sui</i>         | /         |
| <b>DAT</b> | <i>mihi</i>        | <i>tibi</i>        | <i>sibi</i>        | /         | <i>nobis</i>                | <i>uobis</i>               | <i>sibi</i>        | /         |
| <b>ABL</b> | <i>me</i>          | <i>te</i>          | <i>se</i>          | /         | <i>nobis</i>                | <i>uobis</i>               | <i>se</i>          | /         |

Table 3: Declension paradigms of Latin personal pronouns.

However, Latin does have a number of overt pronouns that can be used when for some reason, third person zero anaphora would not be felicitous. I will have a look at those presently.

<sup>4</sup> The non-availability of third person personal pronouns is cross-linguistically not exceptional (cf. Bhat 2004: 13-15).

### 2.1.3 Third person pronouns<sup>5</sup>

Zero anaphora is typically dispreferred in complex discourse contexts with multiple participants: explicit pronouns are used in order to avoid possible ambiguities. In those cases, four pronominal alternatives are available, apart from the *relatif de liaison* (*qui, quae, quod* 'which'). They are listed in (19):

- (19) a. *hic, haec, hoc* (proximal demonstrative)  
 b. *iste, ista, istud* ('immediate' demonstrative)  
 c. *ille, illa, illud* (distal demonstrative)  
 d. *is, ea, id*

For the reader not familiar with Latin, an overview of their declension paradigms is provided in Tables 4 to 7:

(20)

|     | Singular    |            |           | Plural         |              |              |
|-----|-------------|------------|-----------|----------------|--------------|--------------|
|     | M           | F          | N         | M              | F            | N            |
| NOM | <i>is</i>   | <i>ea</i>  | <i>id</i> | <i>ii</i>      | <i>eae</i>   | <i>ea</i>    |
| ACC | <i>eum</i>  | <i>eam</i> | <i>id</i> | <i>eos</i>     | <i>eas</i>   | <i>ea</i>    |
| GEN | <i>eius</i> |            |           | <i>eorum</i>   | <i>earum</i> | <i>eorum</i> |
| DAT | <i>ei</i>   |            |           | <i>eis/iis</i> |              |              |
| ABL | <i>eo</i>   | <i>ea</i>  | <i>eo</i> | <i>eis/iis</i> |              |              |

Table 4: Declension paradigm of *is*.

(21)

|     | Singular     |             |            | Plural       |              |              |
|-----|--------------|-------------|------------|--------------|--------------|--------------|
|     | M            | F           | N          | M            | F            | N            |
| NOM | <i>hic</i>   | <i>haec</i> | <i>hoc</i> | <i>hi</i>    | <i>hae</i>   | <i>haec</i>  |
| ACC | <i>hunc</i>  | <i>hanc</i> | <i>hoc</i> | <i>hos</i>   | <i>has</i>   | <i>haec</i>  |
| GEN | <i>huius</i> |             |            | <i>horum</i> | <i>harum</i> | <i>horum</i> |
| DAT | <i>huic</i>  |             |            | <i>his</i>   |              |              |
| ABL | <i>hoc</i>   | <i>hac</i>  | <i>hoc</i> | <i>his</i>   |              |              |

Table 5: Declension paradigm of *hic*.

<sup>5</sup> For some discussion of Latin third person pronouns, see Zennaro (2006: 87-89).



(22)

|     | Singular      |              |              | Plural         |                |                |
|-----|---------------|--------------|--------------|----------------|----------------|----------------|
|     | M             | F            | N            | M              | F              | N              |
| NOM | <i>iste</i>   | <i>ista</i>  | <i>istud</i> | <i>isti</i>    | <i>istae</i>   | <i>ista</i>    |
| ACC | <i>istum</i>  | <i>istam</i> | <i>istud</i> | <i>istos</i>   | <i>istas</i>   | <i>ista</i>    |
| GEN | <i>istius</i> |              |              | <i>istorum</i> | <i>istarum</i> | <i>istorum</i> |
| DAT | <i>isti</i>   |              |              | <i>istis</i>   |                |                |
| ABL | <i>isto</i>   | <i>ista</i>  | <i>isto</i>  | <i>istis</i>   |                |                |

Table 6: Declension paradigm of *iste*.

(23)

|     | Singular      |              |              | Plural         |                |                |
|-----|---------------|--------------|--------------|----------------|----------------|----------------|
|     | M             | F            | N            | M              | F              | N              |
| NOM | <i>ille</i>   | <i>illa</i>  | <i>illud</i> | <i>illi</i>    | <i>illae</i>   | <i>illa</i>    |
| ACC | <i>illum</i>  | <i>illam</i> | <i>illud</i> | <i>illos</i>   | <i>illas</i>   | <i>illa</i>    |
| GEN | <i>illius</i> |              |              | <i>illorum</i> | <i>illarum</i> | <i>illorum</i> |
| DAT | <i>illi</i>   |              |              | <i>illis</i>   |                |                |
| ABL | <i>illo</i>   | <i>illa</i>  | <i>illo</i>  | <i>illis</i>   |                |                |

Table 7: Declension paradigm of *ille*.

## 2.2 On the nature and usage of third person pronouns

Before starting to analyze the pronominal LEF-patterns, I will elaborate more on some important properties of Latin third person pronouns<sup>6</sup>. First, I will address the question as to whether the pronouns in (20-23) are to be qualified as demonstrative or as personal pronouns. Second, I will discuss the deictic and anaphoric uses of Latin third person pronominals. This last point is important, since, as will be shown, if the pronouns under discussion undergo LEF, they are always anaphors. I will conclude that especially the fronted forms of *is* and *hic* (i.e. IS) can be considered as clear topics.

### 2.2.1 Demonstratives, or personal pronouns after all?

I will first briefly look at the precise nature of the pronouns listed in (19). There are reasons to assume that (19a-c) are demonstrative rather than personal pronouns. On the other hand, the status of *is*, *ea*, *id* is much less clear: it is possible that this is perhaps a personal pronoun.

Cardinaletti & Starke (1999b: 284) list five parameters along which personal and demonstrative pronouns differ:

<sup>6</sup> For more detailed discussion of the Latin pronominal system, the reader is referred to Pieroni (2010).

- (24) a. demonstratives always have a special morphological marker, never found on personal pronouns.  
 b. demonstratives may refer to non-human entities in contexts requiring strong forms (personal pronouns cannot).  
 c. demonstratives must be disjoint from any c-commanding antecedent (principle C), while personal pronouns must be disjoint only from local antecedents (principle B).  
 d. demonstratives, contrary to personal pronouns, cannot overrule their disjointness requirement through Accidental Coreference (AC).  
 e. demonstrative systems typically make spatial distinctions of the near/far type while pronouns seem to never do that.

I will have nothing to say about property (24a): I refer to the original paper and to Cardinaletti & Starke (1999a) for discussion. On the basis of properties (24b), (24c), (24d) and (24e), I will try to determine whether the pronouns under discussion are demonstrative or personal pronouns. I will begin with the last point.

### 2.2.1.1 Spatial deixis

The classical theory, as formulated for instance in Bach (1891), says that the three pronouns (i) *hic, haec, hoc*, (ii) *iste, ista, istud* and (iii) *ille, illa, illud* originally denoted spatial deixis, ranging from proximal (*hic*) to distal (*ille*) deixis. In the classical era, this tripartition is to some extent still in vigour (see a.o. de Jong 1996b for (critical) discussion).

The pronoun *is, ea, id* on the other hand does not seem to be associated with any spatial-deictic meaning. Furthermore, unlike for example *hic*, *is* cannot be used to introduce an item into the discourse. Finally, as observed by de Vaan (2008: 102, s.v. *-c(e)*), forms of *is* cannot be suffixated with deictic element *-c(e)*, which is the last element of many forms of *hic, haec, hoc* (see (21)) and which could optionally be added to forms of *iste* and *ille*. To explain the absence of forms like *\*isce* in Latin, de Vaan hypothesizes that '[m]aybe the demonstrative meaning had developed too much toward a personal pronoun'.

### 2.2.1.2 Principle B or Principle C?

Second, concerning property (24c), we can be sure that all the third person pronouns obey principle C rather than principle B: they are referential expression ('R-expressions'), which need to be disjoint in reference from any c-commanding constituent.

- (25) *Mulieres<sub>i</sub> negant [CP se<sub>i</sub>/\*eas<sub>i</sub>/\*has<sub>i</sub>/\*istas<sub>i</sub>/\*illas<sub>i</sub> scire [qui sit]].*  
 women.NOM deny REFL.ACC know.INF who.NOM he.is.SUBJ  
 '[The women]<sub>i</sub> say that they<sub>i</sub> don't know who he is.' (= Cic. Flac. 92)

the same can be observed in sentences like (26-27), which could be analyzed as 'control' contexts. The pattern of both (26) and (27) are the following: a matrix predicate selects DP

indirect object (bearing accusative case in (26) and dative case in (27)) and a complement clause as direct object, the phonologically null subject of which is coreferential with the indirect object. In (26-27), I represented this null subject as 'ec', for 'empty category'. This null pronoun, possibly to be identified as PRO, cannot alternate with any overt pronoun (bearing nominative case) coindexed with the indirect object:

- (26) [...] *orat Dolabellam<sub>i</sub> [ut ec<sub>i</sub>/\*is<sub>i</sub>/\*hic<sub>i</sub>/\*iste<sub>i</sub>/\*ille<sub>i</sub> de sua provincia  
he.asks D.ACC that from his.ABL province.ABL  
decedat].*  
he.go.away.SUBJ  
'He asked Dolabella to go away from his province.' (= Cic. Ver. act. sec. 1.72)

- (27) *Dicam tuis<sub>i</sub> [ut ec<sub>i</sub>/\*ii<sub>i</sub>/\*hi<sub>i</sub>/\*isti<sub>i</sub>/\*illi<sub>i</sub> eum [...] describant].*  
I.will.tell your.DAT that him.ACC they.describe.SUBJ  
'I will tell your men to copy it (sc. the book Id).' (= Cic. ad Fam. 12.17.2)

Moreover, there seems to be impossible for the disjointness requirement to be overruled by some process of 'Accidental Coreference' (in the sense of Cardinaletti & Starke 1999b: 284), for instance when a pronoun bears heavy stress (cf. property (24d)): sentences like the examples in (26-27) with an overt pronoun are simply not attested in Latin.

### 2.2.1.3 Reference to non-humans

Let's now look at property (24b), namely occurrences of neutre forms of the Latin third person pronouns (which per definition can only have non-human referents) in positions where only strong pronouns are allowed (for the strong-weak-clitic typology, see ch. 2, section 5.1). Strong pronouns are required under coordination with another DP (pronominal or not) (28-29), and when a pronoun is modified by for instance a focus particle like *etiam* 'even' (30) (see Cardinaletti & Starke 1999a: 150ff.).

- (28) *Cum [PP per [ &P [DP haec] [ &° atque [DP talia]]]] Marcellus [...] uoce uoltu  
when through these.ACC and similar.ACC M.NOM voice.ABL face.ABL  
oculis ardesceret, [...].*  
eyes.ABL was.burning.SUBJ  
'When Marcellus of these and other matters, he was aflame in his voice, in his face and in his eyes.' (= Tac. Ann. 16.29.1)

- (29) [...] *quoniam aperte resistere non poterant, quin [ &P illa [ &° et [alia  
since openly oppose.INF not they.could.IMP without.that these.ACC and other.ACC  
talia]] placere sibi faterentur [...].*  
similar.ACC please.INF REFL.DAT they.confess.SUBJ  
'Since they could not openly propose to it, without confessing that they actually liked these and other things.' (= Sal. Iug. 40.2)

- (30) *Intueri quidem etiam ista oportet, sed eis non omnia credere.*  
 look.at.INF PRT also these.ACC it.has.to but them.DAT not all.ACC believe.INF  
 'For sure these elements as well should be taken into account, but they should not be entirely relied upon.' (= Cels. Med. 3.6.7)

However, the most important position exclusively available for strong pronouns are positions at the right and left periphery of the clause (Cardinaletti & Starke 1999a: 150). For instance, the English personal pronoun *it* cannot appear in such a peripheral position (say as a topic, (31a)), whereas a demonstrative like *this* can be tolerated in the same position (31b).

- (31) a. *It<sub>i</sub> I don't like t<sub>i</sub>.*  
 b. *This<sub>i</sub> I don't like t<sub>i</sub>.*

All our cases of pronominal LEF do of course display pronouns in a peripheral, namely at a left edge. This in my opinion yields the most convincing evidence that apart from *hic*, *iste* and *ille*, *is* is also a demonstrative pronoun.

## 2.2.2 Deixis vs. anaphora

It is well known that many pronouns can be used 'deictically' or 'anaphorically', or, in terms of the typology from Kiparsky (2000) discussed in ch. 4, section 4.4, 'referentially dependent' or 'referentially independent'. As I will show now, Latin demonstratives are no different in this respect.

### 2.2.2.1 Deictic and other non-anaphoric uses

The first non-anaphoric use I will illustrate is spatio-temporal deixis, by which a person or an object is localized in space and/or time by means of a demonstrative pronoun. The spatial dimension is more prominent in (32), where it is easy to imagine the speaker pointing at the person he is talking about. These words are uttered by the parasite Artotrogus in an aside, addressing the audience. He is talking about the soldier Purgopolinices, who is also present on stage, and refers to him with the deictic pronoun *hic* 'the one over there':

- (32) *adsentandumst quidquid hic mentibitur.*  
 agree.with.GER-there.is everything.that this.one.here.NOM will.lie  
 'I have to agree with all the lies the one over there will tell.' (= Plaut. Mil. 35)

In (33) on the other hand, the deictic pronoun has more of a temporal import: *has litteras* 'this letter' is to be understood 'the very letter you are reading at this moment'.

(

- 33) *Triginta dies erant ipsi cum has<sub>i</sub> dabam [<sub>t</sub><sub>i</sub> litteras], per quos nullas a uobis acceperam.*  
 thirty days.NOM were self.NOM when these.ACC I.gave letter.ACC during which.ACC no.ACC  
 from you.ABL I.had.received  
 'Exactly thirty days have past since I wrote this letter, during which are received none of you.' (= Cic. ad Att. 3.21.1)

A related use is what I would like to call 'textual' deixis, as in (34), where a pronoun 'deictically' refers to a linguistic item:

- (34) *Sed iam de epistulis satis dictum habebo, si hoc unum addidero: [...]*  
 but already about letters.ABL enough said.ACC I.will.have if this.ACC one.ACC I.will.have.added  
 'And I will have said enough about the letter, if I add this: [...]' (= Apu. Apo. 87.6)

Other uses of demonstrative pronouns are cases where a neuter pronoun is the head of a light headed relative (Citko 2004), most frequently a form *is*, *ea*, *id*. A light headed relative is a relative clause which has a 'dummy' pronoun or a quantifier as its antecedent. An example is given in (35):

- (35) *Id autem [<sub>CP</sub> quod Iones fecerunt primo], Ionicum est nominatum.*  
 that.NOM PRT what Ionians.NOM did.PF first.ADV Ionic.NOM is called.NOM  
 'That what the Ionians did first, is called Ionic.' (= Vitruv. Arch. 4.1.8)

Finally, there are the so called cataphoric pronouns, which could informally be defined as clause-internal placeholders for extraposed sentential arguments or adjuncts. In (36), *id* serves as a cataphor for the clause final CP introduced by *ut*, a complement clause to the predicates *sciscerent* and *iuberent*.

- (36) *Adeo id gratum plebi fuit ut [...] id modo sciscerent iuberentque [ut senatus decerneret qui Romae regnaret].*  
 so that.NOM pleasant.NOM plebs.DAT was.PF that this.ACC only decided ordered-and that  
 senate.NOM decree.SUBJ who.NOM in.Rome be.king.SUBJ  
 'This was so well appreciated by the plebs that they only decided and wished that the senate would decree who was to be king in Rome.' (= Liv. aUc 1.17.11)

I refer to Bodelot (1995, 2004 (ed.)) for discussion of cataphoric expressions in Latin. I now turn the anaphoric use of Latin third person pronouns.

### 2.2.2.2 Anaphoric use<sup>7</sup>

Anaphoric pronouns can be bound (referentially dependent) or free (referentially independent). A bound pronoun is equivalent to a logical variable whose reference is determined by a (not so local) antecedent by which it is c-commanded. In the examples in (37), the c-commanding antecedents are *John* (37a) and *everybody* (37b): these expressions determine the reference of the pronoun *he*.

- (37) a. *John<sub>i</sub> thinks [<sub>CP</sub> he<sub>i</sub> 's a genius].*  
b. *Everybody<sub>i</sub> thinks [<sub>CP</sub> he<sub>i</sub> 's a genius].*

In other cases, coreference between a discourse and a pronoun is optional and thus accidental (see a.o. Reinhart 1983). In (38), *he* is not bound by the potential antecedent *John*. Instead, it refers to some male person who has to be somehow 'salient' in the context in which (38) can be uttered felicitously:

- (38) *John<sub>i</sub> thinks he<sub>j</sub> 's a genius.*

The sentence in (38) does not fundamentally differ from cases where a pronoun and its (linguistically evoked) antecedent are separated by a longer stretch of discourse. In these cases, it is impossible that coreference arises through binding, since there is no c-command relation between an antecedent and a variable.

- (39) *George and Jack<sub>i</sub> are both very good students. Many people predict that Jack<sub>i</sub> has a bright future ahead of him, but others aren't so sure. They think he<sub>i</sub> 's not really talented but more of a hard worker. In any event, John thinks he<sub>i</sub>'s a genius.*

The way in which the reference of such anaphoric expressions is determined is not syntactic in nature (cfr. the literature on 'reference tracking' or 'backward anaphora resolution', see a.o. Reinhart 2004, 2006). Rather, it seems to belong to the realm of pragmatics or Discourse Grammar (in the sense of Williams 1977).

The Latin anaphoric pronouns I'm interested in in the context of the present chapter belong to the type which is not syntactically bound. An illustration is given in (1), repeated here:

---

<sup>7</sup> See also the discussion of E-type pronouns in ch. 4, section 4.4.1.

- (1) *Cum dedissem ad te litteras ut scires Caesarem; Capuae VII Kal. fore, adlatae mihi Capua sunt eum; hic VI et in Albano apud Curionem V Kal. fore.*  
 [*Eum*, [*cum* *t<sub>i</sub>* *uidero*]], *Arpinum pergam.*  
 him.ACC when I.will.have.seen to.Arpinum I.will.proceed  
 'When I had sent at letter to you to let you know that Caesar would be in Capua on the 26th, I received a letter posted in Capua saying that he would be here on the 27th, and with Curio in Alba on the 28th. When I have seen him, I'll move on to Arpinum.'  
 (= Cic. ad Att. 9.15.1)

In the context of (1), it is clear that *eum* refers to *Caesar*, although no syntactic process of c-command underlies this relation of coreference.

### 2.2.3 Pragmatic differences between third person pronouns

There is quite a body of literature on the pragmatic differences between the different third person pronouns listed in (19) (see Bolkestein & Van de Grift 1994; Bolkestein 1996b, 2000; de Jong 1996a,b; Pennell Ross 1996; Luraghi 1998; Matras & Bolkestein 2006; Kroon 2009b; Pieroni 2010).

The generalization that emerges from the pragmatic literature is that *is* and *hic* are the most unmarked overt third person anaphors. *ille* can be characterized as a marked anaphor: it is most often used in a situation with multiple discourse participants, when topichood is shifted from one participant to the other. The new topic is then referred to by means of *ille* (see Kroon 2009b, who emphasizes the connotation of 'contrast' associated with the use of *ille*). *iste* on the other hand is hardly ever used as a pure anaphor: it always has some deictic force (de Jong 1996b).

The contrast between *is* and *hic* remains to some extent elusive (de Jong 1996a): in their anaphoric function, the two pronouns appear to be close in meaning. It is probably the case that the pragmatic status of the antecedent alone does not determine the choice of the anaphoric expression: factors like grammatical function and (non)-animacy of the antecedent and of the pronoun itself seem to play a role as well.

In any event, it should be clear that when Latin third person pronouns are used anaphorically, they automatically refer to an already established discourse referent. This makes them (or 'Familiarity Topics' in the sense of Frascarelli & Hinterhölzl (2007) (see ch. 1, section 3.2.4.3). This topic-like character becomes even stronger if the demonstratives come with a nominal restriction (on the D-linking effect of adding an NP to a (wh-)pronoun or a quantifier, see Cinque 1986; Rizzi 2000; cf. ch. 4, section 3.2.1.2).

## 2.3 ± Attributive

Just like the *relatif the liaison* (cfr. section 4.1.1 of the previous chapter), the demonstrative pronouns *is*, *hic*, *iste* and *ille* can be used attributively. Since *iste* will not play any role any more in the remainder of this thesis, I will only illustrate the ± attributive alternation of the remaining three pronouns.

- (40) a. *Si quod uulnus neutrum horum recipit, [DP id] tamen purgari debet.*  
if some.NOM wound.NOM none.ACC these.GEN receives, that.NOM still be.purified.INF has.to  
'If a wound does not admit any of these, it should be cleaned nevertheless.'  
(= Cels. Med. 5.26.23E)

b. *Si ne id quidem est, homo adhibendus est, qui [DP id] uulnus]*  
if not this.NOM even is man.NOM called.upon.NOM is who.NOM that.ACC wound.ACC  
*exsugat.*  
sucks.out.SUBJ  
'If not even this is available, a man should be called upon to suck out that wound.'  
(= Cels. Med. 5.27.3B)

In (41), there are two examples with forms of *hic*, *haec*, *hoc*:

- (41) a. *Hunc ex primo ordine pauci Caesaris consecuti milites consistere*  
that.ACC from first.ABL row.ABL few.NOM C.GEN followed.NOM soldiers.NOM stand.still.INF  
*coegerunt.*  
forced.PF  
'A couple of men from Caesar's first century followed him [sc. Attius Varus Id] and made him halt.' (= Caes. Bel. Civ. 1.13)

b. *[DP Hunc montem] flumen sublebat.*  
that.ACC mountain.ACC river.NOM washed.IMPF  
'The river flowed at the foot of this mountain.' (= Caes. Bel. Civ. 3.97)

And finally, in (42) there are two examples of *ille*:

- (42) a. *nam nerui musculique [...] contrahuntur neque in suum locum ueniunt,*  
PRT sinews.NOM muscles.NOM-and are.contracted nor in their.ACC place.ACC they.come  
*nisi illos per uim aliquis intendit.*  
unless them.ACC by force.ACC somebody.NOM stretches  
'For the sinews and muscles are contracted and do not come their proper places unless somebody by force stretches them in place.' (= Cels. Med. 8.10C)



- b. *Quid enim tibi faciam qui [illos libros] deuorasti?*  
 what.ACC PRT you.DAT shall.I.do who.NOM those.ACC books.ACC devoured.PF  
 'What should I do for you, who eagerly read those books?' (= Cic. ad Att. 7.3.2)

After this excursus on the system of Latin pronouns, I will at present return to Type A of LEF1, namely the pattern in which one pronoun or one category containing a pronoun has been fronted in a leftward clause. First, I will show that unlike (relative) wh-elements, IS-type pronouns can occur in a non-peripheral position. Subsequently, I will try to show that if they are fronted, they can also act as clausal pied-pipers. Finally, I will show that clausal pied-piping by topics is cross-linguistically not unparalleled.

### 3 Type A: LEF1 with 1 pronoun

#### 3.1 Clause-internal occurrences of IS

As we have seen earlier, both the Latin *relatif de liaison*, which I take to be illustrative of the E-type use of the wh-pronoun *qui*, and the demonstrative pronouns *is* and *hic* are used in LEF patterns. However, the pronouns *is* and *hic* differ distributionally from the E-type use of *qui*: while the latter type is obligatorily fronted and surfaces in a left peripheral position, the former may also remain in the lower parts of the clause, which may itself can but need not be clause-initial. In (43-44), it is shown that anaphoric pronouns can appear clause-internally in clause-initial ACs:

- (43) *Sed eo si ueneris, de toto itinere ac fuga mea consilium capere potero.*  
*[Si id non feceris], mirabor.*  
 if that.ACC not he.does.FUT.EX I.will.be surprised  
 'But if you come here, I will be able to make a decision about my entire journey and exile. If you don't, I will be surprised.' (= Cic. ad Att. 3.3.5)
- (44) [context: description of Caesar's nightly manoeuvres]  
*Pharnaces [cum id repente prima luce animaduertisset], copias*  
 Pharnaces.NOM when this.NOM suddenly first.ABL light.ABL had.noticed.SUBJ troops.ACC  
*suas omnes pro castris instruxit.*  
 his.ACC all.ACC in.front.of camp.ABL he.arranged .PF  
 'When at the bang of dawn, Pharnaces had noticed this, he drew up his troops in battle order in front of the camp.' (= Anon. Bel. Alex. 74)

Forms of *hic* are attested inside embedded clauses as well. The pronoun *hoc* in (45) is the subject of the *si*-clause. *haec* in (46) fulfills the function of direct object.

- (45) *Illum arbitrabantur protinus Patris in Siciliam. Sed [si hoc ita est], huc*  
 him.ACC they.thought straight.ADV Patrae.ABL to Sicily.ACC but if that.NOM thus is here  
*ueniat necesse est.*  
 he.comes.SUBJ necessary it.is  
 'They thought that he (sc. Caesar Id) would move straight from Patrae to Sicily. But if this is the case, he will have to come here.' (= Cic. ad Att. 11.21.2)

- (46) [context: Cicero summarizes the content of two senatorial decrees.]  
*[Cum haec disseruissem], seducit me Scaptius.*  
 when these.ACC I.had.explained took.apart.PR me.ACC Scaptius.NOM  
 'When I had explained these matters, Scaptius took me apart.'  
 (= Cic. ad Att. 5.21.12)

Moreover, the pronouns *hic* and *is* are also attested in a clause-internal position in rightward ACs. A number of examples are given in (47-50):

- (47) [Context: Cicero will be forced to publicly give his opinion in favour of either Caesar or Pompey. He would prefer to remain silent, being afraid of people's reactions.]  
*Plane opus fuit, [si hoc impendebat].*  
 clearly necessary it.was if this.NOM hung.over.IMPF  
 'It really would have been necessary, if this was waiting for us.'  
 (= Cic. ad Att. 7.1.5)

- (48) [context: In 35.1, a brief summary is given of recent battles in Spain.]  
*Nondum ab Roma profectus erat C. Flaminius praetor [cum haec in*  
 not.yet from Rome.ABL left.NOM was C. F.NOM praetor.NOM when these.NOM in  
*Hispania gerebantur.*  
 Hispania.ABL were.done.IMPF  
 'The praetor C. Flaminius had yet to leave from Rome, when these things were happening in Spain.' (= Liv. aUc 35.2.1)

- (49) *Illud tamen, [quoniam nunc abes [cum id non agitur], aderis autem*  
 this.ACC however since now you.are.absent when this.NOM not is.treated you.will.be.present PRT  
*ad tempus], [...] memento curare [...] ut annus noster maneat suo statu.*  
 in time.ACC remember.IMPTV make.sure.INF that year.NOM our.NOM stays.SUBJ its.ABL place.ABL  
 'Since you're away now that this is not at issue, but will be back in time, please remember to make sure that our year remains as it is.' (= Cic. ad Att. 5.9.2)

- (50) *Quin nunc ipsum non dubitabo rem tantam abicere, [si id erit  
 PRT now right not I.will.hesitate thing.ACC that.big.ACC throw.away.INF if that.NOM will.be  
 rectius].*  
 better.NOM  
 'At this very moment, I definitely will not hesitate to give up such a big reward, if that  
 will be the better thing to do.' (= Cic. ad Att. 7.3.2)

Although I cannot provide any quantitative data based on a large scale corpus study, the data collected in Pennell Ross (1996: 513-514) (see also Bolkestein 1996a: 118) give some idea about the frequency of sentence-initial and sentence-final occurrences of the anaphors *hic*, *ille* and *is*. Leaving out of account *iste*, which could not be used a real anaphor (de Jong 1996b), Pennel Ross collected all the non-attributive forms of these three pronouns, as well as the relatif de liaison *qui*, which as I have said cannot occur sentence-internally, from the first two books from Caesar's *Bellum Ciuile*. Moreover, she also looked at adverbial anaphors *ibi* 'there' and *eo* 'to that place', which are related to *is*, and *huc* 'herefrom', *hinc* 'from here', *hic* 'here' which can be considered forms of *hic*. In the table in (51), I have conflated adverbial and non-adverbial uses (the adverbial forms together constitute 13% of the total number of attestations).

(51)

|             | <b>Total # of occurrences</b> | <b>sentence-initial</b> | <b>sentence-internal</b> |
|-------------|-------------------------------|-------------------------|--------------------------|
| <i>hic</i>  | 131                           | 98 (74,8%)              | 33 (25,2%)               |
| <i>ille</i> | 51                            | 22 (43,1%)              | 29 (56,9%)               |
| <i>is</i>   | 206                           | 37 (18,0%)              | 169 (82,0%)              |
| <i>qui</i>  | 52                            | 52 (100%)               | 0 (0%)                   |

Table 8: frequency of sentence-initial and sentence-internal occurrences of *hic*, *ille*, *is* and *qui*.

The rough tendencies seem to be that *hic* is preferred in sentence-initial position and that *is* tends to be found sentence-internally. The distribution of *ille* does not show any clear pattern.

However, Pennell Ross (1996) only looked at linear order. Given my remarks in ch. 1, section 5.2, this is not unproblematic, since a clause-initial constituent is not automatically situated in a left-peripheral position. In a Latin sentence, it is perfectly possible for the left periphery to contain no (overt) material. Consider for instance a sentence like (52), where it is in my opinion impossible to say whether the pronoun *is* should be put on a par with the non-LEF embedded anaphor *is* in (53) or with the LEF-example in (54).

- (52) *Is uiuus est conbustus.*  
 that.NOM living.NOM is burnt.NOM  
 'He was burnt alive.' (= Anon. Bel. Hisp. 20)

- (53) [*Cum is murum hostium paene contingeret*], [...] paulo ante tertiam  
 when this.NOM wall.ACC enemies.GEN almost touched.SUBJ a.little before third.ACC  
*uigiliam est animaduersum fumare aggerem* [...].  
 wake.ACC it.is noted.NOM smoke.INF mound.ACC  
 'When this mound almost touched the wall of the enemies, it was noted shortly before  
 the third wake that the mound was smoking.' (= Caes. Bel. Gal. 7.24)
- (54) [*Is [cum uenisset]*], Romam eum et se statim uenturos.  
 this.NOM when had.come.SUBJ Rome.ACC that.ACC and REFL immediately go.PART.FUT.ACC  
 'When he will have arrived, he would immediately go together with him to Rome.'  
 (= Cic. ad Att. 4.11.1)

In order to give a more accurate idea about the placement of Latin anaphoric pronouns, one would have to look at pronouns occurring embedded clauses like (-), and perhaps also to pronouns in matrix interrogatives with an overt question word. I postpone this task to future research.

### 3.2 Fronted pronouns

Before starting to analyze the syntax of Latin embedded topicalization, I will give a number of examples. Recall that at all times, embedded topicalization of an IS-type pronoun is, just as fronting of a wh-pronoun, subject to the left-right asymmetry schematically represented in (8):

- (8) a. [<sub>CP1</sub> [<sub>CP2</sub> IS<sub>i</sub> [<sub>FinP2</sub> **Sub** [<sub>TP2</sub> t<sub>i</sub> ]]]] [<sub>TP1</sub> [<sub>vP/VP</sub> ]]]  
 b. \* [<sub>CP1</sub> [<sub>TP1</sub> [<sub>vP/VP</sub> ] [<sub>CP2</sub> IS<sub>i</sub> [<sub>FinP2</sub> **Sub** [<sub>TP2</sub> t<sub>i</sub> ]]]] ]]

In (55) I give examples of LEF with a form of *is*: such a form can either be a single pronoun (like *id* 'this' in (55a)) or a larger DP in which the pronominal acts as a modifier (like *id sacrificium* 'this sacrifice' in (55b)):

- (55) a. [context: Caesar tries to lead the troops of the enemies into the plain, and is now heading for Ategua, Pompey's strongest garrison.]  
 [<sub>CP1</sub> [<sub>CP2</sub> Id<sub>i</sub> [*cum Pompeius t<sub>i</sub> ex perfugis rescisset*], <...> *inter montes*  
 this.ACC when P.NOM from deserters.ABL had.learned.SUBJ between mountains.ACC  
*et angustias carra complura mulosque onustos retraxit*].  
 and narrow.passages.ACC wagons.ACC many.ACC mules.ACC-and burdened.ACC withdrew.PF  
 'When Pompey had learned this from deserters, he drew back many wagons and  
 burdened mules.' (= Anon. Bel. Hisp. 6)

b. *Credo enim te audisse [...] [[DP id-que sacrificium] [cum uirgines  
I.believe PRT you.ACC have.heard.INF that.ACC-and offering.ACC when virgins.NOM  
instaurrassent]], mentionem a Q. Cornificio in senatu factam [...].*  
had.repeated.SUBJ mention.ACC by Q. C.ABL in senate.ABL made.ACC  
'For I believe you've heard that [...] and that when the Vestals had repeated the  
sacrifice, the matter was raised in the senate by Quintus Cornificius.'  
(= Cic. ad Att. 1.13.3)

(56) shows two LEF examples containing a form of *hic*:

(56) a. *Sed fidem; recepisse sibi et ipsum et Appium de me.*  
[CP<sub>1</sub> [CP<sub>2</sub> Hanc<sub>i</sub> [si ille t<sub>i</sub> non seruaret]], ita laturum ut omnes  
this.ACC if he.NOM not observes.SUBJ such propose.INF.FUT that all.NOM  
*intellegerent nihil sibi antiquius amicitia nostra fuisse].*  
understand.SUBJ nothing.ACC REFL.DAT more.important.ACC friendship.ABL ours.ABL be.INF.PF  
'But both Clodius and Appius had given him (sc. Pompey) their word concerning me.  
If he (sc. Clodius) didn't honour his pledge, he (sc. Pompey) would react in such a way  
that everybody would understand that nothing had ever been more important to him  
than our friendship.' (= Cic. ad Att. 2.22.2)

b. [PP Ad [DP hos lepores]] [cum amor erga me tantus accedat]],  
to those.ACC witty.remarks.ACC when love.NOM to me.ACC such.NOM comes.with.SUBJ  
*miraris me tanta perturbatione ualetudinis tuae tam grauiter*  
you.wonder me.ACC such.ABL perturbation.ABL health.GEN your.GEN so heavily  
*exanimatum fuisse?*  
moved.ACC have.been.INF  
'When on top of these witty remarks you show such an affection for me, how can you  
wonder that I was so heavily disturbed by your severe health problems?'  
(= Cic. ad Fam. 9.15.2)

Moreover, in all of the cases where an LEF-DP contains an attributive pronoun, this pronoun occupies the leftmost position within the DP (as in the b-sentences in (55-56)). Unlike modifying *wh*-words, which always occur to the left of the NP they modify, attributive demonstratives can occur to the right of the NP they belong to<sup>8</sup>. This is the case in (57), where *ea* 'this' sits to the right of *urbs* 'city', and in (58), where *hoc* 'this' appears to the right of the NP *donum* 'gift':

(57) [*Urbs ea*] in ora Oceani sita est.  
city.NOM that.NOM at coast.ABL ocean.GEN situated.NOM is  
'This city (sc. Carteia Id) is situated near the Ocean.' (= Liv. aUc. 28.30.3)

<sup>8</sup> The order 'noun - attributive demonstrative' is never the most frequent: see Lison Huguet (2001: 114-120) for quantitative data from Cicero, Livy and Seneca.

- (58) *Ioui optimo maximo [...] non grates tantum ob haec agere iussi  
 Jove.DAT best.DAT greatest.DAT not thanks.ACC only because.of these.ACC act.INF ordered.NOM  
 sumus sed [donum hoc] etiam, [...] coronam auream in Capitolium [...] ferre.  
 we.are but gift.ACC this.ACC also wreath.ACC golden.ACC to Capitole.ACC bring.INF  
 'We were not only ordered to thank the Almighty Jove for this, but also to bring this  
 gift, a golden wreath, to the Capitole.' (= Liv. aUc. 28.39.15)*

This suggests that a pied-piping demonstrative pronoun undergoes internal movement to the edge of the pied-piped constituent just like wh-pipers (as indicated in the examples in (59-60)). If the pronoun is a modifier in a DP which is the complement of a preposition, the pronoun can either sit to the left (59) or immediately to the right (60) of the preposition (cfr. ch. 4, fn. 15 on wh-pronouns).

- (59) *[[<sub>PP</sub> Hos<sub>j</sub> [<sub>P°</sub> ad [<sub>DP</sub> t<sub>i</sub> magistros]]] [si qua te fortuna, Cato, cum ista  
 those.ACC to masters.ACC if some.NOM you.ACC fortune.NOM C.VOC with that.ABL  
natura detulisset]], non tu quidem uir melior esses [...] sed paulo  
 nature.ABL had.brought.SUBJ not you.NOM PRT man.NOM better.NOM were.SUBJ but a.little  
ad lenitatem propensior.  
 to mildness.ACC more.inclined.NOM  
 'If some fortune had brought you, Cato, with the character you were born with, to such  
 masters, you would not be a better man, but only a bit more inclined to mildness.'  
 (= Cic. Mur. 64)*

- (60) *[[<sub>PP</sub> Ad [<sub>DP</sub> eam<sub>i</sub> t<sub>i</sub> rem]] [cum mitterem Alexandrum]], has ei dedi  
 to this.ACC matter.ACC when I.sent.SUBJ Alexander.ACC this.ACC him.DAT I.gave.PF  
litteras.  
 letter.ACC  
 'When I sent Alexander concerning this matter, I gave him this letter.'  
 (= Cic. ad Att. 13.2a.2)*

Let's now have a look at *ille*. As we have seen earlier (ch. 3, section 3.2.1), LEF of *ille* is only (but not very frequently) attested in clause-initial embedded clauses (like (61a)), which suggests that fronted *ille* might be a case of LEF1. However, we do find cases where an attributive form of *ille* sits to the right of the word it modifies (61b), which seems to show that *ille* has not undergone internal wh-movement, which we do not expect of a pied-piping element in Latin. This observation casts doubts on the status of *ille* as a potential clausal pied-piper.

(61) a. [*Ille<sub>i</sub> [si t<sub>i</sub> <in> omnis est maleuolus]*], *quod numquam existimaui, minus*  
 he.NOM if towards all.ACC is nasty.NOM which.ACC never I.thought less.ADV  
*offendor in me.*

I.am.vexed in me.ACC

'If it is true that he is ill-disposed towards everybody, which I never thought to be the case, I feel less inclined to take it as a personal offence.' (= Cic. ad Fam. 2.17.7)

b. [*Quas [DP Tannonius ille] [cum utriusque sexus genitalia [...] ]*],  
 which.ACC Tannonius.NOM that.NOM because each.GEN gender.GEN genitals.ACC  
*intellegi uellet tandem uirile 'marinum' nescio qua*  
 be.understood.INF wanted.SUBJ eventually manly.ACC of.the.sea.ACC I.don't.know which.ABL  
*circumlocutione male ac sordide nominauit.*

circumlocution.ABL badly and shamefully named.PF

'And because our friend Tannonius wanted people to think that these [sc. two sea animals Id] were the genitals of the two sexes, he shamefully came up with some embarrassing description to describe the fish which is called after the male organ.'

(= Apu. Apo. 33.6)

I will return to the status of ILLE in LEF-contexts in section 5 of the present chapter. For now, I will only concentrate on IS.

The fact that fronted pronouns exhibit the same left-right asymmetry as fronted relative pronouns, together with the observation that attributive pronouns in an LEF constituent always occur in a left-peripheral position strongly suggests that we are dealing with one and the same phenomenon, namely clausal pied-piping. Before offering an analysis, I will offer some data from modern languages where embedded topics are also only possible in clause-initial embedded clauses.

### 3.3 Topicalization asymmetries in modern languages

In this section I would like to show that the Latin data discussed in the preceding section, for which I would like to propose that pronouns act as pied pipers leading to clausal topicalization, are by no means an isolated case. As I will show, very similar facts hold for Bavarian and Standard German.

Other data which display the same left-right asymmetry but do not seem easily amenable to an analysis in terms of clausal pied-piping will be treated in section 6.1.1.

#### 3.3.1 Standard German

A first phenomenon where the left-right asymmetry can be observed is a type of embedded topicalization in Standard German, which, as was shown in the introductory chapter, is

characterized by the presence of a clause-internal resumptive d-pronoun. This construction is usually called 'Contrastive Left Dislocation' (CLD). A basic example of non-embedded is repeated from earlier discussion (ch. 1, section 3.4).

- (62) *Diesen Frosch, den hat die Prinzessin gestern geküßt.*  
 this.ACC frog RP.ACC has the.NOM princess yesterday kissed  
 'This frog, the princess kissed (it) yesterday.'

CLD can occur in embedded contexts, both in complement (63a) and in adjunct clauses (63b). Given that we know that everything in front of the finite verb in German main clauses, we can be sure that the topicalized constituent *den Hans* sits in the left periphery of the embedded clause and not in the main clause.

- (63) a. [<sub>CP1</sub> [<sub>CP2</sub> [Den Hans]<sub>i</sub> [*daß* er den<sub>i</sub> kennt]] glaube ich nicht].  
 the.ACC Hans that he.NOM him.ACC knows believe I.NOM not  
 'As for Hans, that he knows HIM, I don't believe.'
- b. [<sub>CP1</sub> [<sub>CP2</sub> [Den Hans]<sub>i</sub> [*wenn* du den<sub>i</sub> siehst]] sag ihm er soll  
 the.ACC Hans if you.NOM him.ACC see tell him.DAT he.NOM should  
*mich anrufen*].  
 me.ACC call.INF  
 'As for Hans, if you see HIM, tell him he should call me.'

The crucial observation is that embedded CLD is only available in clause-initial embedded clauses: as the b-sentences show, it is excluded in embedded clauses situated in a clause-final position (examples from Bayer 2001, his (16-17)):

- (64) a. \**Ich glaube nicht [[den Hans]<sub>i</sub> [daß er den<sub>i</sub> kennt]].*  
 b. \**Sag ihm er soll mich anrufen [[den Hans]<sub>i</sub> [wenn du den<sub>i</sub> siehst]].*

### 3.3.2 Bavarian 'Emphatic Topicalization'

#### 3.3.2.1 The basic data

Well documented is the case of Bavarian 'Emphatic Topicalization' (henceforth ET; see esp. Bayer 2001; Lutz 2004), which differs from the Standard German structures presented in the previous section in that it does not have a TP-internal resumptive pronoun. In (65-66), I give two examples where the embedded clause is an AC. It should be noted that the asymmetry also holds for non-islands, as for example embedded declaratives.

(



- (65) a.  $[_{CP1} [_{CP2} [_{Des\ Bier}]_i [wenn-e\ no\ t_i\ trink]]\ bin-e\ glei\ b'suffa]$ .  
           this beer      if-I    still    drink    am-I immediately drunk  
       'If I drink this (glass of) beer as well, I'll be drunk right away.'  
       b. \* $I\ bin\ glei\ b'suffa\ [[des\ Bier]_i\ wenn-e\ no\ t_i\ trink]$ .
- (66) a.  $[_{CP1} [_{CP2} [_{An\ Xaver}]_i [wia\ -s\ t_i\ g'seng\ hom]]\ hom-sa\ -se\ recht\ g'freit]$ .  
           the Xaver    as -they    seen    have    have-they-REFL really rejoiced  
       'As for Xaver, when they saw him they were really happy.'  
       b. \* $Sie\ hom\ se\ recht\ g'freit\ [[an\ Xaver]_i\ wia-s\ t_i\ g'seng\ hom]$ .

Observe that the main clause in the a-sentences is a regular verb second declarative, where the preverbal slot is filled by CP2. Under the assumption that the V2 constraint is operative, we have to conclude that both in (65) and (66) the fronted constituents *des Bier* and *an Xaver* have not left the embedded clause: they are only moved to their edge. In fact, if they had been extracted from the respective adverbial clauses, then both examples would violate the V2 constraint, since two constituents, the topicalised DP and the adverbial clause, would appear to the left of the finite verb. The asymmetry observed with ET can be schematically represented as in (67):

- (67) a.  $[_{CP1} [_{TopP2}\ Top_i [_{CP2}\ Sub [_{TP}\ t_i ] ] [_{TP} [_{VP/VP} ] ] ] ] ] ] ]$   
       \* b.  $[_{CP1} [_{TP} [_{VP/VP} ] [_{TopP2}\ Top_i [_{CP2}\ Sub [_{TP}\ t_i ] ] ] ] ] ] ] ]$

Not unexpectedly, the type of fronting illustrated in (65-66) can apply recursively (Bayer 2001, citing Grewendorf 1988: 256). In (68), the constituent *da Peter*, the subject of the downmost embedded declarative, surfaces the left of the conjunction *daß*, and the complement clause which shows this order sits itself in a left-peripheral position in its superordinate clause (itself also an embedded declarative).

- (68) *Da Peter daß bled is, daß-e g'sagt hom soi, is glatt g'long.*  
       the Peter    that stupid is    that-I    said    have should is straightly lied  
       'As for Peter, it is a straight lie that I should have said that he is stupid.'

The details of the derivation of a sentence like (68) are shown in (69). Under the clausal pied-piping analysis, CP3 is moved from its sentence final position to the left periphery of CP2.

- (69)  $[_{CP1} [_{CP2} [_{CP3} [da\ Peter]_i [daß\ t_i\ bled\ is]]_j [daß-e\ g'sagt\ hom\ soi\ t_j]]_k\ is\ glatt\ g'long\ t_k]$

Much more like the Latin data in section 1.2 are the following examples, from Lutz (2004: 266), where a pronoun is fronted inside the AC. If the main clause contains a pronoun (usually in the function of a direct object) which is coreferential with the moved pronoun in the AC, the pronoun in the main clause can optionally be phonologically null (70b).

- (70) a. [*Den<sub>i</sub>*, [*wann i t<sub>i</sub> derwisch*]], *derschlog i 'n<sub>i</sub>*.  
 him.ACC when I catch slay I him  
 b. [*Den<sub>i</sub>*, [*wann i t<sub>i</sub> derwisch*]], *derschlog i PG<sub>i</sub>*.  
 'If I catch him, I slay him.'

Cases like (70b) are usually analyzed as containing a parasitic gap (on which, see ch. 4, section 1.1.3.3). Felix (1985: 184) shows that the pattern in (70) is also available when full DPs are fronted in the embedded clause:

- (71) a. *Hans<sub>i</sub> wenn ich e<sub>i</sub> sehe, werde ich e<sub>i</sub> fragen.*  
 Hans when I see will I ask.INF  
 'If I see Hans, I will ask him.'  
 b. [<sub>CP1</sub> Hans<sub>i</sub> [<sub>CP2</sub> wenn ich t<sub>i</sub> sehe], werde ich PG<sub>i</sub> fragen].  
 c. \* *Wenn ich Hans<sub>i</sub> sehe, werde ich e<sub>i</sub> fragen.*  
 d. [[Wenn ich Hans<sub>i</sub> sehe], werde ich PG<sub>i</sub> fragen].

### 3.3.2.2 Pragmatic value of ET

Bayer (2001) argues that the interpretive import of Bavarian ET cannot be characterized correctly in terms of the well-known notions of topic and focus. The author shows that Bavarian ET differs from the Standard German (Contrastive)<sup>9</sup> Left Dislocation (LD), which is standardly assumed to be a topicalization strategy.

Although both ET and embedded LD exhibit the same left-right asymmetry, the two are different in many respects. For one thing, quantified DPs can appear in an ET- but not in an LD-configuration (examples from Bayer 2001: his (18a-19a)).

- (72) [<sub>CP1</sub> [<sub>CP2</sub> *Neamad<sub>i</sub>* [*wenn t<sub>i</sub> kummt*], *no is-s aa ned recht.*  
 nobody if comes then is-it also not good  
 'If nobody shows up at all, it isn't ok either.'
- (73) \* [[*Jeden/ keinen Studenten*]<sub>i</sub> [*daß er den<sub>i</sub> kennt*]] *glaube ich nicht.*  
 each.ACC / no.ACC student that he.ACC him knows believe I.NOM not  
 Intended: 'I don't believe that he knows each/no student.'

The different properties of the two constructions leads Bayer to label the pattern illustrated in (65-66) 'Emphatic Topicalization', and he introduces a feature 'etop', which is supposed to represent this pragmatic notion in a syntactic derivation.

<sup>9</sup> Bayer (2001) calls the construction discussed in section 3.4.2 as 'Left Dislocation'.

## 4 Accounting for the left-right asymmetry

Now that we have a full overview of the empirical facts concerning embedded topicalization phenomena that display the left-right asymmetry, I will adduce some more arguments in favour of an analysis involving clausal pied-piping. The arguments will bear on all the biclausal patterns discussed in the present and previous chapter, whether the constituent at the left edge of the subordinate clause has wh-morphology or not<sup>10</sup>.

First, I will briefly discuss the most explicit proposal concerning clausal pied-piping by topic which is available in the syntactic literature, which is Bayer (2001). For the present purposes, the most important ingredient of Bayer's analysis is the fact that the basic trigger of the entire derivation is located outside the pied-piped clause. I will then apply a derivation along these lines to the Latin pronominal LEF-data.

With this in place, I will then argue that an analysis that assumes CP2 to be base generated in its left peripheral position (like Truswell (to appear), cf. chapter 4, section 2.5.2) faces some major difficulties. Recall that Truswell assumes that the structure of sentences like (74) is biclausal, and that the wh-phrase is not a genuine pronoun but rather a topicalized E-type pronoun. The structure he proposes for examples like (74) looks like (75a):

- (74) *With the common vse of teaching and beating in common scholes of England, I will not greatlie contend: [CP1 [CP2 which<sub>i</sub> if I did t<sub>i</sub>], it were but a small controuersie].*  
 (= Roger Ascham, The Scholemaster, 1563-'68)

- (75) a. [CP1 [CP2 [TopP2 E<sub>i</sub> [FinP2 Sub [TP t<sub>i</sub> ]]]] [TP [vP/VP ]]]  
 \* b. [CP1 [TP [vP/VP ]] [CP2 [TopP2 E<sub>i</sub> [FinP2 Sub [TP t<sub>i</sub> ]]]]]

In (75a), an AC CP2 is base generated in the left periphery of a root clause. Inside CP2, an E-type pronoun (with wh-morphology) is topicalized to a position to the left of the subordinating conjunction 'Sub' in FinP. However, under this analysis, the ungrammaticality of the pattern in (75b) remains mysterious, unless it can be shown that the internal structure of a rightward AC is somehow different than the internal structure of its leftward counterpart<sup>11</sup>.

<sup>10</sup> It is perhaps easier to illustrate this phenomenon of biclausal clausal pied-piping with pied-piping by pronouns, since the syntax of topicalization is less complicated than the syntax of relativization.

<sup>11</sup> But see Truswell (to appear) fn. 15.

## 4.1 Clausal pied-piping by topics: Bayer 2001

In the present section I will concentrate on Bavarian data like (76), and on a specific analysis that has been proposed by Bayer (2001) to account for the left-right asymmetry.

- (65) a.  $[_{CP1} [_{CP2} [_{Des\ Bier}]_i [wenn-e\ no\ t_i\ trink]]\ bin-e\ glei\ b'suffa]$ .  
           this beer       if-I   still drink   am-I immediately drunk  
           'If I continue drinking this beer, I'll be drunk right away.'  
       b. \* $I\ bin\ glei\ b'suffa\ [[_{des\ Bier}]_i\ wenn-e\ no\ t_i\ trink]$ .

Recall that Bayer proposed that the pragmatic notion of Emphatic Topicalization be syntactically represented by a feature called 'etop'. This feature can optionally be associated with the C-system of both root and embedded clauses. However, etop feature can only be interpreted in root or root-like CPs, which, according to Bayer, in (Bavarian) German are all clauses exhibiting V-to-C movement (so crucially also embedded V2-declaratives, where ET is possible). Bayer postulates that there is a one-to-one relation between the (potential) expression of 'emphasis' and full-fledged independent illocutionary force.

The carry-home message is that only those etop features which are located on a head in the left periphery of a root clause or an embedded verb second clause can be interpretable. It follows that only two of the three possible combinations in (76) can yield a grammatical output:

- (76) a.  $[_{(Root)CP1[etop]} \quad [_{CP2[etop]} \quad \dots \quad XP_{[etop]} \quad \dots \quad ]]$   
       b.  $[_{(Root)CP1[etop]} \quad [_{CP2} \quad \dots \quad XP_{[etop]} \quad \dots \quad ]]$   
       c. \*  $[_{(Root)CP1} \quad [_{CP2[etop]} \quad \dots \quad XP_{[etop]} \quad \dots \quad ]]$

(76a) gives us the structure with clausal pied-piping: it is illustrated in (77). The DP *da Xavier*, endowed with an etop-feature, first undergoes movement inside the embedded clause, attracted by the etop-feature of CP2. A freezing effect after checking this embedded occurrence of etop makes sure that no extraction can take place. This leaves the entire CP2 as the only candidate to check the etop feature of CP1, by means of movement to the specifier of the relevant functional head:

- (77)  $[_{CP1[etop]} [_{CP2[etop]} [_{DP\ Da\ Xavier}]_{i[etop]} [_{C^2}\ da\beta\ t_i\ an\ Mantl\ kafft\ hot}]]_j$   
        $[_{C^1\ hot\ neamad\ glaubt\ t_j}]$ .  
           the Xavier   that   a coat bought has   has nobody believed  
           'As for Xavier, nobody believed that he bought a coat.'

Another grammatical pattern is the one in (76b): this is what Bayer calls Chain Formation, i.e. extraction, as illustrated in (78) (Bayer's (31a)), which is of course only possible if the embedded CP is not an island. In (78), the embedded subject *da Xavier* enters the derivation with an etop-feature, and it is attracted to the left periphery of the main clause by a functional head endowed with a matching etop-feature. No etop-feature is present on any functional head of the embedded clause (CP2):

- (78)  $[_{CP1[etop]} [_{DP} Da \textit{Xaver}]_{i[etop]} [_{C^\circ} hot \textit{neamad glaubt} [_{CP2} \textit{da\ss t_i an Mantl kafft hot}}]]]$ .  
the Xavier has nobody believed that a coat bought has  
'As for Xavier, nobody believed that he bought a coat.'

The derivation of the pattern sketched in (76c) will always lead to ungrammaticality, due to the absence of etop at the root, the only domain where this feature can be interpreted. As the reader can observe, only the embedded CP has an etop-feature in (79).

- (79)  $*[_{CP1} \textit{Neamad hot glaubt}, [_{CP2[etop]} [_{da \textit{Xaver}}]_{i[etop]} [_{C^\circ 2} \textit{da\ss t_i an Mantl kafft hot}}]]]$ .  
nobody has believed the Xavier that a coat bought has  
intended: 'Nobody believed that as for Xavier, he bought a coat.'

This is, in a nutshell, how Bayer derives the absence of ET in rightward clauses. The author (in his fn. 23) also points out a similarity with the phenomenon of wh-scope marking, as in German (80a) (see also ch. 4, section 2.1.3.5 and sections 5.2.2.1 and 5.2.2.3 of the present chapter). The wh-phrase (**wh**) in the embedded CP is fully dependent on the scope marker in the matrix clause, where the illocutionary force of the entire sentence is encoded. Given the absence of an interrogative operator in the matrix clause, the ungrammaticality of (80b) is expected, not in the least because the predicate *glauben* 'to believe, to think' cannot select a wh- complement clause:

- (80) a. *Was glaubst du [CP **wh** ich gesehen habe]?*  
what believe you whom I seen have  
'Who do you believe I have seen?'  
b. *\*Du glaubst [CP **wh** ich gesehen habe].*  
you believe whom I seen have

In the literature, there is no consensus about the analysis of wh-scope marking constructions. However, the data in (80) seem to substantiate the claim that it is possible for an embedded CP to be endowed with a given feature, without this feature being interpretable in the embedded clause: a corresponding feature upstairs is needed to value the feature in the embedded clause. A possible schematic representation of the scope-marking construction is given in (81), with 'int' for 'interrogative':

- (81)  $[_{RootCP} OP_{[int]} [_{RootC^\circ} [_{EmbCP} XP_i [_{int} [_{C^\circ} [_{int} t_i ]]]]]]$

Moreover, the exact nature of the dependency between the matrix operator ('OP') and the embedded CPs is the subject of discussion (see the contributions in Lutz, Müller & von Stechow (2000)). In the remainder of section 4, I will apply a Bayer-style analysis to Latin topicalization examples.

## 4.2 Latin pronominal LEF

First of all, for deriving sentences like (1), I will need no special etop-feature, I will just assume a regular Topic feature (say an uninterpretable Topic feature associated with a Topic head (the 'Probe') and an interpretable feature with a (deeply embedded) XP (the 'Goal')).

- (1)  $[_{CP1} [_{CP2} \underline{Eum}_i [cum\ t_i\ uidero]],\ Arpinum\ pergam]$ .  
 him.ACC when I.will.have.seen Arpinum.ACC I.will.proceed  
 'When I have seen him, I'll move on to Arpinum.' (= Cic. ad Att. 9.15.1)

Moreover, I will assume that there is only one trigger for the entire operation, as was the case for the for the cases of *Relative Verschränkung*. In other words, I will assume that there is never movement of a topic to an embedded TopP, but that the topicalized phrase undergoes internal movement inside the embedded clause to the EdgeP that I proposed in the previous chapter.

### 4.2.1 No topics inside (central) ACs

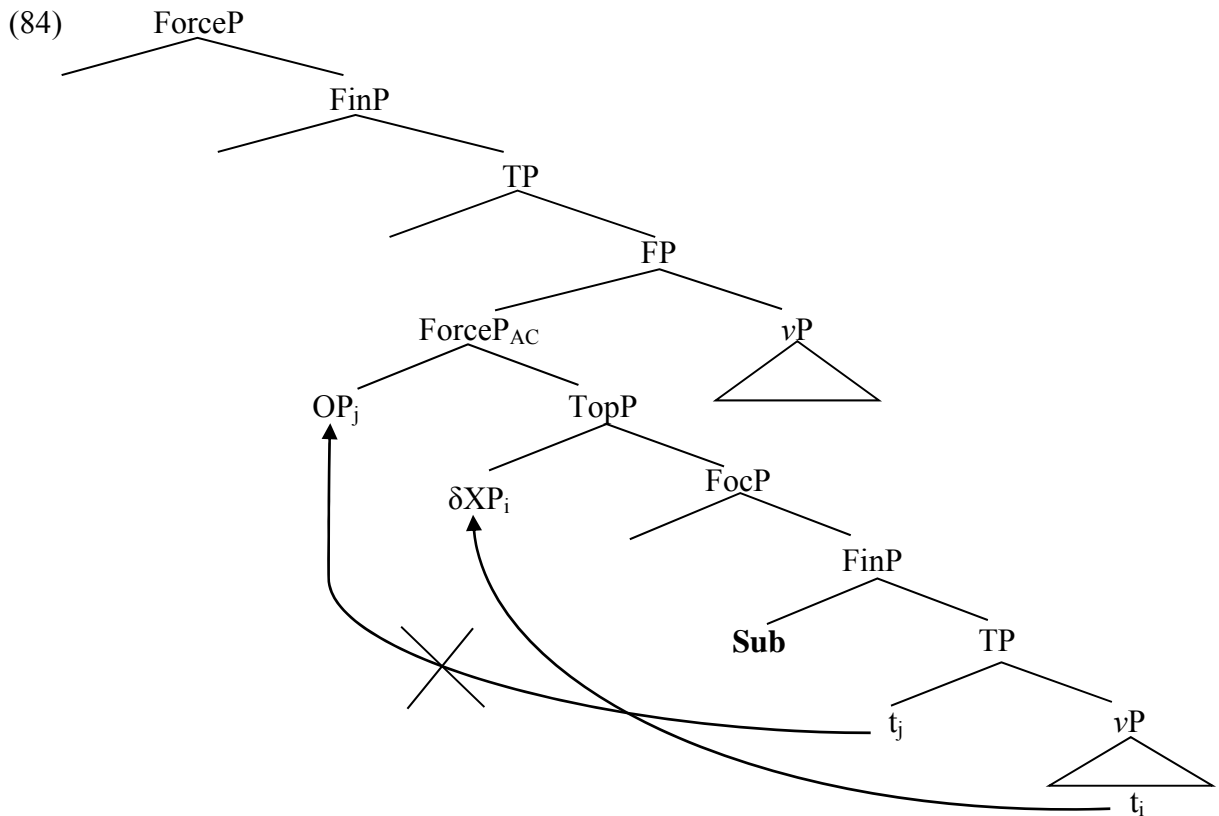
I assume that AC-internal topicalization, by which I mean cases where the probing head is located in the left periphery of the AC, are always ruled out, irrespective of linear position of AC. This is represented schematically in (82). Observe that although the AC in (82a) is situated in a left-peripheral position, it has not been moved there by a topic. Rather, it assume that it sits in the specifier of a Modifier Phrase, a dedicated functional projection that hosts left-peripheral adjuncts (Rizzi 2004), whether it is base-generated there or not.

- (82) a. \*  $[_{CP1} [_{ModP} [_{CP2} [_{TopP2} \underline{Eum}_i [cum\ t_i\ uidero]]], [_{TP1} Arpinum\ pergam]]]$ .  
 b. \*  $[_{CP1} [_{TP1} Arpinum\ pergam [_{CP2} [_{TopP2} \underline{eum}_i [cum\ t_i\ uidero ]]]]]]$ .

Under the by now familiar assumption that (central) AC are derived through movement of a clause-typing operator to Spec,ForceP in the embedded clause, this ungrammaticality can be explained as the effect of a minimality violation. As in the previous chapter (sections 3.3-3.4), I assume that foci and the clause-typing operator only have a wh-feature, and that a topic is endowed with an additional  $\delta$ -feature:

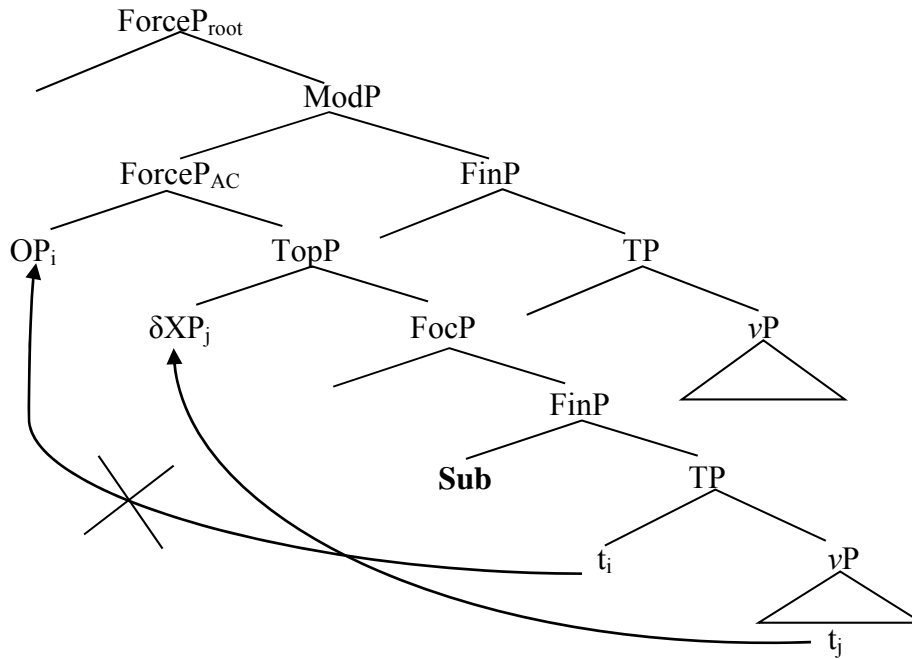
- (83)  $OP_{AC}$  = [wh]  
 Foc = [wh]  
 Top = [ $\delta$ wh]

The ungrammatical derivations are then illustrated in (84-85), showing topicalization in clause initial and clause-final ACs respectively. Simplifying somewhat, I represented the clause-final AC as being located in some functional projection ('FP') above  $vP$ , assuming that the entire  $vP$  is evacuated.



The only difference between (84) and (85) is the site where the AC is attached to the main clause. In (85), an AC sits in the specifier of a dedicated projection ModP in the left periphery of a root clause. Two syntactic objects move: some XP is fronted from inside the AC to the left periphery of the AC, where it forms a barrier for the operator targeting Spec,ForceP.

(85)



This is my main criticism against the proposal in Truswell (to appear): it is not at all clear why topicalizing an E-type pronoun (or any other XP) in an AC should be grammatical.

#### 4.2.2 AC-external Topic probe

The schematic representation of the grammatical derivation of (1) looks like (86). The crucial differences with (82a) are (i) the fact that CP2 sits in a main clause TopP, (ii) that the embedded pronoun does not move to a specialized 'interpretable' discourse projection but rather to an intermediate landing site (EdgeP), and (iii) that CP has itself undergone movement. The derivation of (86) proceeds in exactly the same way as the examples of *Relative Verschränkung*, namely with internal movement, feature percolation and (clausal) pied-piping.

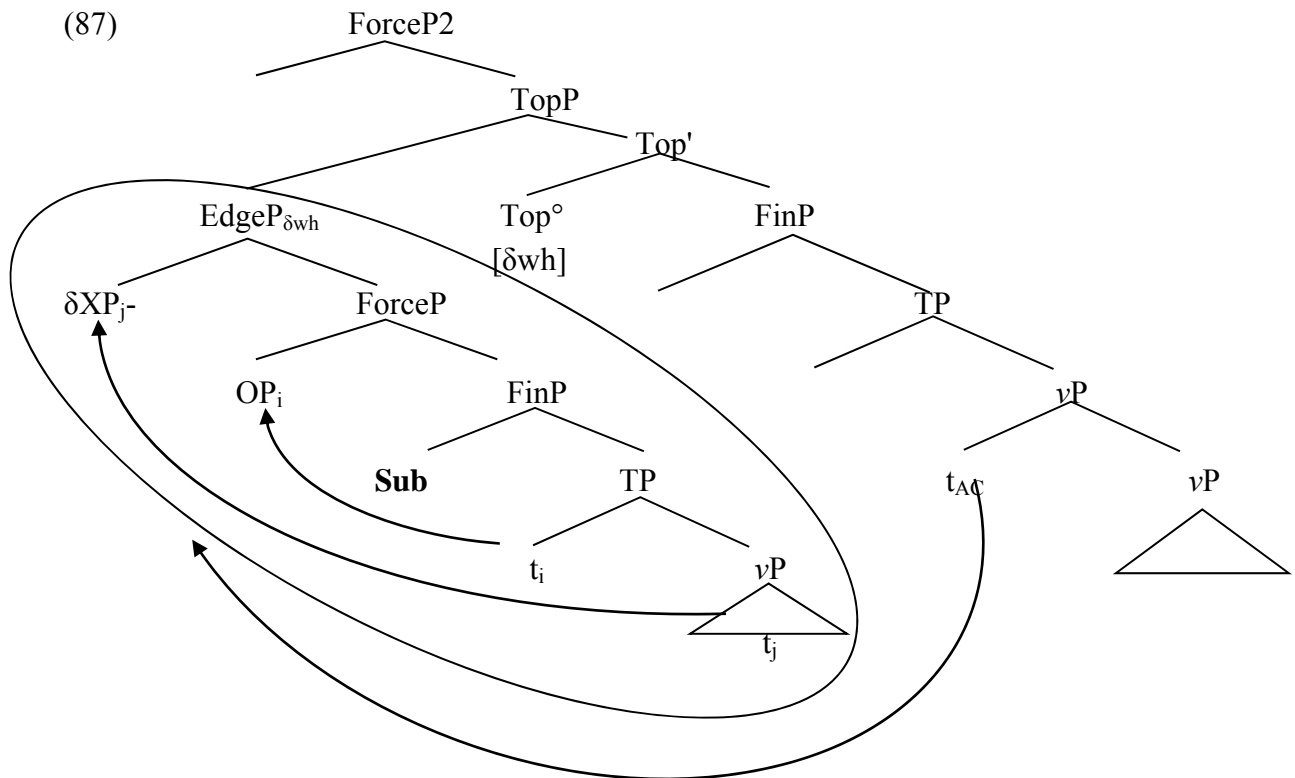
(86) [CP1 [TopP1 [EdgeP2 Eum<sub>i</sub> [**cum** t<sub>i</sub> uidero]]<sub>j</sub>, [FinP1 [TP1 t<sub>j</sub> Arpinum pergam]]]].

The locality problems association with AC-internal topicalization do not arise if we assume that the trigger for topicalization is located in the superordinate clause<sup>12</sup>. Attraction of a topic 'Goal' can only happen after the AC has been attached to the superordinate clause, i.e. as a fully-fledged, clause-typed syntactic object. Under that scenario, the XP endowed with the  $\delta$ -feature moves over the operator in Spec,ForceP to target EdgeP, as was the case in the derivation proposed (cfr. ch. 4, section 3.4). The result is a 'nested' configuration, as in (87). At no point, the clause-typing operator moves past the topic.

<sup>12</sup> For simplicity's sake, let's assume this is a main clause, but more correct would be to say that it should be either a main clause or an embedded clause that does not resist MCP.



(87)



We thus obtain the same mismatch that was also pointed out in the previous chapter (section 4.3.3) between the interpretive topic and the syntactic topic. The interpretive topic, say an item that comes from the lexicon with an interpretable Top-feature, is the constituent at the edge of the embedded clause. However, this constituent is not located in a TopP and thus does not qualify as a syntactic topic. On the other hand, it is the entire embedded clause which fulfills this role of syntactic topic.

## 5 Type B: Multiple LEF, and what it can teach us

In the next part of this chapter, I will consider cases where more than one phrase has undergone fronting inside an AC. One of the main questions that I will try to answer is whether ILLE can act as a clausal pied-piper.

I will try show that only the leftmost phrase can be considered a pied-piping topic. I will identify all phrases intervening between a clausal pied-piper and a subordinating conjunction as a second kind of fronting.

## 5.1 Multiple LEF: the data

### 5.1.1 Attested patterns

In sequences where more than one constituent appears in an LEF configurations, the following combinations are attested:

- (88) a. [wh ILLE [**Sub** [...  
b. [wh XP [**Sub** [...  
c. [IS ILLE [**Sub** [...  
d. [IS XP [**Sub** [...  
e. [XP XP [ [ ...

where IS is to be understood as some kind of meta-expression standing for all (independent or attributive) forms of *is* or *hic* and all DPs and PPs containing such a form, and where ILLE stands for any flecional form of *ille*, or for any DP or PP containing such a form.

I will not take into account (88e): this will be discussed in the following chapter (section 1.1.3). The four remaining patterns are illustrated in (89-92).

- (89) [*Quibus ille [si cedit]] salui sumus*].

which.DAT.PL he.NOM if gives.in, safe.NOM we.are

'If he gives in to those, then we are safe.' (= Cic. ad Att. 5.20.8)

- (90) [*Quod Caesar [cum animum aduerteret]], si oppidum capere contenderet*

which.ACC C.NOM when noticed.SUBJ if town.ACC seize.INF he.attempted.SUBJ

*timuit ne homines perditum incenderent et moenia delerent.*

he.feared that people.NOM lost.NOM put.fire.to.SUBJ and walls.ACC destroy.SUBJ

'When Caesar noticed this, he feared that if he would try to take possession of the town, its desperate inhabitants would set fire to it and would destroy the city walls.'

(= Anon. Bel. Hisp. 36)

- (91) [*Id ille [ut audiuit]], domum reuerti noluit et se Pactyen*

this.ACC he.NOM when heard.PF house.ACC return.INF he.didn't.want and REFL Pactye.ACC

*contulit ibique tria castella communiit [...].*

rendered.PF there-and three.ACC forts.ACC he.fortified.PF

'When he had heard this, he didn't want to return home. Instead, he went to Pactye and there he fortified three fortresses.' (= Cor. Nep. Alc. 7.4)

- (92) [*Huc aurum [si accedit]] - sed quid loquor?*

here gold.NOM if comes.in.addition but why I.talk

'If the gold comes on top of this..., but why speculating?' (= Cic. ad Att. 12.6.1)

### 5.1.2 Non-attested patterns

All the other logically possible combinations of the elements *wh*, *IS*, *ILLE* and *XP* are not attested. They are listed in (93):

- (93) a. \* [wh wh [**Sub** [...  
b. \* [IS IS [**Sub** [...  
c. \* [wh IS [**Sub** [...  
d. \* [IS wh [**Sub** [...  
e. \* [ILLE wh [**Sub** [...  
f. \* [ILLE IS [**Sub** [...  
g. \* [XP wh [**Sub** [...  
h. \* [XP IS [**Sub** [...

### 5.1.3 Question: multiple fronting or two different phenomena?

The question now arises if it is possible to have more than one pied-piping element. In other words: are *ILLE* and *XP* in (a-d) of the same nature as *wh* and *IS*?

- (88) a. [wh ILLE [**Sub** [...  
b. [wh XP [**Sub** [...  
c. [IS ILLE [**Sub** [...  
d. [IS XP [**Sub** [...

In order to answer this question, I will investigate whether it is possible to analyse the grammatical patterns in (88) as involving some process of multiple or recursive A'-movement.

## 5.2 Sources of multiple A'-movement

At first sight, the idea that there could be 'multiple pied pipers' might not seem entirely improbable: there are at least two well described phenomena of multiple A'-movement (found in contexts which do not necessarily implicate pied piping). First, it has been claimed in the literature that (at least a specific kind of) topicalization can be applied recursively (Rizzi 1997; Frascarelli & Hinterhölzl 2007 among many others). Second, we also find multiple long distance phrasal movement and we find multiple partial movement. On the basis of the Latin data, I will argue that neither of those two mechanisms can give rise to multiple pied-pipers. Put differently, I will claim that if any, only the leftmost phrase in a LEF-constellation can be a pied-piper. I will first introduce and discuss multiple topics and multiple long distance movement (full and partial) in turn.

### 5.2.1 Recursion: multiple topics

It is well known from the literature that at least some types of topics are recursive (Rizzi 1997, refined in Frascarelli 2000 and Frascarelli & Hinterhölzl 2007). Italian Clitic Left Dislocation is a point in case, as in the example in (89) (from Rizzi 1997: 290, his (21)).

- (89) *Il libro, a Gianni glielo darò senz' altro.*  
the book to Gianni tomorrow him.CL-it.CL I.will.give for sure  
'The book, to Gianni, tomorrow, I'll give it to him for sure.'

There is no real consensus about whether CLLD involves movement or base generation (movement: Cinque 1977; base generation: Frascarelli 2000; see Cecchetto 2000 for discussion). If a base generation analysis is adopted for CLLD, then admittedly the phenomenon of multiple CLLD would not be immediately relevant for the discussion of LEF, in which I assume that there is movement to the left edge of the AC. The syntactic phenomenon that I will discuss next involves fronting of wh-elements: base generation does not seem an option here.

### 5.2.2 Multiple wh-movement and clustering

#### 5.2.2.1 The phenomenon

In some (but not all) languages it is possible for more than one question word to appear in one and the same sentence. In languages with overt wh-movement, two patterns emerge: either only one wh-phrase is fronted, with the other ones remaining in situ. Alternatively, all the question words obligatorily undergo movement. The first option is exemplified by Dutch (90) and English (91):

- (90) a. *Wat heb je aan wie gegeven?*  
what have you to whom given  
'What did you give to whom?'  
b. \* *Wat aan wie heb je gegeven?*  
what to whom have you given
- (91) a. *What did you give to whom?*  
b. \* *What to whom did you give?*

Concerning (91a), note that we are not interested in the (available) reading where the PP *to whom* which remains *in situ* is interpreted as a so-called echo question word. The relevant reading for this example is the non-echo reading which allows for a pair-list answer: I gave a book to John, a CD to Mary,... : this is not a possible answer to an echo question.

In many languages, all wh-phrases present in a given multiple question obligatorily undergo leftward movement. Many Slavic languages are famous for having this property. An example from Russian is given in (92) (from Rudin 1988: 446, her (1d)):

- (92) *Ko čto kogda skazal?*  
 who what when said  
 'Who said what when?'

Multiple wh-fronting also may take place in contexts where wh-movement is only partial (cfr. ch. 4, section 2.1.3.5), as in the wh-scope marking construction discussed by Horvath (1998, 2000: 295ff.). The author shows that in Hungarian, more than one wh-prase can be fronted in the embedded clause which is associated with a matrix interrogative operator. An example is given in (93), with the landing site of the contentfull wh-words lower than the complementizer *hogy*). In this example (from Horvath 1998: 49, her (15)), the wh-constituents *ki* 'who' and *mire* 'what' are fronted in the complement clause selected by a predicate that cannot take an indirect question as a clausal complement:

- (93) *Mit állított Mari [hogy ki mire számít]?*  
 what.ACC claimed Mary.NOM that who.NOM what-onto counts  
 'Who did mary claim expected what?'

The matrix clause contains a wh-scope marker *mit*, 'what' (underscored), which determines the scope of both wh-constituents that are fronted inside the embedded clause (below the declarative that-complementizer *hogy*, but still in a preverbal position): both embedded wh-phrases thus receive matrix scope, which yield a direct question requiring a pair-list answer (X expected X', Y expected Y',...).

Latin as well has multiple wh-fronting (Kühner & Stegmann 1966<sup>2</sup>: vol. II.2, 497; Devine & Stephens 2006: 89; Brown, Joseph & Wallace 2009: 500). All eight tokens that I found are given in (94-101): they all involve fronting of two wh-arguments to the C-domain of an indirect question. The two last examples are from poetry (dactylic hexameters).

- (94) *Ego [CP **quid** cui debeam] scio.*  
 I.NOM what.ACC whom.DAT I.owe.SUBJ I.know  
 'I know what I owe to whom.' (= Sen. Ben. 4.32.4)

- (95) *[...] etiam atque etiam considera, C. Piso, [CP **quis** quem fraudasse dicatur].*  
 over and over think.IMPTF C. P.VOC who.NOM whom.ACC to.have.cheated is.said.SUBJ  
 'Consider again and again, Gaius Piso, who is said to have cheated whom.'  
 (= Cic. Rosc. Com. 21)

- (96) *Sic fortuna in contentione et certamine utrumque uersauit, ut alter alteri inimicus auxilio salutique esset, neque diiudicari posset, [CP **uter utri** uirtute anteferendus uideretur].*  
 so fortune.NOM in.rivalry.ABL and strife.ABL both.ACC turned.PF so.that one.NOM the.other.DAT enemy.NOM help.DAT -and was.SUBJ nor it.c  
 to.be.preferred.NOM seemed.SUBJ  
 'Fortune so treated the two of them, in their mutual rivalry and strife, that the one enemy helped the other, and that it was impossible to tell who of the two was the bravest.' (= Caes. Bel. Gal. 5.44)
- (97) *Nunc uero [CP **uter utri** plus apud me gratiae conciliet] ignoro.*  
 now PRT who.DU.NOM whom.DU.DAT more.ACC with me.ACC gratitude.GEN provokes.SUBJ I.don't.know  
 'However, now I don't know to whom of the two I am more grateful than the other.' (= Fro. Epi. ed. Haines vol. I. p. 292)
- (98) *Discernatur orationibus nostris diuersitas temporum et ex ipso genere gratiarum agendarum intellegatur [ **cui quando** sint actae].*  
 be.distinguished.SUBJ speeches.ABL our.ABL diversity.NOM times.GEN and from self.ABL kind.ABL thanks.GEN given.GER.GEN be.understood.SUBJ who.DAT when were.SUBJ given.NOM  
 'Our speech should make clear that times have changed, and from the vary nature of our words of gratitude it should be understood to whom and when they were spoken.' (= Pli. Pan. 2.3)
- (99) *Plurimum refert compositionis, [ **quae quibus** anteponas].*  
 most.ADV it.is.important composition.GEN which.ACC which.DAT you.put.before.SUBJ  
 'It is of the utmost importance for composition what element you put in front of what.' (= Quint. I.O. 9.4.44)
- (100) *promptum est oculis praediscere nigram, et [ **quis cui** [t<sub>i</sub> color]].*  
 possible.NOM it.is eyes.PL learn.beforehand.INF black.ACC and which.NOM which.DAT colour.NOM  
 'It is easy for the eyes to recognize black soil, and to learn which land has which colour.' (= Verg. Geo. 2.255-256)
- (101) *Ambigitur quotiens [ **uter utro** sit prior ], aufert Pacuuius docti famam senis, Accius alti, [...].*  
 it.is.doubted each.time.when who.DU.NOM who.DU.DAT is.SUBJ first.NOM takes Pacuvius.NOM learned.GEN fame.ACC old.man.GEN Accius.NOM elevated.GEN  
 'Each time when it is debated who is better than who, Pacuvius wins the prize as the old learned poet, Accius as the lofty poet.' (= Hor. Epist. 2.1.55)

### 5.2.2.2 Two types of multiple wh-languages

Rudin (1988) discovered that languages with multiple wh-fronting come in (at least) two types. In languages of the first type (e.g. Bulgarian and Romanian), all wh-phrases cluster and move to the CP-layer, where they are adjacent and appear to form one constituent). In languages of the second type (e.g. Czech, Polish and Serbo-Croatian), the first of the fronted wh-phrases can be separated from the lower one(s) by clitics and parentheticals. This leads Rudin to conclude that the leftmost element sits in a hierarchically higher position than the remaining ones: on Rudin's account, the highest phrase sits in Spec,CP and the lower one(s) is/are left adjoined to IP<sup>13</sup>.

Two other properties distinguish the two types of multiple wh-languages. First, in multiple wh-languages of the Bulgarian type, the elements in the fronted cluster tend to appear in a fixed order, preserving the basic c-command relations. This ordering restriction is considered by Rudin to be a variant of the phenomenon known as 'Superiority' since Chomsky (1973), where it was observed that if in an English interrogative clause more than one question word is present, only the structurally highest one can be displaced to the left periphery: the other(s) should remain in situ (see (102)).

- (102) a. *Who<sub>i</sub> t<sub>i</sub> saw John where?*  
b. \**Where<sub>i</sub> did who see John t<sub>i</sub>?*

The same Superiority Condition is respected in embedded questions:

- (103) a. *I wonder [<sub>CP</sub> who<sub>i</sub> [<sub>TP</sub> t<sub>i</sub> bought what]].*  
b. \**I wonder [<sub>CP</sub> what<sub>i</sub> [<sub>TP</sub> who bought t<sub>i</sub>]].*

In general, if fronted wh-phrases come in a fixed order, they respect the hierarchy of grammatical functions in (104) (cfr. Rudin 1988: 472), which in Latin roughly coincide with the cases between brackets:

- (104) Subject (Nominative) < Direct Object (Accusative) < Indirect Object (Dative)/Other oblique arguments (esp. PPs) < Adjuncts

In multiple wh-languages of the Bulgarian type, the Superiority hierarchy in (104) is systematically respected (Rudin 1988; see also Krapova & Cinque 2008 for discussion of apparent counterexamples). This is illustrated by the Bulgarian examples in (105-106) (from Rudin 1988: 472-473, her (54)):

---

<sup>13</sup> More recently, Richards (2001) called the two groups CP-absorption languages (Bulgarian-type) and IP-absorption languages (Serbo-Croatian-type).

- (105) a. *Koj kogo vižda?*  
 who.NOM whom.ACC sees  
 'Who sees whom.'  
 b. \* *Kogo koj vižda?*

- (106) a. *Koj kogo na kogo e pokazal?*  
 who.NOM whom.ACC to whom has pointed out  
 'Who pointed out whom to whom?' (no other word order possible)

On the other hand, in languages of the other type, Superiority does not need to be respected, as shown by the Serbo-Croatian examples in (107b), where an accusative precedes a nominative wh-word. The same is illustrated by the Czech examples in (108): for instance, in (108b), an adjunct occurs in the first place in a sequence of three wh-words.

- (107) a. *Kto co robit?* Serbo-Croatian  
 who.NOM what.ACC did  
 b. *Co kto robit?*  
 what.ACC who.NOM did  
 'Who did what?'

- (108) a. *Kdo kdy koho pozval, nevím.* Czech  
 who.NOM when whom.ACC invited I.don't.know  
 b. *Kdy kdo koho pozval, nevím.*  
 when who.NOM whom.ACC invited I.don't.know  
 c. *Koho kdo kdy pozval, nevím.*  
 whom.ACC when who.NOM invited I.don't.know  
 'Who invited whom when, I don't know.'

The second property concerns long distance movement. In languages of the Bulgarian type, multiple wh-words can undergo long movement across clause boundaries. In multiple wh-languages of the other type, similar extractions are ungrammatical or at least not accepted by all speakers<sup>14</sup>. Let us consider the Bulgarian example in (109), with multiple long fronting:

- (109) *Koj<sub>i</sub> kŭde<sub>j</sub> misliš [če t<sub>i</sub> e otišŭl t<sub>j</sub>]?*  
 who where you.think that has gone  
 'Who do you think went where?'

At first sight, given that the subject and the locative adjunct do not form a syntactic constituent in their base position within the embedded clause, it would appear as if both wh-

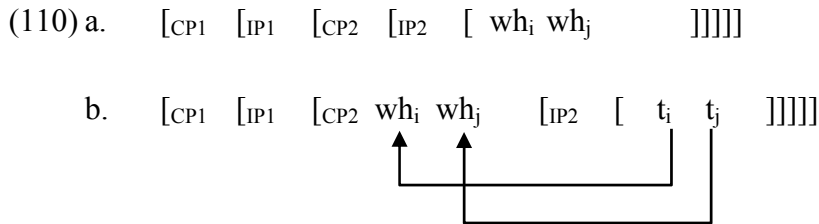
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<sup>14</sup> In the literature, judgments on multiple long distance extractions are not uniform (cfr. Richards 2001: 35-36 on Serbo-Croatian).



phrases have to move separately in a successive cyclic way through the edge of the embedded CP<sup>15</sup>.

One possibility is to suggest that the edge of a cyclic domain (or a 'phase', in minimalist terms) can (temporarily) host more than one constituent and that the constituents moved to the edge of a cyclic domain will subsequently undergo long distance movement. For instance, following a suggestion by Richards (2001: 256), the first stages of a long distance multiple wh-extraction might proceed along lines sketched in (110)<sup>16</sup>:



The main challenge for a syntactician is then to account for the fixed order (i.e. Superiority effects) in 'clustering' languages like Bulgarian, and for the lack of this rigid ordering in non-clustering languages like Czech and Serbo-Croatian. I will not at present elaborate on this, but I refer to the recent literature for a number of proposals (Richards 2001; Grewendorf 2001; Bošković 2002; Boeckx & Grohmann (eds.) 2003; Krapova & Cinque 2008).

### 5.2.2.3 Multiple wh- in Latin

Given that Latin also has multiple wh-movement (section 5.2.2.1), it would be interesting to determine to which multiple wh- type it belongs. However, the Latin data on multiple wh-movement are unfortunately very scarce: I only managed to find eight tokens.

Among them, there are no Latin examples of multiple long distance wh-fronting out of an embedded clause, which would have been evidence for the Bulgarian type, nor any instances of clitics or parentheticals intervening between the first and the second fronted wh-word, which would have suggested that Latin is more like Czech or Polish. However, we can look at the word order properties of the multiple wh-data. Recall that in the Bulgarian type languages the multiple wh-constituents appear in a fixed order while in the Czech/Polish type languages,

<sup>15</sup> Long distance multiple wh-fronting is also available in Romanian, as in (i), from Cheng & Demirdache (2010: 476, their (47); the first interrogative word *cine* 'who' is extracted from the main clause):

(i) *Cine cind, ce, a spus [CP ca va offeri t<sub>i</sub> t<sub>j</sub> satului]*  
 who when what said that will offer the.village  
 'Who said that he will offer the village what, when?'

<sup>16</sup> Richards assumes that functional heads can be endowed with multiple specifiers.

their order is free. In all the eight Latin cases that I found (cited in (94-101)) the hierarchy in (111) is respected (see also Devine & Stephens 2006: 89; 139 n. 53)<sup>17</sup>:

| (111) | Fragment                        | wh- sequence       | Hierarchy (104) respected? |
|-------|---------------------------------|--------------------|----------------------------|
| 1.    | Sen. Ben. 4.32.4                | <i>quid cui</i>    | ACC > DAT ✓                |
| 2.    | Cic. Rosc. Com. 21              | <i>quis quem</i>   | NOM > ACC ✓                |
| 3.    | Caes. Bel. Gal. 5.44            | <i>uter utri</i>   | NOM > DAT ✓                |
| 4.    | Fro. Epi. Haines vol. I. p. 292 | <i>uter utri</i>   | NOM > DAT ✓                |
| 5.    | Pli. Pan. 2.3                   | <i>cui quando</i>  | DAT > ADJ ✓                |
| 6.    | Quint. I.O. 9.4.44              | <i>quae quibus</i> | ACC > DAT ✓                |
| 7.    | Verg. Geo. 2.255-256            | <i>quis cui</i>    | NOM > DAT ✓                |
| 8.    | Hor. Ep. 2.1.55                 | <i>uter utro</i>   | NOM > DAT ✓                |

Table 8: Superiority effects in Latin multiple wh-sequences.

This might be considered a weak indication that Latin patterns with Bulgarian and Romanian rather than with Czech and Polish, but it goes without saying that the limited amount of data does not allow us to claim with any certainty that Latin is a multiple wh-language in which a phrasal cluster is found in C.

#### 5.2.2.4 A note on phrasal clusters

It has been argued that in a subset of languages with multiple wh-movement, a phrasal cluster of (fronted) wh-phrases is formed at the level of CP. The process of phrasal cluster formation, or XP cluster formation, under A'-movement is definitely not well understood: it remains unclear where and how the cluster is formed (see the discussion of Richards' analysis).

Furthermore, XP-clusters in the context of A'-movement are not restricted to (interrogative) wh-phrases. Sabel (2001: 542-543), gives examples from Malagasy, where multiple phrases which otherwise don't form a syntactic constituent can be fronted to the left of the focus particle *no*, which is analyzed by Sabel as the head of CP. See also Keenan (1976) for further discussion of similar data.

- (112) a. *[CP Manasa [DP ny lamba] [PP amin' ity savony ity] Rabe].*  
 wash the clothes with this soap this Rabe  
 'Rabe washes the clothes with soap.'

<sup>17</sup> As Devine & Stephens (2006: 89) observe, raised multiple indefinites (forms of *quis* in the scope of a non-veridical operator (in the sense of Giannakidou 1998)) tend to respect Superiority as well, but they note that there are exceptions, like Cic. Off. 1.20 (*cui quis*: DAT > NOM). Another exception is Cic. Phil. 1.17 (*cui quid*: DAT > ACC). It is not clear whether multiple indefinites can be straightforwardly assimilated to multiple question words (for one thing, multiple indefinites do not seem to form one complex indefinite, whereas multiple question words do form one single interrogative speech act operator).

- b.  $[_{CP} \textit{Amin' ity savony ity ny lamba} [_{C'} \textit{no} [_{TP} \textit{sasan t t dRabe}]]]$ .  
 with this soap this the clothes FOCUS PASS.wash Rabe
- c. \*  $[_{CP} \textit{Ny lamba amin' ity savony ity} [_{C'} \textit{no} [_{TP} \textit{sasan t t dRabe}]]]$ .  
 the clothes with this soap this FOCUS PASS.wash Rabe

(112a) illustrates the unmarked word order with neutral information structure: the manner adjunct *amin' ity savony ity* 'with this soap' follows the direct object *ny lamba* 'the clothes'. The contrast between (112b) and (112c) shows that the fronted constituents must occur in the mirror order with the manner adjunct *amin' ity savony ity* 'with this soap' to the left of the object *ny lamba* 'the clothes'. The mirror order suggests a roll-up derivation, but not all the details are clear to me.

Though several aspects of multiple fronting remain unclear, the data above lead us to the conclusion that there seems to be no *a priori* reason to claim that the edge of a cyclic domain (call it EdgeP) can host only one single phrase. We see that UG provides a(n ill-understood) mechanism for forming phrasal clusters when more than one XP undergoes A'-movement.

We have seen that in the case of multiple wh-movement in Latin there is some support for the idea that the fronted constituents form a cluster. Provisionally, then, the data of multiple wh-phrases on the left edge of the AC would then be compatible with a view according to which the wh-phrases form a cluster and constitute one single (be it internally complex) pied-piper. In the next section, I return to Latin example in which more than one non-wh pronoun is found to the left of a subordinating conjunction, as in (91), repeated here. The goal is to examine whether in such cases too one could argue in favour of cluster formation of the pronouns *id* and *ille*.

- (91)  $[_{CP1} [_{CP2} \textit{Id}_j \quad \textit{ille}_i [ \textit{ut} t_i t_j \textit{audiuit} ]], \textit{domum} \textit{reverti} \quad \textit{noluit} [..]]]$ .  
 that.ACC he.NOM when heard.PF to.house return.INF he.didn't.want  
 'When he had heard this, he didn't want to return home.' (= Cor. Nep. Alc. 7.4)

### 5.3 Latin: only one pied-piper

In this section, I will try to defend the claim that in an example like (91), the two pronouns *id* and *ille* do not form one complex constituent. I will conclude that only the leftmost element *id* ('that', neutre accusative of *is*) can be analysed as a pied-piper.

A first important indication that there are no multiple pied-pipers missing combinations are the missing combinations in (113). Those elements that we can identify with reasonable confidence as clausal pied-pipers, namely wh- and IS, cannot cooccur in an LEF-configuration:

- (113) a. \* [wh wh [**Sub** [...  
 b. \* [IS IS [**Sub** [...  
 c. \* [wh IS [**Sub** [...  
 d. \* [IS wh [**Sub** [...

But what about the patterns in (114), which are in fact attested?

- (114) a. [wh ILLE [**Sub** [...  
 b. [wh XP [**Sub** [...  
 c. [IS ILLE [**Sub** [...  
 d. [IS XP [**Sub** [...

I will first investigate whether it is possible to analyze whether the patterns in (114) involve multiple topics on the left edge of an embedded clause. I will argue that such an analysis is not plausible. Next, I will consider whether the fronted constituents can be argued to form one cluster and thus, parallel to the analysis of multiple wh-phrases, if they can be considered to act as one complex pied-piper. If the answer to these questions is negative, then we ought to conclude that the pronouns do not form a cluster, that one of the two fronted pronouns is a pied piper and that the second constituent has moved to the left edge of the AC for independent reasons.

### 5.3.1 No multiple topics

As discussed above, the first possibility for analysing (91) is to argue that both *id* and *ille* are topics at the level of the embedded clause (CP2 in (91)) and that this sentence illustrates a case of multiple topicalisation. However, this hypothesis can easily be discarded, given the fact that not even a single topic is allowed in central ACs (cfr. section 4 of the present chapter): topicalization counts as a Root Transformation and can thus not be at the basis of the presence of two phrases in the left periphery of the embedded clause.

We do predict recursive topicalization to be possible at the level of the main clause (CP1 in (91)). However, the single fronted phrases *id* and *ille* are not main clause constituents: under the clausal pied-piping analysis developed above, it is the entire island clause CP2 that fulfills this function, so there is just one topic. Other main clause topics, to the left or to the right of CP2 might well be possible, but this is not relevant for the analysis of the status of *id* and *ille*. To conclude, the pronominals *id* and *ille* in (91) should not be both analyzed as (multiple) topics.

### 5.3.2 Multiple A' movement

Alternatively, it is conceivable that the two pronouns in (91) are the short distance topicalization equivalent of long distance multiple (interrogative) wh-movement in the Bulgarian example in (109), repeated here for convenience.

- (109) [*Koj; kŭde<sub>j</sub>*] *misliš* [<sub>EdgeP</sub> *t<sub>i</sub> t<sub>j</sub>* [*če t<sub>i</sub> e otišŭl t<sub>j</sub>*]]?  
who where you.think that has gone  
'Who do you think (that) went where?'

In this example two wh-constituents are fronted to the left edge of the matrix clause. The Latin example in (91) could in principle be similar to (109), modulo the fact that (109) displays long distance extraction and (91) clausal pied-piping.

#### 5.3.2.1 Superiority effects in multiple wh

It was pointed out by Rudin (1988) that languages in which all fronted wh-words form a cluster in CP are characterized by a number of properties (see section 4.1.2.2), namely availability of long distance movement (as in (109)), non-separability of the cluster and fixed word order (related to superiority effects).

The limited amount of Latin material at my disposal only allows me to discuss the last of these properties, viz. the relatively fixed word order inside the cluster. In the Bulgarian instances of multiple wh-movement the hierarchy in (104), repeated here, is respected:

- (104) Subject (Nominative) < Direct Object (Accusative) < Indirect Object (Dative) < Adjuncts

It was shown (section 5.2.2.3) that all eight cases of multiple wh- in Latin, the fronted phrases respect the hierarchy in (104), which led me to the conclusion that Latin multiple wh- might involve cluster formation, and more generally that Latin grammar could generate phrasal clusters (whatever the exact nature of this process underlying cluster formation, cfr. section 5.2.2.4).

#### 5.3.2.2 No superiority effects in multiple LEF

Let us now turn to instances with multiple pronouns on the left edge of the AC. In contrast with instances of multiple wh-fronting, in all the cases (6) of multiple pronoun fronting to the left edge of the AC, the second element is a nominative (sc. *ille*). The first phrase does not seem to have a fixed case form: it can be for instance a dative (115) or an accusative (116):

(115) *[[Quibus praeceptis] ille [si obtemperauisset]], profecto amicos in temulentia non interemisset [...].*  
 which.DAT orders.DAT he.NOM if had.obeyed.SUBJ for.sure friends.ACC in drunkenness.ABL  
 not he.would.have.killed.SUBJ  
 'If had followed those advices, his drunken rage wouldn't have led him to kill his friends.' (Plin. NH 14.58)

(116) *[Id ille [si fecerit]], spes est pacis [...].*  
 this.ACC he.NOM if does.FUT.EX hope.NOM is peace.GEN  
 'If he does this, we can hope for peace.' (= Cic. ad Fam. 16.12.4)

Put differently, rather than being subject to a fixed word order constraint (probably regulated by Superiority), in the examples of multiple fronting with pronouns, the Superiority hierarchy is systematically violated. The correct descriptive generalization seems to be that the first phrase always is (or contains) a form of either *qui*, *is* or *hic*, irrespective of the grammatical function (subject, object) or case morphology (nominative, accusative,...) of this phrase. If the second phrase is a pronoun, it always is (or contains) a form of *ille*. These data are not conducive to an analysis in terms of cluster formation. As we will see shortly (see e.g. (118)), similar conclusions can be drawn from multiple LEF-sequences of the type 'wh - XP' and 'IS - XP': these combinations do not respect the Superiority hierarchy.

A final argument against multiple pied-pipers comes from a number of non-attested LEF-combinations. Consider again (93e-h):

- (93) e. \* [ILLE wh [**Sub** [...  
 f. \* [ILLE IS [**Sub** [...  
 g. \* [XP wh [**Sub** [...  
 h. \* [XP IS [**Sub** [...

Under the assumption that genuine pied-pipers like wh and IS are located in EdgeP, which is literally the highest position in an articulated C-system, we correctly predict that they cannot be preceded by any other elements. On the other hand, if ILLE and XP could be pied-pipers as part of an LEF-cluster, we would expect them to be able to occur in EdgeP as well, *quod non*.

## 5.4 Another type of LEF: LEF2

In other words: it seems to be the case that there can only be one pied piper in the left periphery of AC. This conclusion then implies that when we have two constituents in the left edge of the AC only the first is a pied piper and the second, always *ille* is not. The status of the second constituent is then to be examined in the following chapters.

## 5.5 Non-pronominal DP pied-pipers revisited

The question now arises whether a case can be made for full DP clausal pied-pipers. Consider the example in (117):

- (117) *Ita Caesar oppido potitur. Dum hic detinetur, ex proelio quos circummunitos superius demonstrauiimus, eruptionem fecerunt et bene multis interfectis in oppidum sunt redacti.*  
 [<sub>CP</sub> Caesar Hispalim [**cum** contendisset]], legati deprecatum uenerunt.  
 C.NOM to.Hispalis when had.gone.SUBJ ambassadors.NOM to.beg came.PF  
 'By doing so, Caesar took possession of the town. When he was occupied there, the people that were locked up in the town, as we showed above, launched an assault and only after a great number of losses on our side, they were driven back in the town. When Caesar had gone to Hispalis, ambassadors came to deprecate him.'  
 (= Anon. Bel. Hisp. 35)

The DP *Caesar* in (117) might be a candidate for being full DP clausal pied-piper, given that its discourse reference is not only the protagonist of the entire work, it also is mentioned *uerbatim* a couple of lines earlier. The same might be said of *Caesar* in the *cum*-clause in (118), repeated here, which is taken from almost the same passage in the same work.

- (118) [Quod Caesar [**cum** animum aduerteret]], si oppidum capere contenderet  
 which.ACC C.NOM when noticed.SUBJ if town.ACC seize.INF he.attempted.SUBJ  
*timuit ne homines perditu incenderent et moenia delerent.*  
 he.feared that people.NOM lost.NOM put.fire.to.SUBJ and walls.ACC destroy.SUBJ  
 'When Caesar noticed this, he feared that if he would try to take possession of the town, its desperate inhabitants would set fire to it and would destroy the city walls.'  
 (= Anon. Bel. Hisp. 36)

A crucial difference between (117) and (118) is that in the latter the fronted phrase *Caesar* follows of the wh-phrase *quod* ('which'). I assume that when there are two constituents on a left edge in a pied-piping configuration, it is the first one, here the wh-phrase, that is the pied piper. This means that in (118) the DP *Caesar* is not a pied piper. But if we conclude that the DP is not a pied piper in (118) then the question arises whether it can be a pied piper in (117). Although there is no decisive argument (empirical or theoretical) against assuming that full lexical DPs can be pied-piping constituents, there are certainly no clear examples of topicalized DPs acting as clausal pied-pipers. It is perhaps best to consider this an instance of movement of the left periphery that would not trigger pied piping, i.e. the type of movement that I have referred to as LEF2 and which can, as I will show in the next chapter, involve fronting of (what seems like) more than one constituent and which can occur in clause-final embedded clauses.

## 6 A possible alternative

In this concluding section, I will briefly explore an alternative to the pied-piping analysis that I have proposed in order to account for the pervasive topicalization asymmetry. The Romance data on which this alternative will be based exhibit the same left-right asymmetry, but are not at all easily amenable to an analysis in terms of clausal pied-piping.

### 6.1 Romance (esp. Italian) Clitic Left Dislocation

#### 6.1.1 The left-right asymmetry

In all the sentences in (119-122), a constituent is topicalized to a position below the subordinating conjunction, with lower in the clause a clitic pronoun that matches the  $\phi$ -features (gender, case, number) of the fronted constituent. The examples were all taken from Haegeman (2006b), her (51). For the Italian data in (119), see also Munaro (2005). The other examples are from Catalan (120), Spanish (121) and French (122). The a-sentences with CLLD in a leftward AC are all grammatical, in contrast with the b-sentences where CLLD occurs in a rightward embedded clause.

- (119) a. [*Se queste cose non le sai*], non supererai l'esame.  
if these things not them you.know not you.will.pass the exam  
'If you don't know these things, you will not pass the exam.'  
b.\* *Non supererai l'esame [se queste cose non le sai]*.
- (120) a. [*Si aquest examen no l'aproves amb un cinc*], perdràs el curs sencer.  
if this exam not it pass-2sg with a 5 you.will.loose the course entire  
'If you don't pass the exam, you will loose the complete course.'  
b.\* *Perdràs el curs sencer, [si aquest examen no l'aproves amb un cinc]*.
- (121) a. [*Si este examen no lo apruebas con un cinco*], perderás el curso entero.  
if this exam not it pass-2sg with a 5 you.will.loose the complete course  
'If you don't pass the exam, you will loose the complete course.'  
b.\* *Perderás el curso entero, [si este examen no lo apruebas con un cinco]*.
- (122) a. [*Si ce livre-là tu le trouves à la Fnac*], achète-le.  
if this book-there you it find at the Fnac buy-it  
'If you find this book at the Fnac, buy it.'  
b. % *Achète-le [si ce livre-là tu le trouves à la Fnac]*.



For some French speakers, the contrast *qua* grammaticality between CILD in clause-initial and clause-final sentences is less outspoken, whence the %-sign for (122b).

### 6.1.2 Position of CILD-constituents

Observe that in all of (119-122), the left-dislocated constituent occupies a fairly low position, which in any event is lower than ForceP and thus by necessity not what I called 'EdgeP' in this and the previous chapter, and which I assumed to be a position above ForceP targeted by XPs undergoing successive cyclic long distance movement<sup>18</sup>. In Haegeman (2006b), it was proposed that the CILD-phrases occupy the lower TopP in the split-CP proposed by Rizzi (1997), repeated here<sup>19</sup>:

(123) [<sub>ForceP</sub> [<sub>TopP\*</sub> [<sub>FocP</sub> [<sub>TopP\*</sub> [<sub>FinP</sub> [<sub>TP</sub> ]]]]]]]

We can thus conclude that Romance embedded CILD, despite exhibiting the same left-right asymmetry as Latin, Standard German and Bavarian embedded topicalization, seems to have different properties.

## 6.2 No pied-piping, *is* and *hic* in TopP

Now given that the Romance CILD data provide convincing evidence that topics can be tolerated in what seems to be a designated topic projection (i.e. a criterial position), it should not *a priori* be excluded that the Latin embedded topicalization data are amenable to a similar analysis.

Under the non-pied-piping scenario, whatever the correct explanation is for the left-right asymmetry in the case of Italian embedded CILD, the same explanation might also account for this asymmetry in Latin. As for now, I have no suggestion as to what this explanation could be. Furthermore, one would have to assume that a CILD-constituent does not interfere with a clause-typing operator that moves past it to Spec,ForceP, and that CILD thus

<sup>18</sup> Recall (ch. 3, fn. 11) that for instance in Italian, at least for some speakers, the configuration whereby the left dislocated constituent and the resumptive clitic straddle the subordinating conjunction is also available, but for all the speakers that I consulted, (ia) is preferred over (ib).

- (i) a. [*Se queste cose non le sai*], *non supererai l'esame.*  
       if these things not them.CL you.know not you.will.pass the exam  
       b. % [[*Queste cose*], [*se non le sai*]], *non supererai l'esame.*  
           these things if not them you.know not you.will.pass the exam  
       'If you don't know these things, you will not pass the exam.'

<sup>19</sup> In the taxonomy of Frascarelli & Hinterhölzl (2007), this position is reserved for so called 'Familiarity Topics', which convey old information. Bianchi & Frascarelli (2009) claim that Familiarity Topics are the only type of topic which are allowed in domains that tend to resist MCP.

fundamentally differs from fronted arguments without a resumptive clitic (Haegeman 2007, 2009, 2010a). However, it then remains mysterious why CILD should only exhibit this special behaviour in clause-initial embedded clauses.

A potential problem with applying the non-pied-piping hypothesis to Latin is that the linear position of *wh*- and non-*wh* topics in Latin multiple LEF sequence suggests that these elements systematically occupy a fairly high position, namely always to the left of left peripheral foci (on which see the following chapters), rather than to the right of them. In other words, if they are located in a TopP, it should be the higher rather than the lower of the two topic projections proposed by Rizzi (1997) (cf. (123) above).

In the present context, I will not pursue this non-pied-piping alternative any further, but it is definitely an issue that needs to be dealt with in the future.

## **7 Conclusion**

In this chapter I have extended the clausal pied-piping analysis proposed in chapter 4. I proceeded from clausal pied-piping by relative pronouns in sentences involving two degrees of embedding, over the same phenomenon with only one layer of embedding; finally, I argued that the biclausal pied-piping derivation is also possible without the pied-piper being a *wh*-element. These three seemingly different patterns together form in my analysis one coherent class, which I call 'LEF1'. I tried to push this line of reasoning as far as possible, but at the end I discussed some counterarguments which will have to be further explored in future research.

## Chapter 6.

### LEF2: Presentational foci in CP

At the end of the last chapter I looked at sentences exhibiting a pattern which I labelled 'multiple LEF', that is, (adverbial) clauses where more than one constituent is fronted to the left of a subordinating conjunction. An example of this pattern is repeated in (1):

- (1) *[Quod Caesar [cum animum aduerteret]], si oppidum capere contenderet*  
which.ACC C.NOM when noticed.SUBJ if town.ACC seize.INF he.attempted.SUBJ  
*timuit ne homines perditum incenderent et moenia delerent.*  
he.feared that people.NOM lost.NOM put.fire.to.SUBJ and walls.ACC destroy.SUBJ  
'When Caesar noticed this, he feared that if he would try to take possession of the town, its desperate inhabitants would set fire to it and would destroy the city walls.'  
(= Anon. Bel. Hisp. 36)

I proposed that these particular instances of multiple LEF should be analyzed as a combination of two types of leftward fronting, that is to say (i) LEF1, which is the label for the fronting of the the leftmost fronted constituent, and (ii) LEF2, which is the label for the fronting of the lower LEF-phrase. I argued that LEF1 and LEF2 are different in nature. In the preceding chapter I concentrated on the syntax and interpretation of LEF1.

In this chapter, I will deal with the syntax and interpretation of LEF2. I will argue that this pattern is best understood as an operation that displaces presentational foci to the left periphery. That presentational foci should move to the left periphery is as such surprising, since they are usually thought to target a lower vP-related focus projection.

I will return to this movement also in chapter 7, in which I discuss some properties of the word order pattern in Latin and in particular its verb final properties. Anticipating the discussion in that chapter, I will propose there that Latin head final word order in the middle

field is derived by the displacement of a remnant  $vP$  to the middle field. This displacement has the consequence that it also moves arguments (and possibly adjuncts) to a position hierarchically higher than the  $vP$  related low Focus projection (Foc $vP$ ), thus making this position inaccessible to the presentational focus. The hypothesis developed there is that the presentational focus contained in the displaced  $vP$  moves to the left periphery by LEF2 as a kind of last resort. This derivation can thus be characterized as a 'smuggling' derivation.

Special attention will be paid to the diachrony of LEF2. Detailed quantitative data show that LEF2 declines in the course of the first century BC and the first century AD. I will relate this evolution to an increased frequency of postverbal constituents in the classical period, and, to a lesser extent, to the eventual transition of Latin into the Early Romance VO-languages.

The phenomenon called LEF2 in the present work is discussed in Walker (1918: 652-657), Kühner & Stegmann (1966<sup>2</sup>: vol. II.2, 614-615), Marouzeau (1949: 121-136), Pennell Ross (1986, 1991), Salvi (2004: 57-58) and Spevak (2010: 14-15), although it should be said that these authors do not distinguish between what I call LEF1 and LEF2. Similar studies that mainly or exclusively looked at metrical texts include Schünke (1906), Deecke (1907) and Ambrosini (1992, 1995-'96).

## **1 A third kind of fronting in embedded clauses**

### **1.1 Fronting in rightward clauses**

In chapters 4 and 5, I have looked at those types of LEF that are only available in clause-initial ACs. In the present section, I will introduce examples of LEF taking place in sentence-final ACs.

#### **1.1.1 Some quantitative data**

In chapter 3, section 3, I presented the main quantitative results of the corpus study that I have conducted. Two relevant tables are repeated here for convenience. Table 1 shows the absolute frequencies of ACs introduced by *cum*, *si* and *ut*, as well as the figures concerning their linear position with respect to the superordinate clause. Recall that I did not take into account those ACs which are not clearly clause-initial or clause-final (ch. 3, section 3.2.1; see also Appendix I).

(2)

|                        | <i>cum</i><br>('when') | <i>si</i><br>('if') | <i>ut</i><br>('so that') | Tot.<br># |
|------------------------|------------------------|---------------------|--------------------------|-----------|
| <b>clause-initial</b>  | 2071                   | 2457                | 561                      | 5089      |
| <b>middle field(?)</b> | 30                     | 29                  | 18                       | 77        |
| <b>clause-final</b>    | 1207                   | 1161                | 2474                     | 4842      |
| <b>parenthetic</b>     | 7                      | 93                  | 857                      | 957       |
| <b>other</b>           | 60                     | 214                 | 57                       | 331       |
| <b>Total</b>           | 3375                   | 3954                | 3967                     | 11296     |

Table 1: position of ACs with respect to the superordinate clause

Table 2 provides an overview of the number of clause-initial and clause-final ACs that exhibit movement of a constituent to the left of the conjunction (LEF):

(3)

|                          | <i>cum</i> | <i>si</i> | <i>ut</i> | Total |
|--------------------------|------------|-----------|-----------|-------|
| <b>clause-initial AC</b> | 389        | 350       | 49        | 788   |
| <b>clause-final AC</b>   | 10         | 10        | 41        | 61    |
| <b>Total</b>             | 399        | 360       | 90        | 849   |

Table 2: ACs (unambiguously) exhibiting LEF

We saw that out of the 788 clause-initial ACs displaying LEF, 414 contain a *wh*-element or a form of *hic* or *is* in their left periphery. In the preceding discussion in chapter 5, these elements were argued to be topics, acting as clausal pied-pipers. That is to say: the constituents in question are topics but they cannot reach a topic position by leftward movement. They are displaced to the edge of the left periphery of the AC and in order to satisfy their topic feature they pied pipe the entire clause.

This leaves us with 374 clause-initial ACs displaying LEF in which it is not sure whether the fronted item can be analysed a pied-piping topic. As I hinted at above (chapter 5, section 5.5), it is not clear at this point whether the existence of DP clausal pied-pipers which are both non-*wh* and non-pronominal should be postulated. If such lexical DPs can indeed act as pied-pipers, it seems reasonable to hypothesize that at least a subset of the remaining 374 initial ACs is to be classified as being pied-piped.

On the other hand, it should be clear by now that I am led to conclude that all of the 61 cases of LEF in clause-final ACs are instances of LEF2: these are definitely not instances of pied-piped clauses, thus the fronting is simply triggered by some property of the fronted element in the clause and once it has reached its position in the left periphery there is no further movement required. Two examples of LEF2 in ACs in final position are given in (4-5):

- (4) *Conloqui uidebatur [in Tusculano [cum essem]].*  
 talk.together.INF we.seemed.IMPF in Tusculan.ABL when I.was.SUBJ  
 'It seemed as if we were discussing, when I was in the Tusculan estate.'  
 (= Cic. ad Att. 13.17-18.2)
- (5) *Haec apparent magis ita esse in latioribus regionibus, [simplicia [cum sunt]].*  
 these appear more.ADV such be.INF in wider.ABL regions.ABL simple.NOM.PL when they.are  
 'These characteristics manifest themselves more clearly in larger stretches of land,  
 when they are uniform.' (= Var. Agr. 1.6.2)

Going back to instances of initial ACs, I will show in section 3.1, that while a subset of the remaining 374 instances of LEF in initial ACs may involve LEF1, the majority of the 374 leftward ACs which did not contain a wh-phrase of a form of *hic* in their left periphery can be analysed as LEF2-clauses as well. There will remain a residue of examples for which it is not quite clear what the optimal analysis should be. I will prefer to leave such sentences as unclassified items. But in a large number of cases, the LEF2-character of constituents fronted in initial ACs is, it seems to me, sufficiently clear.

### 1.1.2 LEF2 in initial clauses

Let us consider more carefully those initial ACs which can be argued display LEF2. A first set of sentences for which an LEF2-analysis is clearly motivated, consists of instances such as those in (6-8), which display multiple LEF and in which the leftmost fronted constituent is a wh-word or a form of *hic* or *is*, i.e. a constituent which I identified as an LEF1 constituent. On the assumption that a clause can contain only one LEF1 constituent (cf. the discussion of multiple LEF in chapter 5), it seems reasonable then to conclude that any additional LEF phrase should be classified as LEF2. In all of the examples in (6-8), the LEF2 phrase, which is 'sandwiched' between an LEF1 pronoun and a subordinating conjunction, is underscored:

- (6) *[Quas<sub>i</sub> nuper<sub>j</sub> [cum t<sub>j</sub> mercator t<sub>i</sub> tanti emere uellet a L. Axio [...]]],*  
 which.ACC recently when trader.NOM that.much.GEN buy.INF wanted.SUBJ from L.A.ABL  
*minoris quadringentis denariis daturum negauit.*  
 less.GEN 400.ABL denarii.ABL sell.INF.FUT he.denied  
 'When recently a trader wanted to buy these from L. Axius at this price, the latter said he would not sell for for less than 400 denarii.' (= Var. Agr. 3.7.10)
- (7) *[[A quo<sub>i</sub> [Magnus Alexander]<sub>j</sub> [cum t<sub>j</sub> fuerit septimus decimus t<sub>i</sub>]],*  
 from whom.ABL great.NOM Alexander.NOM because was.SUBJ.PF seventh.NOM tenth.NOM  
*iure materni generis Achille auctore, paterni Hercule gloriatus est.*  
 rightly maternal.GEN lineage.GEN A.ABL founder.ABL paternal.GEN H.ABL boasted.NOM he.is  
 'Since Alexander the Great was a descendant of him in the seventeenth generation, he boasted that he stemmed from Achilles on his mother's side, and from Hercules on his father's side.' (= Vel. Pat. Hist. 1.6.5)

- (8) *[Haec<sub>j</sub> Pudens<sub>i</sub> [si t<sub>i</sub> t<sub>j</sub> legisset]][...] omnino huic maledicto supersedisset [...].*  
 these.ACC Pudens.NOM if had.read.SUBJ totally this.DAT insult.DAT he.had.abstained.SUBJ  
 'If Pudens had read these things, he would have abstained from this insult.'  
 (= Apu. Apo. 17.11)

I argued that an LEF1 phrase is located at the very left edge of the clause it pied-pipes (in a projection labelled EdgeP, which dominates ForceP). It is thus to be expected that where LEF1 and LEF2 co-occur, LEF1 always precedes LEF2. Below, in section 5.2, I will develop an analysis in which LEF2 targets FocP in the CP-zone, without being associated with the typical characteristics of contrastivity or exhaustivity of CP-internal foci. This - at first sight surprising - analysis will be related to other properties of Latin word order in chapter 7.

When there are two fronted LEF constituents, I have assumed that the leftmost one is an instance of LEF1 and the rightmost one instantiates LEF2, which I will argue to be a form of focussing, i.e. a movement driven by a focus feature on the LEF2 constituent. At this point, though, nothing should prevent LEF2, i.e. movement driven by a focus feature, from taking place in the absence of a clausemate LEF1 constituent. In section 2, I will indeed show that the majority of the instances of non-LEF1 constituents lack the characteristic properties of topics (givenness, referentiality and specificity), which will lead me to the conclusion that these fronted constituents have undergone LEF2 and that the fronting is driven by a focal property on the LEF constituent. In the following section, I will very briefly consider clauses with more than one non-LEF1 constituent.

### 1.1.3 Multiple LEF2?

At the end of the previous chapter, I provided some data which suggested that (the then still unidentified) LEF2 could be recursive (cf. ch. 5, section 5.5). This claim seems to be substantiated by cases where more than one XP (different from *wh*- or *IS*) occurs to the left of a subordinating conjunction. In (9-10) two constituents are fronted, in (11-13) (with a complement clause introduced by *ut* in (13)) even three<sup>1</sup>. As indicated, I assume that one remnant category is moved, presumably (a portion of) TP, containing the entire clause except for the finite verb (cf. section 1.4 on the ban on LEF of finite verbs).

- (9) *Quaeris [CP<sub>2</sub> [FocP<sub>2</sub> [ego me t<sub>j</sub>]<sub>i</sub> [ut t<sub>i</sub> gesserim<sub>j</sub>]]].*  
 you.ask I.NOM me.ACC how I.behaved.SUBJ  
 'You ask how I behaved myself.' (= Cic. ad Att. 4.18.1)

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<sup>1</sup> These sentences falsify the claim that the occurrence of phrases to the left of subordinating conjunctions are to be ascribed to the alleged clitic-like character of conjunctions, as in Marouzeau (1949). The examples in (9-15) show that conjunctions do not behave as second position clitics.

- (10) *Dominatio quaesita ab utroque est, non id actum [CP2 [FocP2 [beata et honesta ciuitas t<sub>i</sub>]<sub>j</sub> [FinP2 ut esset<sub>i</sub> t<sub>j</sub>]]].*  
 dominion.NOM sought.NOM by both.ABL is not this.NOM done.NOM happy.NOM and  
 honourable.NOM community.NOM so.that is.SUBJ  
 'Both of them pursued personal power, they did not act to make sure that the state is happy and honourable.' (= Cic. ad Att. 8.11.2)
- (11) *[CP2 [FocP2 [[Ne tum quidem] suspecta fraus t<sub>i</sub>]<sub>j</sub> [FinP2 cum esset<sub>i</sub> t<sub>j</sub>]]], data uenia eius diei [...].*  
 not then even suspected.NOM treason.NOM because was.SUBJ granted.NOM  
 mercy. NOM that.GEN day.GEN  
 'When not even then fraud was suspected, mercy for that day was granted.'  
 (= Liv. aUc 26.17.13)
- (12) *Quem cito secuti multi extulerunt eorum pretia, ita ut oua eorum denariis ueneant quinque, ipsi facile quinquagenis, [CP [FocP[TP [grex centenarius] facile [quadragesima milia sestertia] t<sub>i</sub>]<sub>j</sub> [ut reddat<sub>i</sub> t<sub>j</sub>]]].*  
 whom.ACC quickly followed.NOM many.NOM raised.PF their prices.ACC so.that eggs.NOM their  
 denarii.ABL are.sold.SUBJ 5.DISTR.ABL self.NOM.PL easily 50.DISTR.ABL flock.NOM  
 of.100.NOM easily 40.DISTR.ACC thousands.ACC sesterces.ACC so.that brings.SUBJ  
 'The fact that his example was quickly followed caused prices to raise, to such an extent that the eggs were sold for five denarii each, and the birds themselves easily for fifty denarii each, so that a flock of one hundred birds could easily bring forty thousand sesterces.' (= Var. Agr. 3.6.6)
- (13) *Prope hunc Vicus Sceleratus, dictus a Tullia Tarquini Superbi uxore, quod ibi cum iaceret pater occisus [CP2 [FocP2 [[supra eum] carpentum mulio t<sub>i</sub>]<sub>j</sub> [FinP ut inigeret<sub>i</sub> t<sub>j</sub>]]] iussit.*  
 near this.ACC row.NOM criminal.NOM called.NOM from Tullia.ABL T.S.GEN wife.ABL  
 because there when lay.SUBJ father.NOM killed.NOM above him.ACC charriot.ACC  
 muleteer.NOM that drive.over.SUBJ she.ordered.PF  
 'Close to this is the Vicus Sceleratus, 'Criminal Row', thus called after Tullia, the wife of Tarquinius Superbus, because when her father was lying there, killed, she ordered that her muleteer should ride over him with his charriot.'  
 (= Var. Ling. Lat. 5.159)

In (14-15), it even seems that even four (14) or five (15) constituents have been affected by LEF: in both cases, the first phrase is a LEF1-topic (cf. the wh-morphology on the pronoun), whereas the following three resp. four are affected by LEF2 (underscored):



- (14) [...] *quia C. Flaminius Arimini consulatum iniiit, creatus a Ti. Sempronio consule, [CP2 [TopP2 [CP3 [EdgeP3 qui [FocP2 [[post pugnam ad Trebiam] [ad S.ABL consul.ABL who.NOM after battle.ACC at Trebia.ACC to creandos consules] [Romam] t<sub>k</sub>]<sub>j</sub> [FinP3 cum uenisset<sub>k</sub> t<sub>i</sub> t<sub>j</sub>]]<sub>l</sub> [TP2 t<sub>l</sub> comitiis perfectis ad exercitum in hiberna rediit]].*  
 because C. Flaminius.NOM at.Ariminum consulate.ACC began.PF chosen.NOM by T. Sempronio consul.ABL who.NOM after battle.ACC at Trebia.ACC to choose.GER.ACC consuls.ACC Rome.ACC when had.gone.SUBJ elections.ABL finished.ABL to army.ACC in winter.quarters.ACC he.returned.PF  
 '... because Gaius Flaminius began his consulship at Ariminum, appointed by the consul Tiberius Sempronius, who, after he had gone to Rome in order to elect consuls after the battle at the Trebia, once the elections held, returned to the army in its winter quarters.' (= Liv. aUc 21.15.6)
- (15) [<sub>CP1</sub> [<sub>TopP1</sub> [<sub>CP2</sub> [<sub>EdgeP2</sub> [*Quo ex oppido*]<sub>j</sub> [<sub>FocP2</sub> [<sub>TP</sub> [*cognito Caesaris aduentu*] *legati [clam praesidia Cn. Pompei] Caesarem t<sub>i</sub> ]<sub>k</sub> [FinP2 cum adissent<sub>i</sub> t<sub>j</sub> t<sub>k</sub> ]]]], [<sub>TP1</sub> *petere coeperunt uti sibi primo quoque tempore subsidium mitteret*]]].  
 which.ABL out town.ABL known.ABL C.GEN arrival.ABL envoys.NOM unknown.to troops.ACC C.P.GEN C.ACC when had.gone.to.SUBJ ask.INF they.began.PF that REFL.DAT first.ABL whatever.ABL time.ABL help.ACC he.send.SUBJ  
 'When, upon hearing about Caesar's arrival, ambassadors had come from this town to see Caesar, without being noticed by Pompey's soldiers, they begged him to send them as soon as possible auxiliary troops.' (= Anon. Bel. Hisp. 3)*

However, assuming multiple LEF2 is not desirable, especially not in the light of the analysis that I will develop below, where I will characterize LEF2 as a presentational focus. Crosslinguistically, FocPs are not recursive, which makes multiple LEF2 an anomaly.

Observe now that in all of the alledged cases of multiple LEF2 (9-15), only the inflected verb remains below the conjunction. I therefore (very tentatively) suggest that cases like (9-15) do not actually display multiple instantiations of LEF2. Rather the constituents which precede the conjunction have been moved together, forming one constituent, namely a TP which has been evacuated by the finite verb. This entire big remnant category can (exceptionally) be fronted to the left periphery as a whole, stranding the verb in some high functional projection.

## 1.2 Some interpretive characteristics of LEF2

In this section, I first show that constituents which undergo LEF2 often introduce non-predictable, brand new information. Furthermore, I will show that in both clause-initial and clause-final ACs, non-specific non-referential elements can undergo LEF. On the basis of these observations, I will submit that LEF2 should not be considered as (long) scrambling. In section 2, I will develop a proposal about the interpretation of LEF2 in terms of presentational focalization.

### 1.2.1 Discourse status of the fronted phrase

The first observation concerning the interpretive properties of LEF2 is that many such fronted phrases are completely discourse new. It is instructive to look at narrative discourse rather than at for instance Cicero's correspondence, because in the former the distinction between old and new information can be made much more easily. I first concentrate on proper names in LEF positions. Consider the example in (16) (which was also cited in the previous chapter, cf. (117)). In this example, the fact that Caesar had gone to the city of Hispalis (present-day Sevilla) is non-predictable new information. Actually, (16) is the first time it is the very first time that the name of the city is mentioned in the entire work:

- (16) [<sub>CP</sub> Caesar<sub>i</sub> Hispalim<sub>j</sub> [**cum** t<sub>i</sub> t<sub>j</sub> *contendisset*]], *legati deprecatum uenerunt.*  
 C.NOM Hispalis.ACC when had.gone.SUBJ ambassadors.NOM to.beg.SUP came.PF  
 'When Caesar had gone to Hispalis, ambassadors came to deprecate him.'  
 (= Anon. Bel. Hisp. 35)

More or less the same can be said of (17): the character of Demophon is newly introduced into the discourse. Observe that in this example, the fact that the constituent *Demophon quidam* sits between the wh-PP *in qua* 'in which' and the conjunction *cum* ('when') leads us to the conclusion that this fronted DP must be an LEF2-constituent:

- (17) [<sub>CP</sub> [*In qua*]<sub>i</sub> [[Demophon quidam]<sub>j</sub> [**cum** t<sub>j</sub> t<sub>i</sub> *regnaret*]]], *incidit eorum finibus*  
 in which.ABL D.NOM a.certain.NOM when reigned.SUBJ fell.in.PF their borders.DAT  
*repentina uastitas et ciuium interitio miranda.*  
 sudden.NOM desolation.NOM and citizens.GEN dying.NOM remarkable.NOM  
 'In the time when a certain Demophon was the king of this town (sc. Elaeusa Id), a sudden disaster fell down upon the country and caused a great massacre among the citizens.' (= Hyg. Ast. 2.40.3)

In the vast majority of the cases where an LEF-constituent is not a pronoun, the fronted constituent can be said to convey new information. For instance, in the fragment of text preceding example (18), in which the author is talking about the preservation of different types of herbs, no mention has been made of acid (*acetum*) or brine (*muria*): the entire paragraph that precedes this fragment mainly consists of a list of plant names.

- (18) *Haec omnia una conditura [...] seruantur, [aceti duas partes et*  
 these.NOM all.NOM one.ABL condiment.ABL are.preserved acid.GEN two.ACC parts.ACC and  
*tertiam durae muriae [si miscueris]].*  
 third.ACC hard.GEN pickle.GEN if you.mix.FUT.EX  
 'All these are preserved by one method of pickling, if you mix two thirds of vinegar and one third of hard brine.' (= Col. Agr. 12.7.2)

### 1.2.2 Fronting of non-referential elements

A second observation with respect to the interpretive and informational status of LEF constituents is that non-referential XPs can undergo LEF2. Let's start with non-referential nominals, like for instance the nouns in the English expressions *go to school* or *change place*, where the noun typically occurs without an article.

The two examples in (19-20) contain the expression *castra mouere* 'strike camp', which can be analyzed as a combination of non-referential indefinite DP and a light verb (see Devine & Stephens (2006: 94ff) on similar idioms (like *gratias agere* 'thank!')). Observe that the indefinite nominal constituent *castra* does not here refer to an actual camp, with tents and soldiers and so on. Likewise, the verb *moueo* is not used as a real transitive predicate that takes a Theme-complement, like the English verb *displace*. Rather, the nominal constituent *castra* and the verb *moueo* together form one complex intransitive predicate. In (19-20), the nominal *castra* has undergone LEF2:

- (19) *Non est uisa ratio ad oppugnandum oppidum commorandi, ne, dum in ea re est Caesar occupatus, circumuentus a tergo ab equitatu hostium laboraret.*  
*[Itaque castra [cum mouere uellet]], subito ex oppido erupit multitudo.*  
so-and camp.ACC when strike.INF he.wanted.SUBJ suddenly from town.ABL broke.out crowd.NOM  
'There seemed to be no reason to stay and attack the town, lest Caesar might get in trouble when surrounded in the rear by the enemy's cavalry. As he (sc. Caesar Id) therefore wanted to strike camp, all of a sudden a great number of men broke out of the town.' (= Anon. Bel. Afr. 6)
- (20) *Quinctius [ad Thebas Phthioticas castra [cum mouisset]] <...> cum paucis equitum leisque armaturae ad muros successit.*  
Quinctius.NOM to Thebes. of.Phthia.ACC camp when had.struck.SUBJ with few.ABL  
riders.GEN light.GEN-and arms.GEN to walls.ACC he.proceeded  
'When Quinctius had struck camp in Thebes in Phthia, he marched towards the walls accompanied by a small number of riders and light-armed soldiers.'  
(= Liv. aUc 33.5.1)

Similarly, in (21), the two components which constitute the idiomatic expression *foedus ferire* 'make a treaty' are separated from each other as a result of LEF2:

- (21) *Ab suillo enim pecore immolandi initium primum sumptum uidetur, cuius uestigia, quod initiis Cereris porci immolantur, et quod initiis pacis, [foedus [cum feritur]], porcus occiditur.*  
 and because beginnings.ABL peace.GEN treaty.NOM when is.made pig.NOM is.slain  
 'It seems that initially, in sacrificing, they took animals from the swine family. Traces of this habit can be found in the fact that pigs are sacrificed at the initial rites of Ceres, and that at the rites that initiate peace, when a treaty is made, a pig is killed.'  
 (= Var. Agr. 2.4.9)

Other non- or less referential XPs that can undergo LEF2 include non-verbal predicates like the AP in (22), secondary predicates (23), measure phrases (24), argumental PPs (25), instrumental adjuncts (26), infinitives (27) and gerundives (28)<sup>2</sup>:

- (22) *Sed de his etiam rebus, [ [AP otiosi]<sub>i</sub> [cum t<sub>i</sub> erimus]], loquemur.*  
 but about these even matters.ABL unoccupied.NOM.PL when we.will.be we.will.talk  
 'But we will talk about these matters as well when we have nothing to do.'  
 (= Cic. ad Fam. 9.4.5)
- (23) *Brassica est quae omnibus holeribus antistat. Eam esto uel coctam uel crudam.*  
 [[SC Crudam]<sub>i</sub> [si t<sub>i</sub> edes]], in acetum intinguito.  
 raw.ACC if you.will.eat, in vinegar.ACC you.should.dip.IMPTV  
 'It is cabbage that surpasses all other vegetables. One should eat it either cooked or raw. If you eat it raw, you should dip it in vinegar.' (= Cat. Agr. 156.1)
- (24) *Lepidus desperato aduentu meo, <...>, se cum Antonio coniunxit a. d. IIII. Kal. Iunias, eodemque die ad me castra mouerunt.*  
 [[DP Viginti milia passuum]<sub>i</sub> [cum t<sub>i</sub> abessent]], res mihi nuntiata est.  
 twenty thousand.ACC passes.GEN when they.were.away matter.NOM me.DAT reported is  
 'At a point where Lepidus was desperately trying to make me come over, he joined forces with Antonius on 29 May, and on the same day they set forth towards me. When they were at a distance of twenty miles, the matter was reported to me.'  
 (= Cic. ad Fam. 10.23.2)
- (25) *Nunc [[PP ad rem]<sub>i</sub> [ut t<sub>i</sub> redeam]], 'inhibere' illud tuum, quod ualde mihi adriserat, uehementer displicet.*  
 now to matter.ACC in.order.to I.return.SUBJ 'hold.back' that.NOM your.NOM which.NOM  
 very.ADV me.DAT had.smiled.to heavily displeases  
 'To come back to the point now, that word 'hold back' of yours, which had particularly pleased me, now displeases me.' (= Cic. ad Att. 13.21.3)

<sup>2</sup> I remain agnostic as to the exact category of the latter two.

- (26) *[[<sub>DP</sub>Manu fustiue]<sub>i</sub> [si os t<sub>i</sub> fregit libero]] CCC <...> poenae sunt.*  
 hand.ABL club.ABL-or if bone.ACC break.PF freeman.DAT 300 penalty.DAT be.IMP.3.PL  
 'When someone broke a free man's bone with the hand or with a club, the penalty is 300 <sesterces>.' (= XII Tab. 8.3)
- (27) *Deliciae uero tuae, noster Aesopus, eius modi fuit ut ei desinere per omnis homines liceret. [Is [iurare; [cum t<sub>i</sub> coepisset]]], uox eum defecit in illo loco: 'si sciens fallo'.*  
 he swear.INF when had.begun.SUBJ voice.NOM him.ACC left.PF in this place.ABL if knowingly I.fail  
 'Your beloved actor, our Aesopus, behaved in such a way that all people wanted him to quit. When he had begun to swear, his voice deserted him at this passage: 'if I consciously swear false'.' (= Cic. ad Fam. 7.1.2)
- (28) *[...] tantus consensus senatus fuit ut mature proficisceremur, [parendum; [ut t<sub>i</sub> fuerit]], itaque fecimus.*  
 so.big.NOM consensus.NOM senate.GEN was.PF that hastily we.leave.SUBJ obey.GER.NOM  
 [ ut t<sub>i</sub> fuerit]], itaque fecimus.  
 so.that there.was.SUBJ and.so we.did.PF  
 'The consensus in the senate for me to leave immediately was so overwhelming that I could only comply, and so I did.' (= Cic. ad Fam. 3.3.1)

Finally, even ACs (categorially CPs) can be fronted by LEF2. The conditional in (29) sits at the edge of the complement clause introduced by the negative complementizer *ne* 'that', and in (30), a temporal *cum*-clause is fronted inside an indirect question. Observe that in both cases, the predicate of the AC bears subjunctive morphology: these are both subjunctives of indirect speech (the so called *coniunctiuus obliquus*), which strongly suggests that the ACs are properly contained in the complement clauses, and that they are not to be seen as adjuncts that modify the main clause.

- (29) *Metui, [[<sub>CP</sub>si impetrasset], [ne tu ipse me amare desineres]].*  
 I.feared.PF if he.obtain.SUBJ that you.NOM self.NOM me.ACC love.INF stop.SUBJ  
 'I was afraid that if I he obtained it, that you yourself would stop loving me.'  
 (= Cic. ad Att. 6.1.5)

- (30) *Nemini est enim exploratum [[<sub>CP</sub>cum ad arma uentum sit] [quid futurum sit]].*  
 nobody.DAT it.is PRT clear.NOM when to arms.ACC come.NOM there.is.SUBJ  
 [quid futurum sit]].  
 what.NOM be.PART.FUT there.is.SUBJ  
 'It is clear to nobody what will happen once the fight begins.' (= Cic. ad Att. 7.7.7)

I also found one example of an AC (viz. a conditional) fronted to the left edge of another AC (a purpose clause):

(

- 31) *Insuper lingua bubula obtegito, [[<sub>CP</sub> si pluat], [ ne aqua in  
above.ADV tongue.ABL bovine.ABL cover.IMPTV if it.rains.SUBJ that.not water.NOM into  
librum permanet]].*  
bark.ACC soaks.SUBJ  
'On top of that one should smear ox-tongue, so that if it rains the water will not soak  
into the bark.' (= Cat. Agr. 40.4)

### 1.2.3 Fronting of non-specific elements: indefinites and bare quantifiers

In Latin specific and non-specific indefinites are lexically differentiated: the non-specific indefinite pronoun is *aliquis* ('some or other, any') and its specific counterpart is *quidam* ('a certain, a given'). On the latter, see Kühner & Stegmann (1966<sup>2</sup>: vol. II.1, 642):

*quidam, quaedam, quiddam (quoddam)*, ein gewisser, bezeichnet einen bestimmten Gegenstand, den jedoch der Redende nicht näher bezeichnen will oder kann. ('quidam, quaedam, quiddam (quoddam), 'a certain', denotes a specific object, which the speaker wishes or prefers not to further specify.)

An LEF2-example of *quidam* (used attributively) was provided in (17), repeated here for convenience. As pointed out by Bertocchi & Maraldi (2006), the combination '*quidam* + proper noun' always refers to some specific individual.<sup>3</sup>

- (17) [<sub>CP</sub> [<sub>In qua</sub>]<sub>i</sub> [[Demophon quidam]<sub>j</sub> [<sub>cum</sub> <sub>t<sub>j</sub></sub> <sub>t<sub>i</sub></sub> regnaret]]], *incidit eorum finibus  
in which.ABL D.NOM a.certain.NOM when reigned.SUBJ fell.in.PF their borders.DAT  
repentina uastitas et ciuium interitio miranda.*  
sudden.NOM desolation.NOM and citizens.GEN dying.NOM remarkable.NOM  
'In the time when a certain Demophon was the king of this town (sc. Elaeusa Id), a  
sudden disaster fell down upon the country and caused a great massacre among the  
citizens.' (= Hyg. Ast. 2.40.3)

In contrast, the indefinite *aliquis* 'some' is always interpreted as non-specific. OLD characterizes *aliquis* as 'an unspecified person, anyone, someone' (Glare (ed.) 1968<sup>2</sup>: 100 (s.v. *aliquis*); cf. also Kühner & Stegmann 1966<sup>2</sup>: vol. II.1, 634-636). I found only one example of a form of *aliquis* in an LEF-position (32). In this example, *aliquem* (acc.) is used attributively:

- (32) [<sub>ForceP</sub> [<sub>FocDP</sub> Tantum [<sub>DP</sub> locum aliquem]]]<sub>i</sub> [<sub>FinP</sub> **cum** [<sub>CP</sub> <sub>t<sub>i</sub></sub> *mihi notum esse*  
only place.ACC some.ACC since me.DAT known.ACC be.INF  
*senseris*]], *tecum ipse licebit [quot in eo genere et  
you.noticed.SUBJ you.ABL-with self.NOM it.will.be.possible how.many in that.ABL kind.ABL and  
quanta sint crimina] recordere.*  
how.big are.SUBJ crimes.NOM you.recall.SUBJ

<sup>3</sup> In contrast, the combination '*aliquis* + proper noun' can only be used when the proper noun is used generically, i.e. when it is not a genuine proper noun.

'Since you have understood that only some part is known to me, you will be able to recall for yourself how many crimes of that kind you committed, and how big they were.' (= Cic. In Pis. 87)

Another well known class of non-specific DPs are bare quantifiers: there is ample evidence that these can undergo LEF2 in Latin. Examples of this in clause-initial ACs are given in (33-34):

- (33) [*Omnia<sub>i</sub> [licet t<sub>i</sub> facias]]*, *minor es quam ut serenitatem meam obducas.*  
 all.ACC.PL even.if you.do.SUBJ smaller.NOM you.are than that serenity.ACC my.ACC  
 you.disturb.SUBJ  
 'Do anything you want, you are too insignificant to disturb my peace of mind.'  
 (= Sen. Ira 3.25.4)

- (34) *Temptavit quid patientia perficere posset. [Nihil<sub>i</sub> [cum t<sub>i</sub> proficeret]] ui contra uim experiendum putavit.*  
 he.tried what.ACC patience.ABL obtain.INF he.could.SUBJ nothing.ACC because  
 he.brought.about.SUBJ force.ABL against force.ACC to.be.tried.GER he.thought  
 'He tried to see what he could obtain by being patient. When no result came from this, he decided to go for force against force.' (= Cic. Phil. 10.23)

The same phenomenon is attested in clause-final ACs:

- (35) *Egit causam summa cum grauitate copiaque dicendi, tanto silentio tanta adprobatione omnium [nihil<sub>i</sub> [ut t<sub>i</sub> umquam uideretur tam populare ad populi Romani auris accidisse]].*  
 he.did thing.ACC highest.ABL with sincerity.ABL skill-and saying.GEN such.ABL discretion.ABL  
 such.ABL approval.ABL all.GEN.PL nothing.NOM so.that ever seemed.SUBJ so popular.NOM  
 to people.GEN Roman.GEN ears.ACC have.happened.INF  
 'He pleaded his cause with the greatest sincerity and eloquence, and such a silence and approval of all ensued, that it seemed is if nothing so popular had ever reached the ears of the Roman people.' (= Cic. pro Sest. 107)
- (36) *Non enim mihi est uita mea utilior quam animi talis affectio [neminem<sub>i</sub> [ut t<sub>i</sub> uiolem commodi mei gratia]].*  
 not PRT me.DAT is life.NOM my.NOM more.useful.NOM than mind.GEN such.NOM  
 disposition.NOM nobody.ACC so.that I.harm.SUBJ comfort.GEN my.GEN for.the.sake.of  
 'For my life is not to more useful than a state of mind which is such that I would never do harm to anybody for my own sake.' (= Cic. Off. 3.29)

Recall that bare quantifiers have been shown to resist Clitic Left Dislocation in Italian (Cinque 1986, 1990; Rizzi 1997), which is seen as evidence that they are not subject to

topicalization. We return to this point presently, but given that such quantifiers can occupy an LEF position, we must conclude that at least some LEF constituents (i.e. LEF2) cannot plausibly be analyzed as topics.

### 1.3 What LEF2 is not, and why

I will now proceed to analyse the interpretive properties of the fronted constituents which I describe above in terms of some theoretical work on phrasal movement. First, in section 1.3.1 I will argue that LEF2 should not be characterized as (long) scrambling: this point is crucially related to the discussion of non-referential elements undergoing LEF in section 1.2.2. Section 1.3.2 ties in with section 1.2.3, where I gave examples of non-specific elements in the left periphery: as anticipated already, I will deduce from these that LEF2 is not to be equated with functional equivalent of Romance Clitic Left Dislocation.

#### 1.3.1 Against a scrambling analysis of LEF2

Since Diesing's seminal work (1992), it has been established that non-specific indefinite DPs tend to remain inside the verb phrase (see also Kratzer 1995). Such nominal constituents fail to undergo scrambling, a movement operation which in German targets some position in the middle field, to the left of VP-modifying adverbs. The indefinites inside VP are then not interpreted referentially, but rather as being existentially quantified (through a process called 'existential closure'). In (37a), *Lieder* does not refer to a specific set of songs, and the entire TP can roughly be paraphrased as 'Elly always does song-singing' (with possibly different songs every day). In contrast, *Lieder* in (37b) has been scrambled to the left of the time adverbial *immer* 'always' and it receives a 'strong', referential reading. (37b) can only be uttered felicitously in a context in which there is a set of songs which is such that Elly always sings them. This pattern is known as 'Diesing's Generalization' (Diesing 1992).

- (37) a. *weil Elly immer [VP Lieder singt].*  
           because Elly.NOM always songs.ACC sings  
       b. *weil Elly Lieder<sub>i</sub> immer [t<sub>i</sub> singt].*  
           because Elly.NOM songs.ACC always sings  
           'because Elly always sings songs.'

However, we have just seen that some of the fronted constituents which I identified as LEF2 were clearly non-referential elements. One relevant example is repeated below:

- (19) [*Itaque castra [cum mouere uellet]], subito ex oppido erupit multitudo.*  
       so-and camp.ACC when strike.INF he.wanted.SUBJ suddenly from town.ABL broke.out crowd.NOM  
       'As he (sc. Caesar Id) therefore wanted to strike camp, all of a sudden a great number  
       of men broke out of the town.' (= Anon. Bel. Afr. 6)



Given this and similar examples (cf. (20-28)), I consider it sufficiently proven that LEF2 is not some form of Germanic scrambling.

### 1.3.2 Against a CILD analysis

I refer to Cinque (1986, 1990: 74ff.), Demirdache (1991: 171ff.) and Rizzi 1997: 289-291) for discussion of the behaviour of quantifiers in topicalization (sc. CILD) contexts. The generalization that emerges from their work is that among the bare quantifiers (existentials, negatives and universals), only existential quantifiers can appear in a CILD-configuration. If they appear in that position, these quantifiers are obligatorily interpreted as specific (in the sense of Enç 1991). Cinque (1990: 75, cf. his (49)) illustrates this point with the Italian existential *qualcuno* 'somebody' and *qualcosa* 'something'. The quantifier *qualcosa*, for instance, can only be resumed by a clitic if it is clear from the context that the speaker has a specific object in mind. This is indeed the case in (38), in which the bare indefinite is modified by a restrictive relative clause. As indicated, the sentence is ungrammatical without the accusative clitic.

- (38) [*Qualcosa, [su cui avevo fatto incidere le sue iniziali]], gliel' / \*gli ho appena data.*  
 something on which I.had made engrave.INF the his initials him.it him I.have just given  
 'Something, on which I had his initials engraved, I just gave him.'

If a context like that in (38) is not available, dislocation of a bare quantifier is grammatical without the clitic resumptive, but in that case the non-specific interpretation is the only one that is available (Cinque 1990: 74, his (43b)).

- (39) *Qualcuno (\*lo) troverò di sicuro per questo compito.*  
 someone it.CL I.will.find for sure for this task  
 'Someone (or other) for sure I will find for this task.'

In the literature the fronting of a bare quantifier without a resumptive clitic (as illustrated in (39)) is commonly analyzed as an instance of focus fronting, i.e. movement to Spec,FocP (Rizzi 1997: 290; (40-41) below is his (19-20)).

In contrast with existentially quantified indefinites like *qualcuno* 'somebody' or *qualcosa* 'something', negative and universal quantifiers are reported to be always ungrammatical in a CILD-configuration<sup>4</sup>.

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<sup>4</sup> In contrast, adding a lexical restriction to a universal or a negative quantifier makes it possible for the phrase to occur in a CILD-configuration.

(40) *NESSUNO<sub>i</sub> (\*I') ho visto t<sub>i</sub>.*  
 nobody CL I.have seen  
 'Nobody I saw.'

(41) *TUTTO<sub>i</sub> (\*I') ho fatto t<sub>i</sub>.*  
 everything CL I.have done  
 'Everything I did.'

Given that bare quantifiers can undergo LEF2 in Latin (33-36), I conclude that LEF2 is also not to be assimilated to Romance-type Clitic Left Dislocation (for instance with a null clitic)<sup>5</sup>.

Note however that the Latin bare quantifiers undergoing LEF2 discussed here should not be put on a par the Italian examples in (28-30). Italian (identificational) focus fronting qualifies as a Main Clause Phenomenon and is disallowed in ACs (Haegeman in prep.).

## 1.4 A note on word order in poetry

With respect to prose texts, there seem to exist few categorial restrictions on the types of constituents that can undergo LEF2. Basically, anything can be fronted except for the finite verb and the markers of sentential negation *non* and *ne*: I refer to section 1.2.2 for a number of examples with PPs, CPs and APs in LEF2, among other things.

Poetic texts are even less constrained: in such material the finite verb can also appear to the left of the conjunction. The below examples (from Schünke 1906: 71ff) are all dactylic. So far I have found no instances of fronting of sentential negation.

(42) *oscitat extemplo, [tetigit [cum limina uillae]]*  
 he.yawns immediately he.touched when thresholds house.GEN  
 'As soon as he has reached the threshold of the house, he yawns.'  
 (= Lucr. DRN 3.1065)

(43) *o [mihi praeteritos referat [si Iuppiter annos]]!*  
 o me.DAT past.ACC bring.back.SUBJ if Jove.NOM years.ACC  
 'If only Jove brought back to me the years that have gone by.' (= Verg. Aen. 8.560)

(44) *non ego sum tanti, [ploret [ut illa semel]].*  
 not I.NOM am that.much.GEN cries.SUBJ so.that she.NOM once  
 'I am not worth a single tear from her.' (= Tib. 2.6.42)

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<sup>5</sup> Observe that the properties of CILD are not crosslinguistically uniform. For instance, it has been shown that in modern Greek CILD is quite different from Italian CILD (Alexopoulou, Folli & Tsoulas 2010).

As discussed in Schünke's (1906) study, the fronting of a finite verb is well attested with numerous authors of poetic texts, and occurs in various periods, it is compatible with diverse types of metrical patterns and with different types of genres. In the current research, though, I concentrate on prose texts. Hence, in the remainder of this chapter, I do not take LEF2 of finite verbs into account. I think that this particular type of fronting and other systematic differences between the language of prose and poetry deserve to be studied in their own right<sup>6</sup>.

## 2 Presentational foci in CP

In this section, I will start developing an account according to which LEF2 is a syntactic operation which moves presentational foci to the left periphery of a clause. Before launching into the discussion, I will first show that presentational foci are often thought of as belonging to the lower parts of the clause, such as, for instance, the left periphery of the verb phrase). This might at first sight appear to be problematic for my account, which postulates that the presentational focus moves to a high left periphery. However, in a number of recent studies it has been observed that in some languages, presentational foci can indeed move to the C-domain. I will therefore spend some time presenting these, as they offer indirect support for the plausibility of my analysis.

### 2.1 Different types of constituent focus: the classical picture

#### 2.1.1 Two types of constituent focus

In seminal work on the syntax of information structure, É. Kiss (1998) argues that two different types of foci need to be distinguished. The two types are illustrated by means of the Hungarian examples in (45). The fronted bracketed constituent *Marinak* in (45a) is referred to as an 'exhaustive' identificational focus, whereas its in situ counterpart in (45b) illustrates a (new) information focus, also referred to as a presentational focus. In my discussion I will use the latter term.

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<sup>6</sup> Other such discrepancies between the languages of prose and poetry are discussed in Penney (1999), as for instance the pattern 'noun - adposition - genitive', which is also exclusively attested in poetry (thanks to Wolfgang de Melo for pointing this out to me).

- (45) a. *Tegnap este* [<sub>Foc</sub> *Marinak*]<sub>i</sub> *mutattam be Pétert* *t<sub>i</sub>*.  
 last night Mary.DAT I.introduced PF Peter.ACC  
 'It was to Mary that I introduced Peter last night.'  
 b. *Tegnap este be mutattam Pétert* [<sub>Foc</sub> *Marinak*].  
 last night PERF I.introduced Peter.ACC Mary.DAT  
 'Last night I introduced Peter TO MARY.'

### 2.1.1.1 Identificational foci

É. Kiss (1998) claims that in Hungarian, identificational foci are fully configurational, which means they are hosted in a dedicated functional projection (viz. FocP). They are always left adjacent to the inflected verb and there can be only one identificational focus per clause. The sequence focus-verb can be preceded by topics (as in (45a)).

É. Kiss (1998: 245) defines the function of identificational foci as follows:

An identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds.

An important element in the above definition is the notion of exhaustivity, which is associated with identificational but not with presentational foci. Consider again the pair in (45). The identificational focus (45a) triggers the presupposition that it was *only* Mary that the speaker introduced to Peter that night. In (45b) on the other hand, no such uniqueness presupposition is associated with the DP *Marinak*: it might very well be the case that the speaker also introduced Peter to Susan, to John and to Rumpelstiltskin.

É. Kiss (1998) develops a test to diagnose this property of exhaustivity in a formal way, namely by putting two coordinated constituent in the preverbal focus slot. This test works as follows. In the Hungarian example in (46), the DP *egy kalapot és egy kabátot* 'a hat and a coat' is a preverbal focus, as is the DP *egy kalapot* 'a hat' in (47). If both are endowed with a uniqueness presupposition, it is predicted that (47) is not among the logical entailments of (46). This prediction is borne out: a situation in which Mary picked only a hat is not compatible with a situation in which she also picked a coat.

- (46) *Mari* [*egy kalapot és egy kabátot*]<sub>Foc</sub> *nézett ki magának*.  
 Mari a hat.ACC and a coat.ACC picked out herself.ACC  
 'It was (only) [a hat and a coat]<sub>Foc</sub> that Mary picked out herself.'

—/→

- (47) *Mari* [*egy kalapot*]<sub>Foc</sub> *nézett ki magának*.  
 Mari a hat.ACC picked out herself.ACC  
 'It was (only) [a hat]<sub>Foc</sub> that Mary picked out herself.'

The same effect can be observed if we apply the coordination test to English clefts, which are also associated with an exhaustive interpretation. The sentence in (49) is not one of the logical entailments of (48), because focalization by means of a cleft triggers a presupposition of exhaustivity ('Mary picked only a hat'), which is incompatible with Mary also buying a coat. The examples are from Gryllia (2008: 15, her (13)):

(48) *It was [a hat and a coat]<sub>Foc</sub> that Mary picked for herself.*

—/→

(49) *It was [a hat]<sub>Foc</sub> that Mary picked for herself.*

Identificational foci are often given the status of propositional operators endowed with quantificational properties (Rizzi 1997, 2004; Agouraki 1999). Observe that, if one adopts a movement analysis of ACs, then this quantificational property has important consequences for the status of this type of focus as a Main Clause Phenomenon: if the identificational focus is located in a designated CP-internal FocP (as in Rizzi 1997), i.e. in between what would be the launch site and the landing site of an operator that derives ACs, then the prediction is that identificational foci will not be available in central ACs. Identificational focus should only be available in domains that are compatible with MCP.

### 2.1.1.2 Presentational foci

In contrast with an identificational focus, a presentational focus as that illustrated in (45b), does not give rise to this presupposition of uniqueness or exhaustivity: a given constituent is merely marked as non-presupposed (É. Kiss 1998: 247). As a syntactic correlate of this interpretive contrast, É. Kiss proposes that presentational foci are realized *in situ*, i.e. without syntactic movement taking place<sup>7</sup>.

A (rather informal) way of identifying presentational foci are (constituent) question-answer pairs. The constituent that corresponds to a wh-word in a question (50B) or the only constituent in a fragment answer (50B') are usually taken to be presentational foci:

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<sup>7</sup> É. Kiss (1998: 254-255) refutes the claim that *in situ* focus involves LF-movement, as proposed in Chomsky (1976), on the basis of the contrast between the English examples in (i). (ib) was analysed by Chomsky as involving weak crossover induced by LF-raising of the focalized constituent.

(i) a. *His mother likes John.*  
 b.?? *His mother lies JOHN.*

However, É. Kiss shows that the equivalents of (ia-b) are also deviant in Hungarian, despite the fact that in other contexts, weak crossover configurations in Hungarian do not give rise to unacceptability. She explains the ungrammaticality of sentences like (ib) on pragmatic grounds, claiming that there is a class between a discourse referent first being introduced by an anaphoric pronoun and subsequently being presented as new information (what I call 'presentational focus' is called 'new information focus' in É. Kiss 1998).

- (50) A: *Who won the match?*  
 B: *[Justine Henin] won the match?*  
 B': *[Justine Henin].*

- (51) A: *Which tournament did Justine Henin win?*  
 B: *She won [Roland Garros].*  
 B': *[Roland Garros].*

The B-replies in (50-51) show that presentational foci do not give rise to a special word order permutation in English (in line with É. Kiss's proposal that presentational foci do not undergo syntactic movement). I will now look at data from Italian, where presentational foci do tend to be realized in a non-canonical position. To not make the discussion too complex, I will only discuss focalized subjects.

### 2.1.2 Presentational foci in FocvP

In a number of influential papers, Belletti (2001a, 2004) has shown that the apparent free alternation between preverbal and postverbal subjects in Italian (as in (52)), which used to be known as 'Free Inversion', actually encodes a difference in information structure (see also ch. 1, section 4).

- (52) a. *Ha telefonato Gianni.*  
       has called Gianni  
 b. *Gianni ha telefonato.*  
       Gianni has called  
 'Gianni has called.'

Belletti argues that (52a) is a sentence with broad scope focus (see ch. 1, sections 3.2.4.2 and 4.1), in which the subject occupies its canonical preverbal position (Spec,TP or Spec,AgrSP). The 'broad scope focus' character of (52a) is illustrated in the short dialogue in (53):

- (53) A: *Che cos'è successo?* // B: *Gianni ha telefonato.*  
       what is happened Gianni has called  
 'What happened? Gianni called.'

On the other hand, (52a) is not as appropriate as a reply to A's constituent question in (53), in which the wh-phrase is a subject. For such examples, the most idiomatic answer to is a declarative with a postverbal subject, as shown by B's response in (54). In such examples the wh-constituent is the focus of the question, and in the reply the postverbal subject is a presentational focus.

- (54) A: *Chi ha telefonato?* // B: *Ha telefonato Gianni.* Focus on the subject-DP  
           who has called                   has called    Gianni  
           'Who called? Gianni called.'

In other words, (52a) and (52b), with different subject positions, are not functionally equivalent and hence one cannot really assume that there is 'free' inversion of the subject. Rather, the extent to which one of the two variant patterns in (52) can be uttered felicitously is context dependent.

In order to account for the observed interpretive effect of postverbal subjects in Italian, and in particular the fact that they are focal, Belletti proposes that the postverbal subjects such as *Gianni* in (52a) are hosted in a dedicated focus projection which dominates  $\nu$ P: the subject then moves from Spec, $\nu$ P (its base position) to this focus position. I will call this projection Foc $\nu$ P (cf. Devine & Stephens 2006). Belletti's proposal thus differs from É. Kiss's account of presentational foci in that the latter does not assume presentational foci to be configurational (i.e. associated with a specific position in the tree).

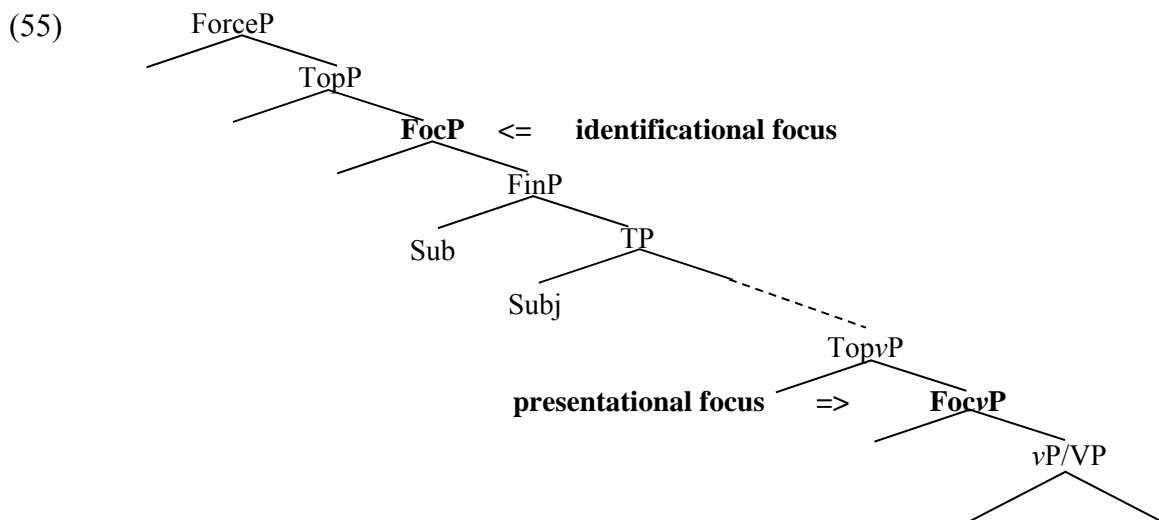
The word order of (52a) is then further derived through movement of the remnant  $\nu$ P (from which the subject has been extracted) to a position to the left of the focalized subject. Thus in addition to Rizzi's left periphery focus position, which ultimately is part of what has come to be known as the CP layer, Belletti (2001a, 2004) proposes that there is a lower focus projection<sup>8</sup>.

### 2.1.3 The locus of focus: focus projections in the clausal spine

On the basis of Rizzi (1997), É. Kiss (1998) and Belletti (2001a, 2004) we can present the following picture (with the proviso that it seems not possible for the higher FocP and the lower Foc $\nu$ P to be filled simultaneously (Belletti 2004: 39-40)):

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<sup>8</sup> Belletti (2004) also assumes a lower topic projection, as indicated in the tree in (55) (see also Jayaseelan 2001; Devine & Stephens 2006). Since this projection is not of primary importance for the rest of the discussion, I will leave it aside.



I refer to Jayaseelan (1996, 2001), Drubig (2003), Butler (2003), Devine & Stephens (2006) and Poletto (2006) (among many others) for additional arguments that postulating a projection like FocvP is indeed justified.

## 2.2 Some refinements

Recall that it has been proposed that the focus position which is located in the clausal CP layer is in fact an identificational focus (Rizzi 1997; É. Kiss 1998). However, a number of authors have proposed that in some languages it is possible for presentational foci to be hosted in the left periphery (or for CP-internal foci to be non-identificational). I will briefly present a number of these proposals. The discussion is not exhaustive: the goal is simply to show that the left periphery is not exclusively associated with identificational focus<sup>9</sup>.

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<sup>9</sup> See Bailyn (2003) for interesting discussion. This author proposes that some languages encode through syntactic movement what in other languages is encoded solely by means of prosody. Thus Bailyn (2003: 171, emphasis mine):

- (i) The A'-Dislocation Generalization
  - a. languages encode Information Focus uniquely at some level of representation
  - b. a language may or may not express Information Focus by S-structure configurations
  - c. **languages that express Information Focus 'early' use A'-movement to do so**
  - d.
    - i. A'-scrambled orders are always associated with different discourse/ informational interpretations from non-scrambled orders
    - ii. The movement deriving scrambled orders is motivated by discourse/ informational considerations (= Discourse earliness)



### 2.2.1 Gryllia (2008)

Gryllia (2008, esp. 8-20) investigates the status of preverbal object foci in Modern Greek. The major result of her study is that not all preverbal foci need to receive an 'exhaustive' or identificational focus reading.

Recall from section 2.1.1.2 above that in an answer to a wh-question, the constituent corresponding to the questioned constituent can be considered a presentational focus. Gryllia applied this test to Modern Greek constituent questions. In order to force a non-exhaustive answer, she added the phrase *μεταξύ άλλων* 'among other things' to the wh-question in (56) (thus making (56) a 'mention some' rather than a 'mention all' question):

- (56) *Τι χάρισε μεταξύ άλλων ο Γιάννης στην Ηλέκτρα;*  
what he.gave among others.GEN the.NOM Yanis.NOM to.the.ACC Ilektra.ACC  
'What did Yanis give to Ilektra, among other things?'

Now observe that both (57a) and (57b), with a postverbal and a preverbal presentational focus respectively, are felicitous answers to (56):

- (57) a. *Χάρισε [ένα βιβλίο] στην Ηλέκτρα.* V-DO<sub>I-Foc</sub>-IO  
he.gave a.ACC book.ACC to.the.ACC Ilektra.ACC  
'He gave a book (among other things) to Ilektra.'
- b. *[Ένα βιβλίο] χάρισε στην Ηλέκτρα.* DO<sub>I-Foc</sub>-V-IO  
a.ACC book.ACC he.gave to.the.ACC Ilektra.ACC  
'A book, (among other things) he gave to Ilektra.'

The fact that (57b) is a felicitous answer to (56) can be seen as a first piece of empirical support for Gryllia's proposal that Greek preverbal (object) foci need not be interpreted exhaustively.

Recall from section 2.1.1.1 that Hungarian (preverbal) identificational foci generate a uniqueness presupposition, whereby the constituent in the focus slot can be paraphrased in English by adding the focus particle *only*. However, as shown by Gryllia, Greek preverbal foci again seem to be different. Gryllia (2008: 17-19) slightly refines É. Kiss' exhaustivity test. She observes that it is important to rule out a 'collective' reading, where there are as many pairs of people or objects as focalized constituents (viz. one). In order to force the desired distributive reading, with as many pairs of people, objects,... as conjoined constituents in the focus phrase, Gryllia inserts an overt distributivity marker, a PP of the form 'apó (lit. 'from, of') + numeral + noun'.

With this in place, we can look at the behaviour of Modern Greek preverbal foci. The sentence in (58), with an indirect object consisting of two coordinated DPs does have (59) as one of its logical entailments:

(58) [*Στο Γιάννη και στη Μαρία*]<sub>Foc</sub> *αγόρασα από ένα παντελόνι.*  
 to.the.ACC Yanis.ACC and to.the.ACC Maria.ACC I.bought each(lit.from) one.ACC trousers.ACC  
 'I bought [for Yanis and Maria]<sub>Foc</sub> a pair of trousers each.'

→

(59) [*Στο Γιάννη*]<sub>Foc</sub> *αγόρασα ένα παντελόνι.*  
 to.the.ACC Yanis.ACC I.bought one.ACC trousers.ACC  
 'For Yanis I bought a pair of trousers.'

We conclude from these data that in Modern Greek, preverbal foci are not automatically associated with an exhaustive interpretation: they can be mere presentational foci.

### 2.2.2 Cruschina (2006)

According to Cruschina (2006), in Sicilian subjects that qualify as presentational foci are typically preverbal (60). This is in contrast to Standard Italian, in which the most idiomatic question-answer pair would be as in (61), with a postverbal subject in the answer (Belletti 2001a, 2004; see section 2.1.2):

(60) A: *Cu partì?* // B: *Salvo partì.* Sicilian  
 who left Salvo left.  
 'Who left? Salvo left.' (adapted from Cruschina 2006: 369, his (14a-b))

(61) A: *Chi è partito?* // B: *E partito Salvo.* Standard Italian  
 who is left is left Salvo  
 'Who left? Salvo left.'

Cruschina assumes that the subject in B's reply in the Sicilian example (60) is moved to a focus projection in a split-CP. However, it is worth noting that, since Sicilian has SVO word order, linear order only cannot provide irrefutable evidence that the moved phrases are indeed in CP can be drawn from. However, question answer pairs in which a non-subject is questioned provide conclusive evidence that in Sicilian presentational foci are moved to the left periphery: this is shown in (62), in which an embedded direct object is long moved to the matrix clause. It seems justified to think that string vacuous movement has taken place in the B-part in (62).

(

- 62) A: *Chi dicisti ca s' accattà Maria?* B: [*Una machina*]<sub>i</sub> *dissi [ca s' accattà t<sub>i</sub>].*  
 what you.said that REFL bought Maria a car I.said that REFL bought  
 'What did you say that Maria bought? I said that she bought a car.'  
 (from Cruschina 2006: 370, his (16a-b))

To wrap up this section, I would like to sum up three more salient properties of Sicilian left peripheral presentational foci. First of all, they can only occur in main clauses, but these can have different types of illocutionary force (declarative, most typically answers to constituent questions), yes-no questions (but not in wh-questions), exclamatives). Second, the preverbal presentational foci are said to be connotated with a notion of surprise or unexpectedness. Finally, although identificational and presentational foci are mutually exclusive, it seems that they do not compete for the same position. The data in (63) suggest that they are not sitting in the same projection: (63c) shows that presentational foci can only marginally be followed by a CLD-topic, whereas such a topic is fine after an identificational focus (63d). Note that this last sentence is fully grammatical in isolation, but it is pragmatically inappropriate in this little discourse context (indicated by the # sign).

- (63) a. A: *Chi ci<sub>i</sub> scrivisti [a Maria]<sub>i</sub>?*  
 what to.her you.wrote to Maria  
 'What did you write to Maria?'  
 b. [*A Maria*]<sub>i</sub> ***na littira*** *ci<sub>i</sub> scrissi.* Presentational focus  
 'I wrote a lettre to Mary.'  
 c. ?? ***Na littira*** [*a Maria*]<sub>i</sub> *ci<sub>i</sub> scrissi.* Presentational focus  
 d. # ***NA LITTIRA*** [*a Maria*]<sub>i</sub> *ci<sub>i</sub> scrissi.* Identificational focus

Cruschina therefore concludes that two different focus projections inside the CP-domain need to be postulated, namely a higher CFocP and a lower IFocP, separated by a TopP (cf. Benincà & Poletto 2004).

### 2.2.3 'Subpart of Focus Fronting'

Fanselow & Lenertová (2010) discuss what they call 'Subpart of Focus Fronting' (SFF). These are cases in which an entire VP or TP counts as a presentational focus (thus being a 'broad scope focus', cf. ch. 1, section 4.1; cf. the questions in (64-67)), and in which a part of this VP or TP is fronted to the left periphery, i.e. to the left of the finite verb in German main clauses or to the left of second position clitics in Czech<sup>10</sup>. The pattern is said to be connotated with a

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<sup>10</sup> According to the authors, SFF is syntactically triggered by an unselective edge feature on C°. Although they thus characterize SFF as a movement operation which is genuinely syntactic in nature, they argue that it is subject to a prosodic locality constraint: a phrase that undergoes SFF, itself necessarily accented, cannot cross another accented word.

notion of surprise (German) or aggravation (Czech). Note that in (64-65), an non-specific indefinite is fronted<sup>11</sup>:

- (64) A: What did he do? VP-focus  
B: [*Ein BILD*]<sub>i</sub> hat er t<sub>i</sub> zerrissen.  
'He tore a picture.'
- (65) A: What do you want to do in your holiday? VP-focus  
B: [*Ein BUCH*]<sub>i</sub> würde ich gerne t<sub>i</sub> lesen.  
'I would like to read a book.'
- (66) A: What happened? TP-focus  
B: [*Im GRAben*]<sub>i</sub> ist er t<sub>i</sub> gelandet!  
'He drove into the ditch.'

The authors also point out that idioms can be split by SFF, as illustrated in (67). Interpretively, the entire idiom bears focus, with or without SFF. Fanselow & Lenertová (2010: 8):

Examples such as [( ) ld] refute the idea that SFF movement is triggered by a pragmatic property of the moved item in a direct way.

- (67) A: Why did you quarrel with him?  
B: [*Schöne AUgen*]<sub>i</sub> hat er ihr t<sub>i</sub> gemacht.  
'He made eyes at her.'  
B': [*Den GARaus*]<sub>i</sub> hat er ihr t<sub>i</sub> gemacht.  
'He killed her.'

### 2.3 Characterization of Latin LEF2

On the basis of the data presented in section 2.2, and in the light of the discussion of the typology of focus patterns, I would like to propose the descriptive generalization in (68) about Latin LEF2:

- (68) LEF2 displaces the most prominently accented phrase of a TP to the left periphery: this constituent is either the presentational focus itself (= 'Focus Fronting' (FF), e.g. (17-10)) or, in case of broad scope (TP) focus, the constituent that carries nuclear (sentential) stress (= 'Subpart of Focus Fronting' (SFF), e.g. (19)).

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<sup>11</sup> The questions of A in (64-67) are in English in the original paper.

(17) and (10) are sentences in which the entire presentational focus has been moved. (17) represents the simplest case, where the moved presentational focus is a relatively small constituent, namely a DP:

- (17) *[CP [In qua]<sub>i</sub> [[DP Demophon quidam]<sub>j</sub> [cum t<sub>j</sub> t<sub>i</sub> regnaret]]], incidit eorum finibus*  
 in which.ABL D.NOM a.certain.NOM when reigned.SUBJ fell.in.PF their borders.DAT  
*repentina uastitas et ciuium interitio miranda.*  
 sudden.NOM desolation.NOM and citizens.GEN dying.NOM remarkable.NOM  
 'In the time when a certain Demophon was the king of this town (sc. Elaeusa Id), a sudden disaster fell down upon the country and caused a great massacre among the citizens.' (= Hyg. Ast. 2.40.3)

Similarly, a sentence like (10) might also exemplify the pattern where the entire presentational focus moves. However, if, as I suggested in section 1.3, (10) contains an embedded clause with broad scope focus in which an entire remnant TP has undergone LEF2, the focus moved phrase in (10) would be considerably larger than the one in (17).

- (10) *Dominatio quaesita ab utroque est, non id actum [CP<sub>2</sub> [FocP<sub>2</sub> [beata et*  
 dominion.NOM sought.NOM by both.ABL is not this.NOM done.NOM happy.NOM and  
*honestam] ciuitas t<sub>i</sub>]<sub>j</sub> [FinP<sub>2</sub> ut esset<sub>i</sub> t<sub>j</sub>]].*  
 honourable.NOM community.NOM so.that is.SUBJ  
 'Both of them pursued personal power, they did not act to make sure that the state is happy and honourable.' (= Cic. ad Att. 8.11.2)

Consider now again the discontinuous (quasi-)idiom *castra mouere* 'strike camp' in (19). On the basis of the discussion of 'Subpart of Focus Fronting' in section 2.2.3, I would like to hypothesize that their might be an alternative option for sentences exhibiting broad scope focus (like (10)), namely LEF2 of the phrase that contains the main sentence accent, i.e. the most deeply embedded constituent (cf. Cinque 1993; Zubirreta 1998). This might be the case in (19), which is very similar to the German split idioms in (67) above:

- (19) *Itaque [castra [cum t<sub>i</sub> mouere uellet]], subito ex oppido erupit multitudo.*  
 and.then camp.ACC when strike.INF he.wanted.SUBJ suddenly from town.ABL broke.out crowd.NOM  
 'As he wanted to strike camp, all of a sudden a great number of men broke out of the town.' (= Anon. Bel. Afr. 6)

However, I immediately have to admit that the exact interpretation of LEF2 is very subtle and hard to pin down. Consider for example the minimal pair in (18-69). In (18), the direct object of the verb *misceo* (mix) has undergone LEF2 in a rightward conditional clause:

- (18) *Haec omnia una conditura [...] seruantur, [aceti duas partes et tertiam durae muriae [si miscueris]].*  
 these.NOM all.NOM one.ABL condiment.ABL are.preserved acid.GEN two.ACC parts.ACC and  
 third.ACC hard.GEN pickle.GEN if you.mix.FUT.EX  
 'All these are preserved by one method of pickling, if you mix two thirds of vinegar  
 and one third of hard brine.' (= Col. Agr. 12.7.2)

In contrast, only a couple of paragraphs later, the same author writes a very similar sentence, but the phrase that corresponds to the LEF2-constituent in (18), which this time is the subject of a passive form of *misceo*, sits in its TP-internal base position:

- (69) *Verum commodius seruantur, [si [DP duae partes sapae cum aceti una parte] misceantur].*  
 but better.ADV they.are.preserved if two.NOM parts.NOM must.GEN with acid.GEN  
 one.ABL part.ABL are.mixed.SUBJ  
 'But they are best preserved if two parts of must are mixed with one part of vinegar.'  
 (= Col. Agr. 12.10.3)

To conclude, it is perhaps the case that marking a presentational focus 'in situ' with prosodic stress could alternate with left peripheral fronting, making LEF2 an optional operation.

### 3 Summary

Without claiming to have answered every question concerning the interpretation of LEF2, I hope to have made a convincing case for analyzing this phenomenon as a focus strategy. Some additional suggestive evidence that supports the hypothesis that LEF2-constituents are indeed presentational foci comes from diachrony: this can be found in ch. 7, section 1.2.2.

Furthermore, it is plausible to assume that in the period when LEF2 was available in embedded clauses, it was also possible in declarative main clauses. However, given the lack of an element that marks the CP-zone in the majority of the root clauses, LEF2 is often hard to pin down. Further research will have to make clear whether LEF2 is allowed in matrix interrogatives. At present, I have found no convincing example of such a pattern. Moreover, given (i) the incompatibility of presentational foci and identificational foci (cf. Belletti 2004) and (ii) the often observed kinship of question words and identificational foci (see e.g. Rizzi 1997), one might doubt whether LEF2 was compatible with question words.

Before dealing with the syntax and especially the diachronic development of LEF2 in chapter 7, I will finish this chapter with a brief intermezzo on some quite remarkable data involving both LEF1 and LEF2.

## 4 Interlude: the special behaviour of LEF under coordination

### 4.1 The data that initially made me think that LEF is postsyntactic PF-movement...

Recall that one of the syntactic environments that count as strong islands are coordinated phrases (cf. the 'Coordinated Structure Constraint': Ross 1967; see ch. 1, section 3.4.1.1). The example from the introductory chapter is repeated here below:

(70) Coordinated structure island

- a. *I saw [John and Mary].*
- b. *\*Who<sub>i</sub> did you see [John and t<sub>i</sub>]?*
- c. *\*Who<sub>i</sub> did you see [t<sub>i</sub> and Mary]?*

I will adopt the view that coordination is asymmetric, in that the first conjunct asymmetrically c-commands the second (Kayne 1994, Johannessen 1998). As indicated in the examples in (71-74), I assume that the first conjunct sits in the specifier of a conjunction head '&°' (lexicalized by *et* 'and', *nec* 'and not',...), and that the second conjunct is the complement to this head.

On the assumption that (71-74) involve TP-coordination, it seems that in Latin, the Coordinated Structure Constraint can be violated by LEF (by LEF1 in (71) and (73) and by LEF2 in (72-74))<sup>12</sup>:

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<sup>12</sup> I found 13 other instances of structurally identical CSC-violations: Cic. ad Att. 3.6.2; Cic. ad Att. 7.3.3.10; Hirt. B.G. 8.33; Hirt. B.G. 8.34.1; Tac. Ann. 4.60.1-3; Tac. Hist. 4.34.1; Anon. Bel. Afr. 4; Anon. Bel. Afr. 30; Anon. Bel. Afr. 25; Anon. Bel. Afr. 44; Anon. Bel. Afr. 88; Anon. Bel. Alex. 21; Anon. Bel. Alex. 30.

- (71) [<sub>CP</sub> [Ex ea]<sub>i</sub> [<sub>CP</sub> **cum** [<sub>&P</sub> [<sub>TP1</sub> *t<sub>i</sub> tela* <...> *iacerentur ad fontis aditum*] [<sub>&°</sub> *nec*  
out.of this.ABL when missiles.NOM were.thrown to source.GEN entry.ACC and.not  
[<sub>TP2</sub> *sine periculo possent aquari oppidani*]]]]], *non tantum pecora atque*  
without danger.ABL could.SUBJ fetch.water townsmen.NOM not only cattle.NOM and  
*iumenta, sed etiam magna hostium multitudo siti consumebatur.*  
'When from there missiles were thrown towards the entry to the source and <when>  
the townsmen could not fetch water without danger,...' (= Hirt. Bel. Gal. 8.8.41)
- (72) [[*Tuus pater*]<sub>i</sub> [*istuc aetatis*]<sub>j</sub> [**cum** [<sub>&P</sub> [<sub>TP1</sub> *t<sub>i</sub> t<sub>j</sub> esset*] [<sub>&°</sub> *et* [<sub>TP2</sub> *pro animaduertisset*  
your father.NOM that age.GEN when was.SUBJ and had.noticed.SUBJ  
[<sub>CP</sub> *rem publicam ab nefariis sceleratisque ciuibus oppressam*]]]]], <...>  
republic.ACC.FEM by impious wicked -and citizens.ABL.PL oppressed.ACC.FEM  
*paterni exercitus reliquiis collectis paene oppressam funditus et deletam*  
father's army.GEN remnants.ABL collected.ABL almost crushed.ACC completely and destroyed.ACC  
*Italiam urbemque Romanam in libertatem uindicauit.*  
Italy.ACC city.ACC-and Roman.ACC into liberty.ACC he.claimed.PF  
'When your father was of that age and <when> he noticed that the republic was  
crushed by impious and wicked citizens,...' (= Anon. Bel. Afr. 22.2)
- (73) [...], *sed interdum uoces procedebant contumaces et inconsultae*, [<sub>&P</sub> [<sub>ForceP</sub> [*quas*]<sub>k</sub>  
but at.times words.NOM came.forth.IMPF stubborn.NOM and inconsiderate.NOM which.ACC  
[<sub>adpositi custodes</sub>]<sub>j</sub> [*t<sub>k</sub> exceptas auctasque*]<sub>i</sub> [<sub>FinP</sub> **cum** [<sub>TP1</sub> *t<sub>j</sub> t<sub>i</sub> deferrent*] [<sub>&°</sub> *neque* [<sub>TP2</sub>  
posted guards.NOM caught augmented.ACC-and when reported.SUBJ nor  
*Neroni defendere daretur*]]]]], *diuersae insuper sollicitudinum formae oriebantur.*  
Nero.DAT defend.INF was.given.SUBJ diverse.NOM in.addition worries.GEN shapes.NOM arose  
'But from time to time some insolent and ill-advised words escaped him, which were  
picked up, enlarged and reported by the guards on duty. As Nero wasn't offered the  
chance of defending himself, yet other kinds of worries arose.' (= Tac. Ann. 4.60)
- (74) [...], [<sub>&P</sub> [<sub>ForceP</sub> [<sub>FocP</sub> [<sub>DP</sub> *uictor Tarentinus in turbatam duce amisso nauem*  
victorious Tarentine.NOM into troubled.ACC leader.ABL lost.ABL ship.ACC  
*impigre transgressus*]<sub>i</sub> [<sub>FinP</sub> **cum** [<sub>TP1</sub> *t<sub>i</sub> summouisset hostes*]] [<sub>&°</sub> *et* [<sub>&P</sub> [<sub>TP2</sub> *prora iam*  
quickly crossed.over.NOM when had.discarded.SUBJ enemies.ACC prow.NOM already  
*Tarentinorum esset*], [<sub>&°</sub> [<sub>TP3</sub> *puppim male conglobati tuerentur Romani*]]]]],  
Tarentines.GEN was.SUBJ stern.ACC badly gathered.NOM guarded.SUBJ Romans.NOM  
*repente et alia a puppe triremis hostium apparuit.*  
suddenly and other.NOM from stern.ABL trireme.NOM enemies.GEN appeared.PF  
'The victorious Tarentines briskly entered the ship which was in confusion since it  
lacked its commander. When they had driven back the enemies and when the  
Tarentines had already seized control of the prow, and the Romans, packed together,  
were trying desperately to defend the stern, suddenly another hostile trireme appeared  
from behind.' (= Liv. aUc. 26.39.17)



With Aoun & Benmamoun (1998) and Sauerland & Elbourne (2002), it could be argued that some instances of phrasal movement only take place on the PF-branch of the derivation, thus not being subject to purely syntactic island conditions. (75) might be another instance of an island violation, namely a violation of the complex Noun Phrase Constraint by an LEF2 constituent (sc. fronting of a(n extraposed?) relative clause):

- (75) *Ex Aledio [[<sub>CP</sub> quod scribas]<sub>i</sub> [<sub>CP</sub> si quid inueneris t<sub>i</sub>]] scribes.*  
 from A.ABL what write.SUBJ if anything.ACC you.find.FUT.EX you.write.FUT  
 'If you have any interesting news from Aledius, please write it to me.'  
 (= Cic. ad Att. 12.27.2)

## 4.2 ... and the ones that subsequently made me abandon this idea.

However, there are some serious problems with the hypothesis that LEF is PF-movement. For one thing, LEF is not clause- (and thus not phase-) bound. Both LEF1 (76) and LEF2 (76-79) can cross CP-boundaries, which suggests that they this is movement of the 'narrow syntactic' kind. It is very unlikely that something like successive-cyclic PF-movement is at work in examples like (76-79)<sup>13</sup>:

- (76) [<sub>CP</sub> Quod<sub>i</sub> Tiberius<sub>j</sub> [<sub>CP</sub> cum t<sub>j</sub> [<sub>CP</sub> t<sub>i</sub> fieri] animaduertit], simul pugionem eduxit et manum eius incidit.  
 which.ACC T.NOM when happen.INF noticed at.once dagger.ACC drew and  
 hand.ACC his he.hit  
 'When he noticed that this was happening, Tiberius immediately drew a dagger and stabbed his hand.' (= Anon. Bel. Hisp. 18)
- (77) *Igitur, inquam, [[et homines et pecudes]<sub>i</sub> [cum [<sub>CP</sub> t<sub>i</sub> semper fuisse] sit necesse natura]] <...> necesse est humanae uitae ab summa memoria gradatim descendisse ad hanc aetatem <...>.*  
 PART I.said and men.NOM and cattle.NOM when always be.INF.PF is.SUBJ necessarily  
 nature.ABL necessary is human.GEN life.GEN from earliest.ABL memory.ABL gradually  
 descend.INF.PF to this.ACC age.ACC  
 'Well, I said, since it is naturally necessary that men and cattle have always existed, it should be the case that they gradually descended from the earliest recollections of human life to our age.' (= Var. Agr. 2.1.3)

<sup>13</sup> cf. also Anon. Bel. Alex. 35.

- (78) *Sed [iudicium]<sub>i</sub> [CP si quaeris [CP quale t<sub>i</sub> fuerit]]], incredibili exitu, sic uti  
 but judgment.NOM if you.ask how.NOM has.been.SUBJ incredible.ABL outcome.ABL so that  
*nunc ex euentu ab aliis, a me tamen ex ipso initio consilium*  
 now from end.ABL by others.ABL by me.ABL however from very.ABL start.ABL plan.NOM  
*Hortensi reprehendatur.*  
 H.GEN was.reproached.SUBJ  
 'In case you're asking what the judgment was like, well, the outcome was incredible,  
 to the extent that afterwards Hortensius' plan was reproached by all, whereas I rejected  
 right from the start.' (= Cic. ad Att. 1.16.3)*
- (79) *[[Fici aridae]<sub>i</sub> [CP si uoles [CP uti t<sub>i</sub> integrae sint]]], in uas fictile condito.*  
 figs.NOM dry.NOM if you.want.FUT that unharmed are.SUBJ in pot.ACC clay.ACC preserve.IMP  
 'If you want dry figs to remain untainted, preserve them in an earthenware vessel.'  
 (= Cat. Agr. 99)

Presumably, the exceptional behaviour of the data in (71-74) is due to some property of the coordination involved rather than to LEF. In all likelihood, we are not dealing here with 'coordination of likes' (viz. two TPs). It is known that if two conjuncts are categorially distinct, otherwise unexpected extraction can occur (see a.o. Höhle 1990, Schwarz 1998, Buring & Hartmann 1998, Johnson 2002 and esp. Reich 2009 for discussion of (quite) similar cases in German).

## **Chapter 7.**

# **The syntax of LEF2: a synchronic and diachronic perspective**

In the seventh and last chapter of this thesis, I will concentrate on the syntax of LEF2, with special attention to its diachronic evolution. It will turn out that diachronic data can give us important indications about different synchronic stages of a language.

On the basis of quantitative data, I will first show that LEF2 was mainly productive in the earlier stages of the Latin language, and that it became obsolete during the classical period (section 1.1). I will then formulate two intimately related hypotheses about LEF2 (section 1.2) one about the syntactic derivation of LEF2 and one about its diachrony.

In section 2 I will deal with the synchronic syntactic analysis of LEF2. I will present my proposal to derive the INFL final word order of Latin, which involves movement of the entire  $vP$  to a fairly high position in the split-TP. I will work out an account in which presentational foci which are contained within  $vP$  are 'smuggled' past  $FocvP$  by default, which forces them to move to the left periphery (section 3). I will then turn my attention to the decline of LEF2 and to grammar of post-LEF2 Latin. I will try to determine which were the sources and which the consequences of the loss of  $vP$  movement and, concomitantly, of LEF2. More specifically, I will try to track down which repercussions the decline of  $vP$  movement has had on the overall structure of the Latin clause (section 4). Section 5 concludes.

It should be stressed from the outset that the results of this chapter are to some extent speculative, and that they should not be considered as strong conclusions but perhaps rather as hypotheses that can form the basis of future research. This is mainly due to the fact that at present we know very little about the middle and lower parts of the Latin clause, say TP,  $vP/VP$  and the right periphery (the 'Nachfeld'): detailed corpus studies of the kind I conducted

on the left periphery of ACs are completely lacking. I am convinced that careful quantitative studies on the Latin TP and *v*P/VP will be able to verify or falsify the hypotheses formulated in the present chapter.

## 1 Diachronic evolution: decline of LEF2

I will first have a closer look at the quantitative data that came out of the corpus study that I conducted. On the basis of these data, I will formulate two hypotheses that will be investigated in the remainder of this chapter.

### 1.1 Results of the corpus study

#### 1.1.1 The figures

Tables 1 and 2 present an overview of the absolute and relative frequency of LEF2 per author<sup>1</sup> as attested in the corpus which I have been using (see ch. 3, section 3.1.1). For the reader's convenience, I have repeated here in (1) an overview of the chronological organisation of the corpus and lists the five periods that I distinguished in chapter 3, section 3.1.1:

- (1) **I.** Archaic Latin: 2nd century BC
- II.** Classical Latin: 1st century BC
- III.** Classical Latin: 1st century AD
- IV.** Late Classical Latin
- V.** Late 2nd century 'mannerist' prose

Although I do realize that assigning specific left frontings to either LEF1 and LEF2 will to some extent inevitably remain subjective, I feel confident in classifying 248 instances of the 374 instances of leftward fronting in initial ACs discussed in section 1.1.1 as instantiation of the type labelled LEF2. In the majority of these cases, this decision was made either because the fronted phrase was sandwiched between an LEF1-element (*wh*, *is* or *hic*) and a conjunction or because of the discourse-new information status of the fronted phrase.

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<sup>1</sup> Note that the sum of all the cases of LEF1 (568) and LEF2 (309), 877, is higher than the total number of clauses exhibiting LEF, as given in table 3, namely 849. This is because in table 3, the possibility that LEF1 and LEF2 can cooccur was not taken into account. In table 1, such a combination yields two separate tokens.

| (2)  | Author               | Date       | Work                   | LEF1            | LEF2            |                |                 |
|------|----------------------|------------|------------------------|-----------------|-----------------|----------------|-----------------|
|      |                      |            |                        |                 | Initial ACs     | Fin. ACs       | Total           |
| I.   | <b>Cato</b>          | 160 BC     | <i>De agricultura</i>  | 6/280           | 45/280          | 4/92           | 49/372          |
| II.  | <b>Cicero</b>        | 50-40 BC   | <i>Ad Atticum</i>      | 142/1241        | 60/1241         | 16/1096        | 76/2337         |
|      | <b>Anon. I</b>       | ± 40 BC    | <i>Bellum Afr.</i>     | 14/84           | 11/84           | 0/57           | 11/141          |
|      | <b>Anon. II</b>      | ± 40 BC    | <i>Bellum Hisp.</i>    | 18/87           | 11/87           | 0/38           | 11/125          |
|      | <b>Anon. III</b>     | ± 40 BC    | <i>Bellum Alex.</i>    | 19/111          | 5/111           | 0/52           | 5/163           |
|      | <b>Varro</b>         | 36 BC      | <i>Res rustica</i>     | 33/374          | 62/374          | 26/409         | 88/783          |
| III. | <b>Velleius Pat.</b> | 30 AD      | <i>Historiae</i>       | 30/161          | 2/161           | 0/143          | 2/304           |
|      | <b>Columella</b>     | 40-50 AD   | <i>De agricultura</i>  | 222/1263        | 26/1263         | 3/1026         | 29/2289         |
| IV.  | <b>Plinius min.</b>  | 90-110 AD  | <i>Epist. + Paneg.</i> | 32/515          | 0/515           | 0/787          | 0/1302          |
|      | <b>Tacitus</b>       | 100-110 AD | <i>Ann. + Hist.</i>    | 14/536          | 9/536           | 6/745          | 15/1281         |
| V.   | <b>Fronto</b>        | 150-170 AD | <i>Epistulae</i>       | 10/208          | 7/208           | 3/176          | 10/384          |
|      | <b>Apuleius</b>      | 170-180 AD | <i>Flor. + Mag.</i>    | 28/233          | 10/233          | 3/220          | 13/453          |
|      | <b>Total:</b>        |            |                        | <b>568/5091</b> | <b>248/5091</b> | <b>61/4841</b> | <b>309/9932</b> |

Table 1: absolute frequency of LEF in adverbial clauses, compared to the total number of clause-initial (for LEF1 and LEF2) and clause-final (for LEF2) adverbial clauses.

| (3)  | Author               | Date       | Work                   | LEF1  | LEF2        |          |       |
|------|----------------------|------------|------------------------|-------|-------------|----------|-------|
|      |                      |            |                        |       | Initial ACs | Fin. ACs | Total |
| I.   | <b>Cato</b>          | 160 BC     | <i>De agricultura</i>  | 2,1%  | 16,1%       | 4,3%     | 13,2% |
| II.  | <b>Cicero</b>        | 50-40 BC   | <i>Ad Atticum</i>      | 11,4% | 4,8%        | 1,5%     | 3,3%  |
|      | <b>Anon. I</b>       | ± 40 BC    | <i>Bellum Afr.</i>     | 16,7% | 13,1%       | 0%       | 7,8%  |
|      | <b>Anon. II</b>      | ± 40 BC    | <i>Bellum Hisp.</i>    | 20,7% | 12,6%       | 0%       | 8,8%  |
|      | <b>Anon. III</b>     | ± 40 BC    | <i>Bellum Alex.</i>    | 17,1% | 4,5%        | 0%       | 3,1%  |
|      | <b>Varro</b>         | 36 BC      | <i>Res rustica</i>     | 8,8%  | 16,6%       | 6,4%     | 11,2% |
| III. | <b>Velleius Pat.</b> | 30 AD      | <i>Historiae</i>       | 18,6% | 1,2%        | 0%       | 0,7%  |
|      | <b>Columella</b>     | 40-50 AD   | <i>De agricultura</i>  | 17,6% | 2,1%        | 0,3%     | 1,3%  |
| IV.  | <b>Plinius min.</b>  | 90-110 AD  | <i>Epist. + Paneg.</i> | 6,2%  | 0%          | 0%       | 0%    |
|      | <b>Tacitus</b>       | 100-110 AD | <i>Ann. + Hist.</i>    | 2,6%  | 1,7%        | 0,8%     | 1,2%  |
| V.   | <b>Fronto</b>        | 150-170 AD | <i>Epistulae</i>       | 4,8%  | 3,3%        | 1,7%     | 2,6%  |
|      | <b>Apuleius</b>      | 170-180 AD | <i>Flor. + Mag.</i>    | 12,0% | 4,3%        | 1,4%     | 2,9%  |

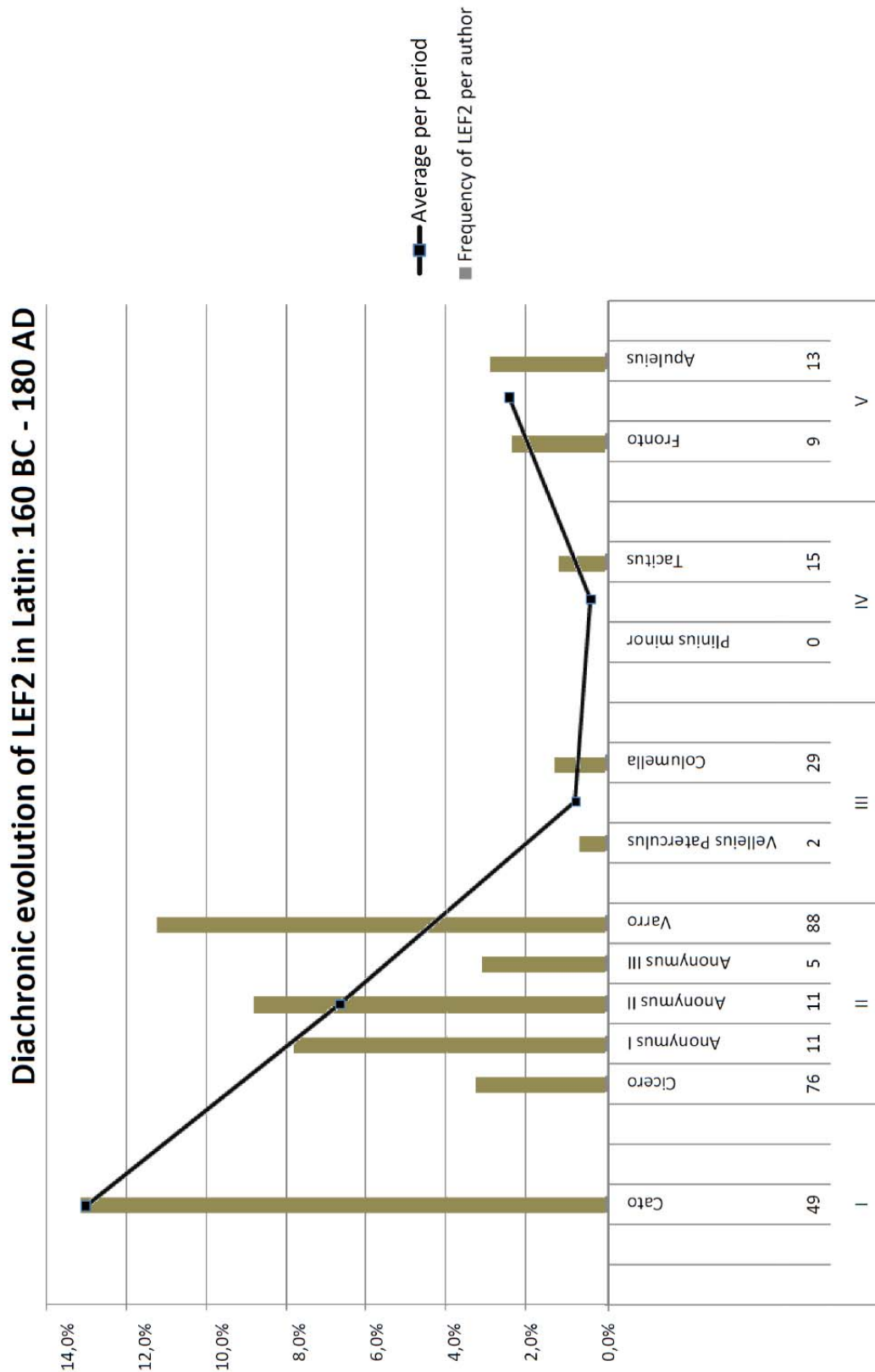
Table 2: relative frequency of LEF in adverbial clauses, compared to the total number of clause-initial (for LEF1 and LEF2) and clause-final (for LEF2) adverbial clauses.

As the reader can verify, LEF1 remains more or less productive throughout the period examined. In the remainder of this chapter, I will have nothing to say about the diachronic evolution of LEF1.

The tables also show that LEF2 is well attested in stage I. On the other hand, though authors vary to some extent, it is clear that LEF2 has become much rarer in stages III and IV. Stage II then seems to be a period of transition in which we move from a language with LEF2 to a language without LEF2 (i.e. stages III and IV). Stage II shows fairly high interclass variability: authors who are contemporaries differ considerably in the frequency they use LEF2. A modest revival is seen in stage V, probably to be ascribed to conscious imitation of archaic (Plautus, Terence, Cato) and early classical authors (esp. Cicero).

The diachronic development tabled in (2) and (3) is also represented in Graph 1 in (4).

(4)



Graph 1: Diachronic evolution of Latin LEF2 in ACs: frequency per author and per period.  
Below: names of the author, absolute number of LEF2 attested and number of the period.

If one looks at the average figures per period, a very simple picture emerges. Things look a bit more complicated if one considers the figures for the individual authors: especially those pertaining to period II. One way of interpreting the mixed results for that period would be to try to characterize period II as the period in which Latin went through a transition from being a language with LEF2 grammar to one without an LEF2 grammar.

### 1.1.2 Statistics

I have checked the statistical significance of the figures presented. The results of the relevant CI-test are given in (5) (Wald-intervals, confidence level 95%). The table should be read as follows: if the value '0' is not in between the confidence limits, the two compared periods are significantly different.

(5)

| Reference period | Compared period | Upper limit   | Lower limit   | Significant? |
|------------------|-----------------|---------------|---------------|--------------|
| I                | II              | 0,0987560626  | 0,0280457550  | YES          |
|                  | III             | 0,1566680967  | 0,0875245282  | YES          |
|                  | IV              | 0,1603582914  | 0,0913729670  | YES          |
|                  | V               | 0,1416752641  | 0,0696305244  | YES          |
| II               | III             | 0,0678069879  | 0,0495838195  | YES          |
|                  | IV              | 0,0712713341  | 0,0536581066  | YES          |
|                  | V               | 0,0558690274  | 0,0286349435  | YES          |
| III              | IV              | 0,0085419275  | -0,0010032941 | NO           |
|                  | V               | -0,0050134051 | -0,0278734314 | YES          |
| IV               | V               | -0,0090243177 | -0,0314011521 | YES          |

Table 3: comparing the different values of the 5 periods.

The overall conclusion is that all periods identified in fact differ significantly from one another, except for periods III and IV. However, although the figures based on *De Agricultura* by Cato, my sole representative of period I, do differ significantly from the average values for the authors in period II, not every single author from stage II differs significantly from Cato. Specifically, the values for Anonymus I, Anonymus II and Varro pattern with Cato. Together, those four authors can then be said to form an 'LEF2-cluster'.

If one looks at the significance values for the individual authors, it emerges that Apuleius and Fronto are the only authors that do not differ significantly from Cicero. It seems indeed correct to qualify the former as *imitatores* of the prose of the classical period, of which Cicero is the main exponent.

Finally, Pliny's writings also stand out in that in the 1302 adverbial clauses that I have examined he never uses LEF2.



## 1.2 Two hypotheses

In the remainder of this chapter, I will explore two closely related hypotheses about the place of LEF2 in Latin syntax. First I will elaborate a synchronic hypothesis about the relation of LEF2 to the syntax of the Latin middle field, and after that I will elaborate a diachronic hypothesis about the loss of LEF2. First I will formulate each of these proposals in turn: the synchronic discussion is provided in sections 2 and 3, the diachronic development is elaborated in section 4.

### 1.2.1 How LEF2-constituents end up in CP

First of all, recall that the analysis of LEF2 elaborated here is one according to which the fronted constituent is a presentational focus and moves to the left periphery. As shown, this is puzzling since it has been argued that a left peripheral focus is an identificational rather than a presentational focus. The consensus in the literature seems to be that presentational focus is encoded in the middle field, either by some *in situ* prosodic focussing or by movement to a lower Foc $\nu$ P projection (Belletti 2001a, 2004 and many others). I would like to propose that the reason why in the Latin LEF2 pattern, a constituent which is interpretively a presentational focus (call that constituent XP) can be attracted by Foc $^{\circ}$  in the C-domain, is that XP cannot be attracted to the lower Foc $\nu$ P, because XP is contained in a larger constituent, YP, which itself obligatorily has moved to a position higher than Foc $\nu$ P. In other words: the movement of the containing YP makes Foc $\nu$ P inaccessible for XP contained inside YP, since all syntactic movement is by assumption leftward (i.e. XP cannot 'sink' into Spec,Foc $\nu$ P). This is rephrased in (6):

(6) Hypothesis I:

In Latin, a presentational focus XP moves to FocP iff XP is dominated by YP and YP c-commands Foc $\nu$ P.

I will explore Hypothesis I in sections 4 and 5. An important disclaimer here is that Hypothesis I is only about Latin presentational foci. At this point, it is not clear whether my proposal can be carried over in any straightforward way to any of the other languages where presentational foci have been claimed to be hosted in the C-domain (such as, for instance, Modern Greek, Sicilian and perhaps other languages (cf. section 2.2 of the previous chapter)).

I will argue that the relevant moved constituent YP which contains the presentational focus XP is a (remnant)  $\nu$ P, which has undergone A-movement to some functional projection in the middle field (perhaps TP). FocP can only serve as a target for presentational foci if it is the closest probe for the relevant constituent. In the unmarked case FocP in the left periphery is not the closest probe because that will be FocP in the  $\nu$ P-periphery. However, if some independent step in the derivation has made Foc $\nu$ P unavailable, then the left peripheral FocP can become the closest potential Probe for a presentational focus. As a host for presentational

foci, the left peripheral FocP is so to speak only a 'second best'. In section 5, I will show that this type of derivation could be seen as involving a process of 'smuggling'.

It should be said that the current proposal is not compatible with a strictly derivational model of syntax (as the one proposed in López 2009). In such a theory,  $\text{Foc}_{\nu^o}$  would attract any lower presentational focus to its specifier as soon as it is merged, before the higher head that attracts  $\nu\text{P}$  in my analysis is added to the structure. However, with Zubizarreta (1998: 29ff.) among others, we could assume that a syntactic derivation consists of multiple levels of representation, and that 'peripheral' discourse-related edge movements obligatorily take place later than 'core' syntactic operations (but still before Spell Out, i.e. in the syntactic component). However, this is not in line with most of the current work in syntactic theory: I do realize that this is potential problem.

### **1.2.2 Syntactic change in Latin: the loss of LEF2 and the shift from OV to VO**

In the above I have made it clear that I assume that the movement of the presentational focus to the CP focus position is due to a conspiracy: the lower FocP is not available because of movement of a (remnant)  $\nu\text{P}$  which dominates the representational focus to the middle field, and specifically to a position that dominates  $\text{Foc}_{\nu\text{P}}$ . The move of the (remnant)  $\nu\text{P}$  pre-empts the movement of the presentational focus to the lower FocP. As a result of leftward (remnant)  $\nu\text{P}$  movement only the left peripheral FocP is a potential probe for the presentational focus. The prediction of this hypothesis is that in the absence of  $\nu\text{P}$  movement, LEF2 to the left periphery should no longer be available since the focus projection in the CP layer will not be the closest probe for a presentational focus contained in  $\nu\text{P}$ . I assume then that the loss of LEF2 is due to the loss of  $\nu\text{P}$  movement.

The second hypothesis to be outlined here is that the loss of  $\nu\text{P}$  movement not only is at the basis of the decline of LEF2, but that it also (at least indirectly) contributed to the eventual transition of Latin to a VO-language.

(7) Hypothesis II:

There is a correlation between the loss of LEF2 and the increased frequency of VO word-order observed in the history of Classical Latin.

I will interpret this correlation in the following terms: the older LEF2, in which a presentational focus surfaces to the left of the conjunction, and one specific kind of later VO-order, in which a presentational focus surfaces to the right of the verb, are functionally equivalent. I will first briefly motivate why I think Hypothesis II is worth pursuing.

Consider the short text fragments in (8-9). These pieces of discourse have all roughly the same internal organisation. They consist of two sentences, the second of which contains a

subordinate clause which precedes the clause it modifies. The direct object of that subordinate clause is an item which is (literally) repeated from the preceding sentence, after which the author specifies what exactly he means by using that particular lexical item (so the basic scheme is always something like '... X .... . And when I say 'X', I actually mean 'Y'.'). The first two examples are both from Cicero (in whose writings, as we have seen, LEF2 remains more or less productive). We see that the second occurrence of the item under discussion is located in front of the subordinating conjunction. For instance, in (8) the item under discussion is the pronoun *me* ('me'). The author picks up on this and elaborates in what would come out in English as 'when I say *me*', however the attested order is *me cum dico*, literally 'me when I say', with what I have labelled an LEF2 pattern.

- (8) *Mamertini me publice non inuitarunt. [Me [**cum dico**]], leue est: Mamertines.NOM me.ACC officially not invited.PF me.ACC when I.say light.NOM it.is senatorem populi Romani si non inuitarunt, honorem debitum detraxerunt non homini sed ordini.*

'The people of Messina did not officially invite me. And when I say 'me', I regard this a light matter, personally. However, if they did not invite a Roman senator, they bereaved not the man but the Senate itself from due respect.'

(= Cic. Ver. act. sec. IV.25)

- (9) *His ego duobus generibus facultatem ad se aere alieno liberandas aut leuandas dedi, uno quod omnino nullus in imperio meo sumptus factus est;*

*[nullum [**cum dico**]], non loquor ὑπερβολικῶς, nullus inquam, ne terruncius quidem.*  
none.ACC when I.say not I.speak with.exaggeration none.NOM I.say not 1/4as.NOM even

'With the following two actions I offered them an opportunity to free themselves from their debts, or to make them lighter: first, while I was governor, no expense has been incurred. And when I say 'no expense', I am not exaggerating: I really mean no expense, not even a penny.' (= Cic. ad Att. 6.2.4)

Observe that the fact that the underscored items are, when repeated, per definition old information does not exclude that they can be presentational foci. Actually, interpreting them as topics seems quite inappropriate: none of the above patterns could felicitously be paraphrased with a CILD construction in Italian. Rather, it seems to be the case that underscored elements are just emphasized by the author. I therefore would like to suggest that the fronted elements are best interpreted as presentational foci: they have undergone LEF2. As I mentioned before (ch. 1, section 3.2.4.2), an element need not be new information to qualify as a presentational focus. For instance, a (stressed) anaphoric personal pronoun can perfectly well be focalized.

The examples form a remarkable contrast with two examples from Pliny the Younger. Recall that among all the authors I have looked at systematically, Pliny stood out in that he never used LEF2. The sentences in (10-11) are from his work. They illustrate the same discourse

organisation, namely the author introduces an item (*princeps* 'chief' in (10) and *balinei* 'bath (gen.)' (in (11)) which he then elaborates on with the expression *cum dico ...* ('when I say...'). Observe that in neither of these LEF2 is used. Rather, the item which is repeated now shows up as a postverbal direct object: *cum dico princeps*, *cum dico balinei*. This suggests that this author exploited a different means for conveying the same pragmatic information.

- (10) *Arrianus Maturus Altinatium est princeps. [Cum dico princeps], non de facultatibus loquor, <...>, sed de castitate, iustitia, gravitate, prudentia.*  
 A. M. Altinates.GEN is chief.NOM when I.say 'chief' not about means.ABL  
 I.speak but about chastity.ABL justice.ABL dignity.ABL prudence.ABL  
 'Arrianus Maturus is the most important man in Altinum. When I say 'most important', I am not referring to his wealth, but to his virtue, sense of justice, dignity and wisdom.' (= Pli. Epi. 3.2.2)
- (11) *Haec inter medios labores urbisque fremitum. In secessu, solum balinei tempus studiis eximebatur. [Cum dico balinei], de interioribus loquor, nam dum destringitur tergiture, audiebat aliquid aut dictitabat.*  
 when I.say bath.GEN about interior.ABL I.speak PRT while he.is.scraped  
 he.is.dried-and he.listened someting.ACC or he.dictated  
 'Such were his activities in the busy life in the city. At the countryside, only the hour of bathing was devoted to studying, and when I say 'bathing', I refer to the time he spent *in* the water: when he was rubbed down and dried, he usually listened to something or dictated.' (= Pli. Epi. 3.5.14)

The patterns displayed above arise in quasi-identical discourse circumstances in the two sets of examples. The authors we are looking at are separated by 150 years. Cicero wrote around 50 BC) and Pliny around 100 AD. It seems unlikely that the different patterns follow from synchronic variation within one and the same language system. Rather, it would seem plausible to assume that these authors have a different grammar and hence that the patterns illustrated in (8-11) in fact illustrate a change in the grammar of Latin. In section 6 of the present chapter, I will argue that the difference between (8-9) on the one hand and (10-11) on the other was caused by a process of language change, which quite fundamentally altered the structure of the Latin clause. Simplifying somewhat, the grammar went from being an OV grammar towards becoming a VO grammar, as is also reflected in its Romance descendents.

First, in section 4, I will develop an explicit proposal for deriving OV word order in Latin. On the basis of this, I will present a 'smuggling' account of LEF2 in section 5.

## 2 The derivation of Latin SOV

In this section I will propose that the SOV order observed in Latin be derived by leftward movement of the  $vP$ . This proposal ties in with my analysis of LEF2 in that it is precisely this movement of the  $vP$  which pre-empts the possibility that the presentational focus can move to the lower Spec,Foc $vP$ . I will now look in more detail at the proposed movement of the  $vP$ .

This section is structured as follows: section 2.1 provides some theoretical background. In 2.2 I survey a number of studies that have proposed that in some languages  $vP$  (or VP) is moved to the middle field, with special attention for some case studies where this process has been invoked to derive an OV pattern. Finally, in 2.3, I will apply the same mechanism to derive the (discourse neutral) SOV word order in Latin.

### 2.1 Theoretical premises

#### 2.1.1 Universal Base and language specific neutral word orders

In the early days of generative grammar, the observed differences head-initial languages like English, where heads precede their complements, and hence where V precedes the object, and head-final languages like Japanese, where heads follow their complements, and hence objects precede verbs, were encoded in so called phrase structure rules. The different base structure of individual languages was considered an idiosyncratic primitive<sup>2</sup>.

In the antisymmetric framework initiated by Kayne (1994), linear order is derived in a direct way from hierarchical syntactic structure: in the antisymmetric system, non-mutual (i.e. asymmetric) c-command is translated into linear (left-right) precedence. As we have seen earlier (ch. 1, section 1.2), Kayne goes on to derive a very restrictive version of the basic template of classical X'-theory: according to antisymmetric tenets, every head has one and only one specifier to its left and one and only one complement to its right.

One of the main consequences of the Antisymmetry Hypothesis is the claim that one universal word order underlies all the basic word orders of individual languages<sup>3</sup>. This universal word

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<sup>2</sup> Alternatively, the directionality of the order head complement was derived from the directionality of government: if case assignment depends on government and if an object has to be assigned case by the governing verb then the object will have to precede or follow V depending on the direction of government of V. I refer to Kayne (2010b) for a recent statement against directionality parameters.

<sup>3</sup> It goes almost without saying that such a strong claim has had its share of criticism (see e.g. Haider 2002; Pintzuk 2005).

order is referred to as the Universal Base. Basic or unmarked word order of every specific language are derived from this Universal Base by means of syntactic movement operations (see Hinterhölzl 2004, 2009, 2010 for discussion).

One of the syntactician's main tasks is then to provide a crosslinguistically valid theory of the movement operations that derive neutral word orders in the languages of the world, which correctly derives attested word orders and correctly excludes non-attested ones. Such studies include Koopman & Szabolcsi (2000), Svenonius (2007) and Jayaseelan (2010).

### **2.1.2 'Mixed' word order languages**

A discourse neutral Latin clause exhibits two conspicuous 'deviations' from the Universal Base. The first is that the complement of the lexical verb surfaces to the left rather than to the right, and the second is that, in the case of the analytic verbs (see 2.3.1.1 below), the lexical verb occurs to the left of the inflected verb. Both of these 'deviations' are located in the lower part of the Latin clause. In the higher regions, the Latin order is as in the base: for instance, complementizers precedes the inflected verb (and by this token the entire TP). Languages of which the basic order partially deviates from the base order are sometimes called 'mixed word order languages'.

In recent literature, it has been pointed out that the distribution of word order patterns that are different from the one in the Universal Base is not random (see Biberauer & Roberts (2005, 2006) and especially Biberauer, Holmberg & Roberts (2010)). The rough generalization is that if in a given language, two adjacent nodes X and Y end up linearized in an order different than the base order, all the nodes below X and Y will be linearized differently from the base order as well. This has come to be known as the 'Final-Over-Final Constraint' ('FOFC') (see Biberauer, Holmberg & Roberts 2010 for a much more detailed account). To give an example, if a language has the order V-INFL, it will have the order OV rather than VO.

In section 2.3, I will discuss the behaviour of Latin as a mixed word order language.

### **2.1.3 Verbal inflection and head movement**

In the GB/Principles and Parameters approach (as represented for instance by Baker 1985) lexical categories are inserted in lower areas of the clause and through head-to-head movement are related to and fused with pieces inflectional morphology which themselves are base generated as bound morphemes in functional projection located higher in the structure. The verb assembles the inflectional morphemes by means of (repeated) head movement, whereby all the pieces of inflection ultimately get attached to the verbal root as affixes. The further away from the verbal root a certain functional morpheme is located, the higher it was generated in the clausal hierarchy (this correlation has come to be known as the 'Mirror

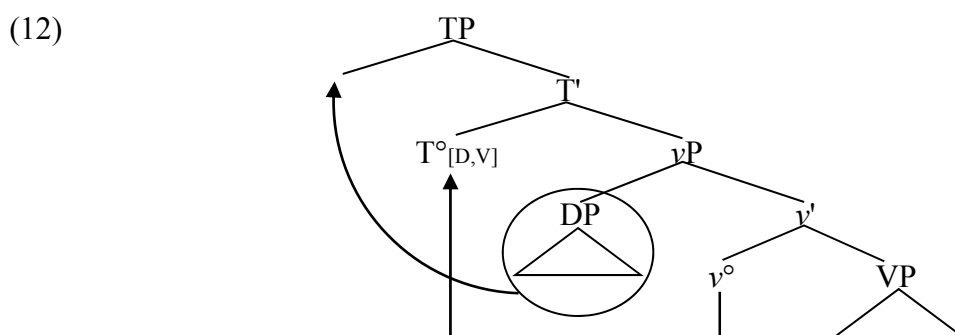
Principle'; see also ch. 1, section 2.4 on the universal hierarchy of functional projections (Cinque 1999)).

In more recent approaches there have been attempts to eliminate head movement, and hence verb movement, from the grammar (Chomsky 2001; Mahajan 2001; contra: Roberts 2010). It could be assumed, for instance, along the lines of Jayaseelan (2010), that all verb movement is actually phrasal movement, and that Morphological Merger of the verbal root and its affixes takes place under linear adjacency (as in Distributed Morphology). A third possibility is to assume that both phrasal and head movement of lexical elements to functional projections can give rise to word formation (as does, for instance, Julien 2002).

### 2.1.4 The EPP-requirement

It is standardly assumed that T is endowed with nominal (N) and verbal (V) features, which need to be 'checked' by syntactic objects with matching nominal and verbal features. The need to check a nominal feature on T is better known as the EPP requirement (the 'Extended Projection Principle' (Chomsky 1981, cf. ch. 1, section 2.4), i.e. the requirement that each clause have a subject).

The classical case is one in which a verbal head moves to adjoin to T° (cf. Pollock 1989; Belletti 1990) in order to check T's V-feature, and XP-movement takes place targeting Spec,TP in order to check T's N-feature. Most typically the latter is achieved by movement of a subject-DP to Spec,TP. A language like French in which this derivation holds could schematically be represented as in (12)<sup>4</sup>:



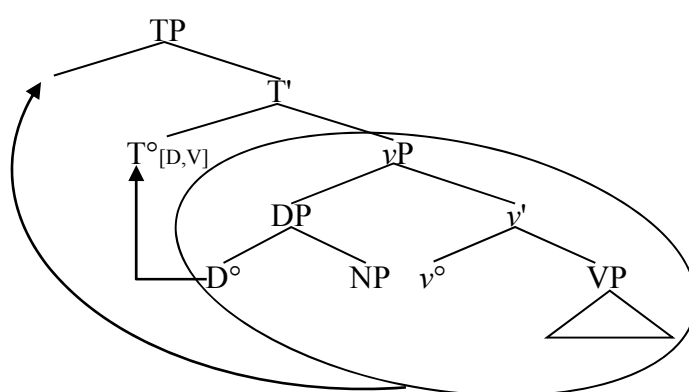
However, there seems to be substantial evidence that (12) is not the only way in which the N- and V-features of T can be checked. Consider first the following remark from Chomsky (2001: 38):

<sup>4</sup> It goes without saying that the diagrams in (12) and (13) are an oversimplification: the actual facts in specific languages are obviously far more complicated.

It has always been taken for granted that the strong V-feature is satisfied by V-raising to T (French vs. English), not VP raising to SPEC-T; and the strong NOMINAL-feature by raising of the nominal to SPEC-T (EPP), not raising of its head to T. But the theoretical apparatus provides no obvious basis for this choice. The same is true of raising to C and D. In standard cases, T adjoins to C, and an XP (say, a WH-phrase) raises to SPEC-C, instead of the WH-head adjoining to C while TP raises to SPEC-C. And N raises to D, not NP to SPEC-D.

Along the lines of this consideration, Travis (2006) suggests that there are languages which, rather than using DP movement and V movement to satisfy the N and V features of T, use D<sup>o</sup>- and VP-movement. Schematically the relevant derivation would look like (13):

(13)



The empirical data that lead Travis to postulate the existence of vP movement (or predicate fronting) languages come from Malagasy<sup>5</sup>, a VOS language. In Pearson (2000: 341-342) it is proposed that a structure as in (13) (without the V<sup>o</sup>-to-T<sup>o</sup> instead of D<sup>o</sup>-to-T<sup>o</sup> movement) underlies the derivation of the neutral SOV word order in Turkish<sup>6</sup>. Crucially, both authors postulate movement of verbal maximal projection to the left.

There is nowadays some consensus that the EPP requirement can be satisfied in more than one way (see a.o. Alexiadou & Anagnostopoulou 1998). Below, I will propose that in Latin, it is movement of a phrasal category, namely vP, that satisfies the EPP requirement. With Biberauer & Roberts (2005), I will consider this to be a case of pied-piping: although the verb phrase itself is of course verbal rather than nominal in nature, the probing head actually

<sup>5</sup> I will have nothing to say about D<sup>o</sup>-movement: I refer to Travis' paper (Travis 2006: 135-136) for discussion.

<sup>6</sup> Pearson (2000) also discusses the derivation of what he calls inverse languages (all VO), like Malagasy, where maximal projection are said to undergo movement without skipping any intervening projection, and pied-piping the entire subtree after each intermediate step. This is of course reminiscent of classical head movement, not in the least because both give rise to a 'mirror effect': in inverse languages, the relative order of arguments and adverbs is the reverse image of the universal order proposed by Kayne (1994) and Cinque (1999). This type of phrasal roll-up is called 'snowball movement' in Aboh (2004) and Travis (2006).



attracts the external argument in Spec, $\nu$ P, a DP with nominal features. It is this DP that pied-pipes the entire verb phrase.

Departing from the studies mentioned above, I will make the additional assumption that the nominal and verbal features which need to be checked are located on different functional heads in the T-system. Following much work in the cartographic and nanosyntactic tradition, I will adopt the view that there is a one-to-one relation between (functional) heads and (syntactic) features (see for instance Shlonsky 2010 (cartography) and Svenonius, Ramchand, Starke & Taraldsen 2009 (nanosyntax)). Simply put: one head, one feature. As we will see below, there is evidence that in Latin these two functional heads were not adjacent. Below, I will show that the lexical verb, which I assume to be contained in  $\nu$ P, and inflection can be separated by a purely functional category, namely sentential negation, which I assume to be located in a functional projection NegP.

To make things a bit more concrete, I will assume that the functional head associated with a T-feature is  $T^\circ$  itself (assuming that per clause, only one of the T-heads of Cinque's (1999) hierarchy can be active). I will be less specific about the head endowed with an N-feature: I will just call it FP ('Functional Projection'), but I tentatively propose that it could be equated with the position for full lexical subjects ('SubjP') from Cardinaletti (2004), which is located high in the TP-domain (higher than all the Tense heads). I refer to section 2.3 for extensive discussion and illustration.

In the next section I will first have a look at a number of proposals in the literature which adopt a similar proposal in terms of  $\nu$ P movement in order to derive the sentence final position of the inflected verb. After this, I will return to the Latin data.

## **2.2 Deriving the order 'verb-inflection' through $\nu$ P-movement: some case studies**

In order to derive the INFL-final word order of Latin I adopt an analysis according to which the  $\nu$ P moves leftward. This proposal itself is not new: Devine & Stephens (2006: 89; 142 fn. 113) suggested it for Latin, and other authors have made similar proposals to derive 'head final' word orders in other languages. In this section I briefly illustrate some such proposals. The goal of this section is not to present an exhaustive discussion of these proposals, but merely to show that my proposal is in line with current theorizing within the framework that I have adopted.

Movement of a large verbal projection has frequently been invoked to derive the basic word order of verb-first languages (i.e. languages where the basic word order is VSO or VOS). I

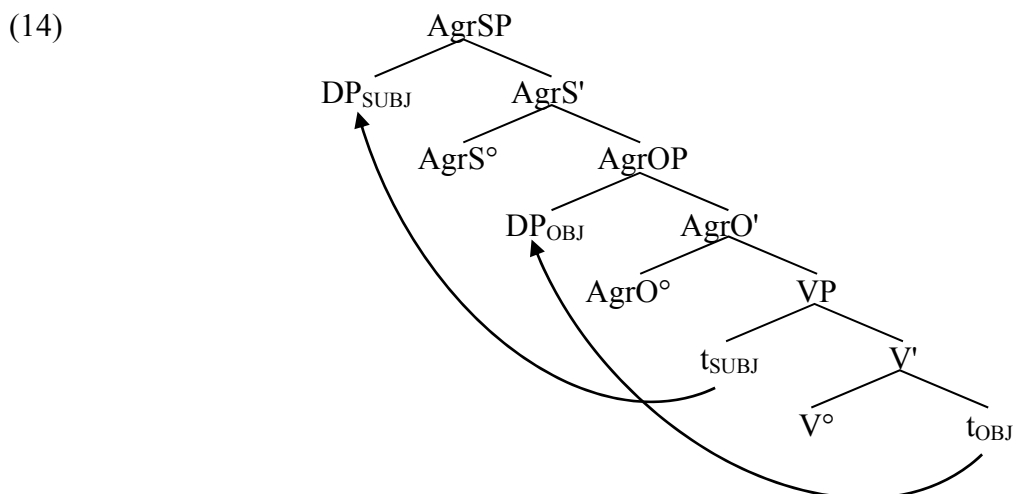
refer to Lee (2006) and to several contributions in Carnie & Guilfoyle (2000 (eds.)) and Carnie, Dooley & Harley (2005 (eds.)).

In addition, the same mechanism of movement of a verbal chunk has been invoked by some to account for word order patterns in SOV and, to a lesser extent, SVO languages (see. esp. the collection of papers in Svenonius (2000 (ed.))). In the next section, I will outline three explicit proposals to derive INFL-final word order patterns in some SOV-languages.

As the reader will observe, the case studies that I will present are differ from one another in that some authors assume an articulated-VP (with a functional projection  $vP$  dominating  $VP$ , as outlined in ch. 1, section 2.3) whereas others don't. However, nothing crucial hinges on this, and one can take, for instance, Haegeman's  $VP$  to be a shorthand for the articulated  $vP$ - $VP$ .

### 2.2.1 West Flemish

Haegeman (2000) starts with rejecting a number of proposals from early Minimalism (e.g. Zwart 1993, 1996) that seek to explain the word order of Dutch and German (embedded) without assuming that the verb moves to  $T$  and in which the OV word order is derived through of feature driven movement of the arguments of the verb from their  $VP$ -internal base position to a licensing position the middle field, stranding the verb in clause-final position. A derivation along these lines is sketched in (14), where it can be seen that the direct object and the subject move to the specifiers of specialized agreement ('Agr') projections (Belletti 1990; Chomsky 1995), viz.  $AgrO(bject)P$  and  $AgrS(ubject)P$ . The overall result is an SOV word order pattern:



A first objection against such an approach is that it predicts a number of differences between West Germanic OV languages on the one hand and the Germanic VO languages (English and Scandinavian languages) on the other, for instance with respect to the placement of indefinite (cf. Diesing's Generalization) and definite (cf. Holmberg's Generalization) direct objects.

Furthermore, assuming there to be no or only very short verb movement does not explain how the fairly rich inflectional affixes of the West Germanic languages end up attached to the verbal root. Finally, lack of verb movement leaves unexplained a number of facts concerning the syntax of negation in West Flemish and a number of Romance languages (based on comparison with data from Zanuttini 1997a,b). I refer to the original paper for full discussion and examples.

Instead, Haegeman proposes a two-step derivation to account for the word order observed in West Flemish verb final embedded clauses, with (i) head movement to T and (ii) remnant VP movement to Spec,TP. The proposal is similar to that suggested by Pearson (2000: 341-342) for the derivation of an (S)OV language like Turkish. Although Haegeman only looks at West Flemish, she assumes that the same proposal should be able to account for deriving the word order patterns embedded clauses in the other West Germanic OV languages.

Haegeman (2000: 82) proposes the hierarchy in (15) to represent the base structure of the IP-domain<sup>7</sup>:

- (15)            > TP            > NegP1            > FP            > AdvP1            > NegP2            > AdvP2            > VP  
                   landing site            *en*            landing site            temporal            negative            aspectual  
                   for finite verb                                    of infinitives            adverb            adverb            adverb

On the basis of a comparison with a number of Romance varieties (based on Zanuttini 1997a,b), she proposes that two projections for negation should be distinguished, a higher NegP1, where the optional 'presuppositional' negative head *en* is base generated, and a lower NegP2, in whose specifier the regular marker of sentential negation *nie(t)* 'not' or negative adverbials are hosted. The West Flemish example in (16) contains the 'presuppositional' negator *en* (on XP see below). Furthermore, the argument PP *nor us* 'home' is preceded by a series of functional adverbs.

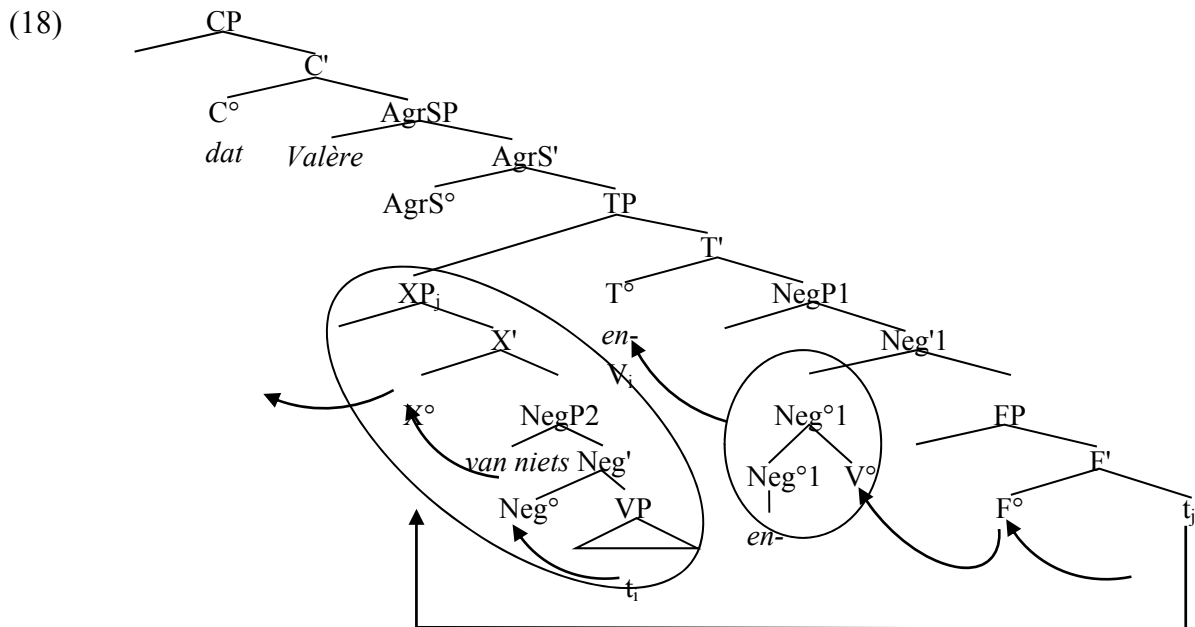
- (16) *da Valère* [<sub>XP</sub> [<sub>AdvT1</sub> *a*] [<sub>AspP1</sub> *nie meer*] [<sub>AspP2</sub> *atent*] *t*<sub>i</sub> [<sub>PP</sub> *nor us*]]<sub>j</sub> *en-komt*<sub>i</sub> *t*<sub>j</sub>.  
           that Valère            already            not anymore            always            to house    EN comes  
           '... that Valère already no more always comes to Ghent.'

Haegeman assumes that the (optional) negation marker *en*, which can only occur in tensed clauses, cliticizes to the inflected verb when the verb passes through NegP1 on its way to T. As indicated in the representation, in Haegeman's analysis the adverbial elements *a* ('already'), *nie meer* ('no more'), the PP *nor us* ('to home') and the trace of the finite verb are all contained in a large constituent XP, which is moved to a position higher than the derived position of the finite verb. The same is illustrated in the slightly simpler example in (17) (from Haegeman

<sup>7</sup> For presentational reasons, I have slightly changed the labels of some projections. FP stands for 'Functional Projection', and is the landing site of infinitives in the so called 'Infinitivus pro Participio' (IPP) construction.

2000: 75, her (7d)), where it is shown that the verb moves to T°, after which XP moves to Spec,TP. The tree corresponding to (17) is given in (18).

- (17)  $[_{CP} da [_{AgrSP} Valère [_{TP} [_{XP} van\ niets\ ketent]_j [_{T^\circ} en\ was_i\ t_j]]]]$ .  
 that Valère of nothing content EN was  
 'that Valère was not pleased with anything.'



Apart from the VP, which contains the adjectival predicate *ketent* 'content' (not indicated in (18)), some functional superstructure dominating VP is moved along to Spec,TP. The upper boundary of the moved chunked is marked as XP in (17-18). It is not quite clear from Haegeman's discussion with which projection XP should be equated.

Finally, Haegeman (2000: 87) suggests that her proposal can be extended to other West Germanic OV languages. In order to account for the phenomenon of object shift in German, which moves a definite object lefward, she proposes that the indefinite object remains in its VP-internal base position and is interpreted existentially, whereas the shifted object in (19b), moved outside VP but still within XP receives a 'strong' reading (Diesing 1992; cf. chapter 6, section 1.3.1, for more discussion of the behaviour of scrambled indefinites).

- (19) a. *weil Elly [XP immer [VP t<sub>i</sub> Lieder]]<sub>j</sub> singt<sub>i</sub> t<sub>j</sub>.*  
 because Elly.NOM always songs.ACC sings  
 b. *weil Elly [XP Lieder<sub>k</sub> immer [t<sub>i</sub> t<sub>k</sub>]]<sub>j</sub> singt<sub>i</sub> t<sub>j</sub>.*  
 because Elly.NOM songs.ACC always sings  
 'because Elly always sings songs.'

## 2.2.2 Finnish

In neutral sentences in Finnish, VO is the only possible order. This is shown in (20), from Holmberg (2000: 124, his (2)).

- (20) a. *Jussi kirjoitti romaanin.* VO  
Jussi wrote novel  
'Jussi wrote a novel.'  
b. \* *Jussi romaanin kirjoitti.* \*OV

Holmberg (2000) discusses cases in Finnish where the presence of an operator (an interrogative phrase or an identificational focus) in C can optionally give rise to OV word order. This pattern is illustrated in (21): while (21a) represents the neutral order, in the matrix question in (21b), the DP *romaanin* 'novel' precedes the verb. This variation is due to the presence of the question word *milloin* 'when' in Spec,CP.

- (21) a. *Milloin Jussi olisi kirjoittanut romaanin?* VO  
when Jussi would.have written novel  
b. *Milloin Jussi olisi romaanin kirjoittanut?* OV  
'When would Jussi have written a novel?'

One of Holmberg's main goals is to account for the contrast between (20b) and (21b). I will not go into this matter, but I refer to the original paper (esp. p. 143ff.) and to Biberauer, Holmberg & Roberts for discussion. Instead, I will focus on the derivation of sentences with OV word order, which according to Holmberg are derived through (repeated) XP-movement. A sketch of a part of the derivation of (21b) is given in (22), with 'PrcP' for 'Participle Phrase'. Each newly merged bound inflectional morpheme gives rise to phrasal movement to the specifier of the projection it is born in<sup>8</sup>.

- (22) a. [<sub>VP</sub> kirjoitta romaanin] Move Obj →  
b. [<sub>VP</sub> romaanin kirjoitta t<sub>OBJ</sub>] Merge Prc →  
c. [<sub>PrcP</sub> -nut [<sub>VP</sub> romaanin kirjoitta- t<sub>OBJ</sub>]] Move VP to Spec,PrcP →  
d. [<sub>PrcP</sub> [<sub>VP</sub> romaanin kirjoitta- t<sub>OBJ</sub>] [<sub>Prc'</sub> -nut t<sub>VP</sub>]] Merge Aux →  
e. [<sub>AuxP</sub> ol- [<sub>PrcP</sub> [<sub>VP</sub> romaanin kirjoitta- t<sub>OBJ</sub>] [<sub>Prc'</sub> -nut]]] Move PrcP to Spec,  
AuxP →  
f. [<sub>AuxP</sub> [<sub>PrcP</sub> [<sub>VP</sub> romaanin kirjoitta- t<sub>OBJ</sub>] [<sub>Prc'</sub> -nut]] [<sub>Aux'</sub> ol- t<sub>PrcP</sub>]] Merge TP →  
g. [<sub>TP</sub> -isi [<sub>AuxP</sub> [<sub>PrcP</sub> [<sub>VP</sub> romaanin kirjoitta- t<sub>OBJ</sub>] [<sub>Prc'</sub> -nut]] [<sub>Aux'</sub> ol- t<sub>PrcP</sub>]]] Move PrcP to Spec,TP →  
h. [<sub>TP</sub> [<sub>AuxP</sub> [<sub>PrcP</sub> [<sub>VP</sub> romaanin kirjoitta- t<sub>OBJ</sub>] [<sub>Prc'</sub> -nut]] [<sub>Aux'</sub> ol- t<sub>PrcP</sub>]] [<sub>T'</sub> -isi t<sub>AuxP</sub>]]

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<sup>8</sup> Step (22b) shows short movement of the object inside VP, to 'say Spec,VP' (Holmberg 2000: 138); compare section 2.3.1.3 below.

What is important in (22) is that at three points in this derivation, an extended projection of the verb (VP in (22d), PrcP in (22f) and AuxP in (22h)) containing the direct object is moved to pick up inflectional morphology base generated higher up in the tree (assuming a process of word formation *à la* Julien (2002)).

### 2.2.3 Hindi

Mahajan (2003) seeks to dispense with the operation of head movement as part of narrow syntax, and second, it tries to deal with both crosslinguistic and language-internal word order variation in the computational component of the grammar ('narrow syntax'), i.e. without encoding directionality parameters in phrase structure rules). The latter aim is fully in the spirit of Kayne (1994).

Mahajan follows Kayne (1994) in assuming that the complement of the verb, say the direct object, is universally base generated as a rightward sister to its selector. Moreover, the author also assumes that the direct object undergoes (short) leftward moved past the verb, 'possibly to a case licensing position'. This leftward movement of the object is argued to be universal: it does not only take place in OV languages, but also in VO languages, where the object targets a slightly higher position (outside VP). This first step of object movement is then universally followed by VP movement, namely movement of a remnant VP in the case of 'high' object movement (VO languages) and movement of a full VP in the case of 'short' (VP-internal) object movement (OV languages).

This then yields the following basic derivations of (i) SVO-languages, with remnant VP movement (23a) and (ii) SOV-languages, with VP movement (23b), from Mahajan (2003: 224, his (9-10)):

(23) a. SUB [<sub>VP</sub> t' V t<sub>OBJ</sub>] OBJ [<sub>PredP</sub> t<sub>SUB</sub> t<sub>VP</sub>] VP-remnant movement => VO



b. SUB [<sub>VP</sub> OBJ V t<sub>OBJ</sub>] [<sub>PredP</sub> t<sub>SUB</sub> t<sub>VP</sub>] VP movement => OV



Under Mahajan's account, the only difference between OV and VO languages is the height of the landing site of the object (the difference in VP and remnant VP movement being a result of this).

Let me present some independent evidence for a derivation along the lines of (23b). Mahajan (2003: 227-228) adduces data from Hindi, an INFL-final SOV-language where word order is considerably free. The main clauses in (24-25) contain a ditransitive predicate. Mahajan

argues that there is movement of the VP, which contains both the direct object and the indirect object, whereby the former has already undergone short VP-internal movement past the verb and the latter is sitting in its base position<sup>9</sup>.

Moreover, the sentences in (24-25) both contain a clause-final adjunct-CP. In this adjunct, we see a proper name, *Mohan*, which is coreferential with a pronoun in the matrix clause *use* 'him'. The hypothesis is that the contrast *qua* grammaticality between the two sentences can be correlated to the structural position of the pronoun *use* 'him'. The only difference between (24) and (25) is the order of the direct and the indirect object. Consider first (24):

- (24) *??siitaa-ne use<sub>i</sub> [VP [DP vah kitaab]<sub>j</sub> t<sub>i</sub> nahii dikhaayii t<sub>j</sub>] thii t<sub>VP</sub> is liye*  
 Sita.ERG him that book not showed be.PAST therefore  
*[CP to mohan<sub>i</sub> naaraaz ho gayaa].*  
 then Mohan angry be gone  
 'Sita did not show the book to Mohan in order to make him angry.' (lit. 'Sita had not shown him the book therefore, then Mohan angry became.')

According to Mahajan, the severely degraded status of (24) is to be ascribed to a Principle C-violation. The indirect object has scrambled from its base position to a position outside VP, from where it c-commands the coindexed R-expression *Mohan*, whence the principle C-violation. In (25) on the other hand, *use* has not undergone scrambling:

- (25) *?siitaa-ne [VP [DP vah kitaab]<sub>j</sub> use<sub>i</sub> nahii dikhaayii t<sub>j</sub>] thii t<sub>VP</sub> is liy*  
 Sita.ERG that book him not showed be.PAST therefore  
*[CP to mohan<sub>i</sub> naaraaz ho gayaa].*  
 then Mohan angry be gone  
 'Sita did not show the book to Mohan in order to make him angry.' (lit. 'Sita had not shown him the book therefore, then Mohan angry became.')

If one did not assume that *use* was contained in a larger constituent, i.e. VP, a similar Principle C-violation as in (25) would be predicted, *quod non*.

In section 3.1.3 below, I will discuss another set of (related) proposals concerning sentences with clause-final adjuncts, which also involve *vP*-movement. Since these derivations display an additional feature which will be the subject of the entire section 3, I prefer to present them at a later stage. I now return to Latin.

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<sup>9</sup> Although Mahajan doesn't mention this, it is clear from (24-15) that the moved verb phrase also has to contain sentential negation *nahii* 'not'.

## 2.3 $\nu$ P movement in Latin

Having shown that the idea that head final orders are derived through  $\nu$ P movement is not novel, I will now present my implementation of this idea for the head final order of Latin syntax. I will not be concerned with the phenomenon of so called *uerbum primo loco*, i.e. verb initial sentences (VO(S) and V(S)O)<sup>10</sup>.

### 2.3.1 OV word order in Latin: the basic idea

#### 2.3.1.1 Synthetic vs. analytic verbs

As already discussed, I assume that the lexical verb (i.e. V, shorthand for the complex  $\nu$ /V) can undergo head movement to T°. More specifically, it does so if the verb is 'synthetic', i.e. when INFL and the lexical root of the verb are realized on the same word, as in the active sentences with perfect tense in (26).

- (26) a. *Caesar exercitum **reduxit**.*  
Caesar.NOM army.ACC led.back.PF  
'Caesar led back his army.' (= Caes. Gal. 3.29)
- b. *Etenim omnes boni [...] Caesarem **occiderunt**.*  
PRT all.NOM good.NOM Caesar.ACC killed.PF  
'For all the good men killed Caesar.' (= Cic. Phi. 2.29)

Conversely, in the case of 'analytic' verb forms, i.e. when INFL (in boldface) is realized as an auxiliary, I assume that the lexical verb (underscored) does not leave  $\nu$ P. The auxiliary is base generated in T° and V surfaces in a derived position. This is illustrated in the deponent (27a) and passive (27b) sentences with perfect tense in (27):

- (27) a. *[...] utilitas amicitiam secuta **est**.*  
utility.NOM friendship.ACC followed.NOM is  
'Advantage has followed friendship.' (= Cic. Lael. 51)
- b. *Cum Medii hospites occisi **sunt**, omnes e Peloponneso [...] uolauerunt.*  
when Medus.GEN guests.NOM killed.NOM they.are all.NOM from P.ABL flew.PF  
'After the guests of Medus had been killed, all (sc. the ravens) flew away from the Peloponnesus.' (= Plin. NH 10.33)

I will assume that in Latin, verbs with so called 'synthetic' morphology (i.e. verb forms which contain both the lexical root and the inflectional morphology) undergo V°-to-T° movement,

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<sup>10</sup> On *uerbum primo loco*, see Bolkestein (1995), Spevak (2005) and Devine & Stephens (2006: 145-172).



although it should be said that the empirical data as such do not provide any conclusive argument against an analysis along the lines of Jayaseelan (2010). On the other hand, along the lines of Cinque (1999), I will assume that in the so called 'analytic tenses', in which an auxiliary combines with a participle, the (finite) auxiliary is base generated in a TP-internal position.

Now if the synthetic verb moves to T and nothing else happens then one would not expect it to occupy a final position. Rather one would expect the inflected verb to appear to the left of VP material, contrary to fact. As I pointed out in section 2.1.2 above, the basic Latin word order diverges in two important respects from the order in the Universal Base: it has the order OV rather than VO, and it has the order V-INFL rather than INFL-V. I will discuss each of these in turn, but I will mainly focus on the derivation of the order INFL-V.

### 2.3.1.2 Deriving the order OV: short object movement

The basic point is that the direct object undergoes leftward movement to some fairly low position in the extended projection of the verb (see e.g. Mahajan 2003). The same is probably the case for the indirect object (if present) and the external argument (the subject) as well. However, these two are base generated to the left of the lexical verb, so they do not change their 'surface string' position with respect to this verb by undergoing leftward movement.

A little sample derivation is given in (28). (28a) shows the base order. In (28b), two functional projections are merged on top of vP. The specifiers of those two projections can host the verb's arguments, stranding the verb inside the verb phrase<sup>11</sup>.

- (28) a. [<sub>vP</sub> **DP**<sub>S</sub> [<sub>v°</sub> **V** [<sub>VP</sub> [<sub>v°</sub> **DP**<sub>O</sub> ]]]]  
 b. [<sub>EP</sub> **DP**<sub>S</sub> [<sub>FP</sub> **DP**<sub>O</sub> [<sub>vP</sub> *t*<sub>S</sub> [<sub>v°</sub> [<sub>VP</sub> [<sub>v°</sub> *t*<sub>O</sub> ]]]]]]]

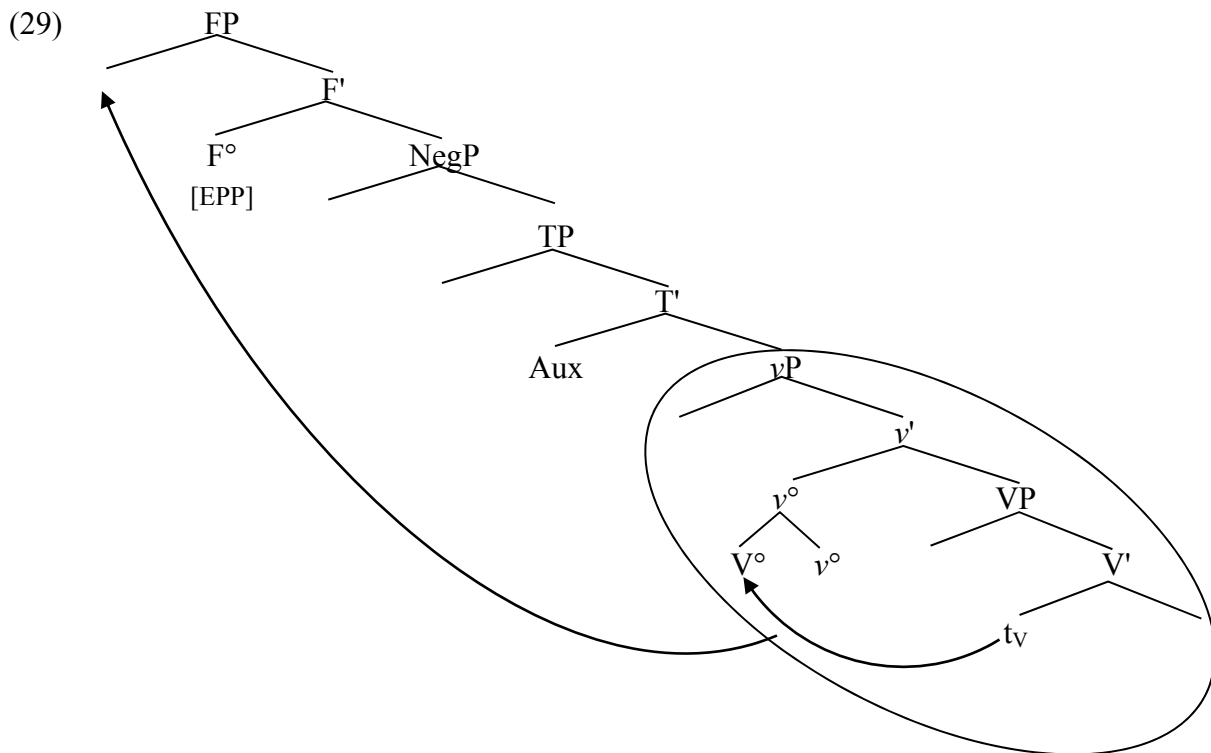
I refer to Koopman & Szabolcsi (2000), Holmberg (2000), Hróarsdóttir (2000, 2010), Mahajan (2003), Biberauer & Roberts (2005), and Jayaseelan (2010) for discussion. It goes without saying that is not sufficiently clear what the exact landing site of the verb's complement is, especially not if one wants to pin down this landing site 'cartographically'. Furthermore, it is hard to tell what the trigger of this movement should be. A possible answer to this last question could be that movement only takes place for the sake of linearization (see Biberauer, Holmberg & Roberts 2010). I will not elaborate further on this difficult question.

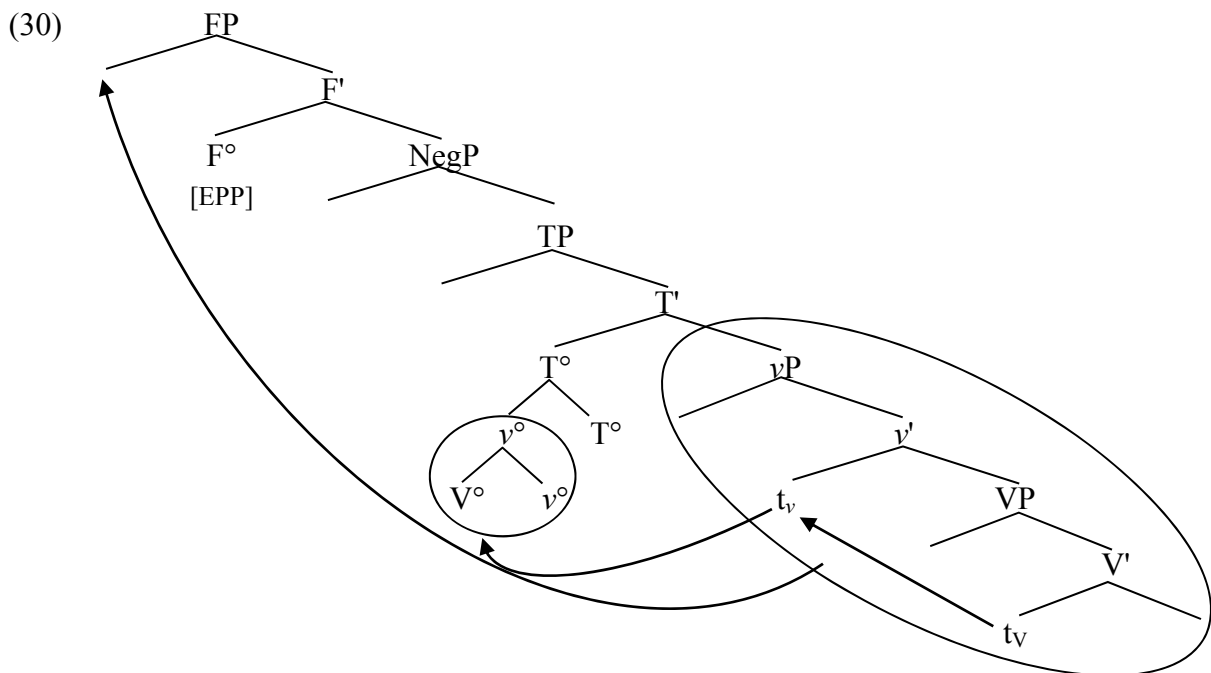
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<sup>11</sup> See Haegeman (1993) for some discussion of phenomena of order preservation in derivations where arguments separately undergo movement.

### 2.3.1.3 Deriving the order V-INFL: (remnant) $\nu$ P movement

Concerning the second 'deviation' of the Universal Base, I propose that the observed INFL-final word order of discourse neutral Latin sentences is derived by (leftward) (remnant)  $\nu$ P movement to the specifier of a functional head ('FP' in (29-30)) in the split TP, which is endowed with an EPP feature and which sits higher than NegP, itself above TP. When the lexical verb is a participle (i.e. in analytic tenses) or an infinitive (selected by a raising verb, possibly with restructuring), I assume that the fronted constituent is a full  $\nu$ P. In the case of synthetic verbs, I propose that a remnant  $\nu$ P is fronted, which contains the trace of the verb that has undergone  $V^\circ$ -to- $T^\circ$  movement (along the lines of Haegeman 2000 and Pearson 2000). These two derivations are sketched in (29) and (30):





Below (cf. examples (36-37)), it will be shown that the extracted  $vP$  targets a position higher than  $NegP$  (as represented in (29-30)). In addition, it is possible that subsequent  $v^\circ$ - or  $vP$ -remnant movement disturbs the linear order  $V_{lex}-V_{fin}$  (yielding a verb first sentence, cf. Bolkestein 1995, Spevak 2005, Devine & Stephens 2006).

### 2.3.2 Two illustrations

I will illustrate the derivation that I have just proposed with two small case studies. I will look the relative order of transitive non-finite verbs (participles in 4.3.2.1 and infinitives in 4.3.2.2), their direct objects and tensed auxiliaries.

#### 2.3.2.1 'Analytic' transitive verbs

The only cases in Latin where one can find transitive predicates where the lexical verb and its inflection are not realized on the same word are perfect tense forms of so called 'deponent' verbs (see Embick 2000 for an analysis of the morphology of this class of verbs). Deponent verbs have passive morphology in all tenses and moods, but they have the argument structure of genuine active predicates. In (32) for instance, the verb *molitur* 'brings about' has passive morphology (cf. the ending *-tur*), but it behaves like any transitive predicate in taking a direct object which it marks with accusative case. As shown by the bracketing, I assume that (i) the verb moves to T, (ii) the object DP *optimatum discordiam* 'strife among the patricians' undergoes short leftward movement inside  $vP$ , (iii) the remnant  $vP$  containing the trace of V moves to Spec,FP.

- (31) *Quis igitur [FP [vP [DP *optimatum discordiam*]<sub>j</sub> t<sub>i</sub> t<sub>j</sub>]<sub>k</sub> [TP *molitur*<sub>i</sub> t<sub>k</sub> ]]*?  
 who PRT optimates.GEN discord.ACC brings.about  
 'Who is it that envisages strife among the patricians?' (= Cic. Har. resp. 40)

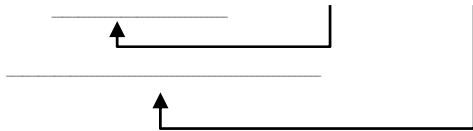
I will now focus on the perfect tense forms of transitive deponents, and more specifically in the order in which inflection, participles and direct objects appear in these contexts. Consider first the sentences in (32-33), which exhibit the order **DP<sub>obj</sub>-V<sub>main</sub>-INFL** (examples from Devine & Stephens 2006: 183). Once again the fact that the auxiliary *esse* 'be' has been selected does not imply any notion of passive voice or unaccusativity: the predicates in (96-97) are genuinely transitive.

- (32) *nihil aliud molitus est [...]*.  
 nothing.ACC else.ACC brought.about.NOM he.is  
 'He has brought about nothing else.' (= Cor. Nep. Lys. 1.4)

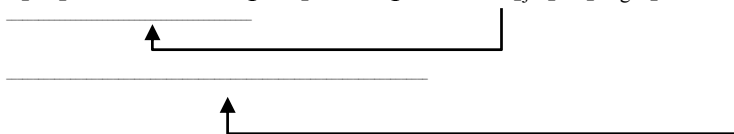
- (33) *[DP *Hostium copias*] conspicatus est*.  
 enemies.GEN troops.ACC noticed.NOM he.is  
 'He noticed the enemy's troops.' (= Caes. Bel. Gal. 5.9)

For sentences as these, I would like to suggest a structure as in (34-35). I assume that vP, i.e. the complex 'direct object + past participle' is extracted out of TP. Moreover, the complement of the verb has itself undergone (short) leftward movement inside the fronted vP (cf. section 2.3.1.3):

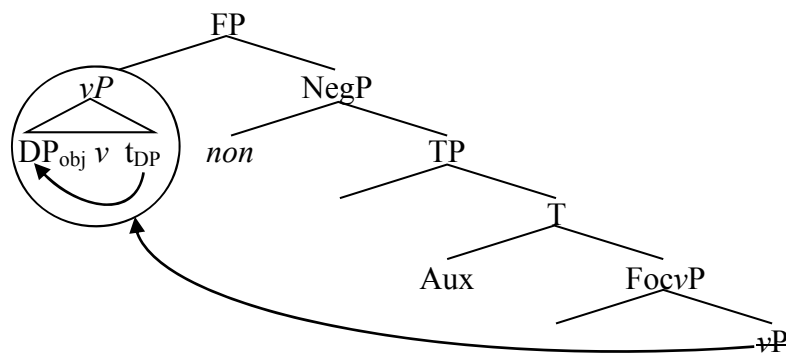
- (34) a. [FP [vP [DP nihil aliud]<sub>i</sub> molitus t<sub>i</sub> ]<sub>j</sub> [F° [NegP [TP est t<sub>j</sub> ]]]].



- b. [FP [vP [DP Hostium copias]<sub>i</sub> conspicatus t<sub>i</sub> ]<sub>j</sub> [F° [NegP [TP est t<sub>j</sub> ]]]].



- (35)



That such an analysis is indeed on the right track seems to be confirmed by examples like (36-37), where the past participle and the inflected verb are not string adjacent. In the examples below, they are separated from each other by an intervening negation, yielding the order **DP<sub>obj</sub>-V<sub>lex</sub>-Neg-V<sub>fin</sub>**:

- (36) *Consilii nostri, ne si eos quidem, [CP qui [FP [vP id<sub>i</sub> secuti t<sub>j</sub>]<sub>j</sub> [F° [NegP non [TP sunt t<sub>j</sub>]]]], non poeniteret, nobis poenitendum putarem.*  
 advice our.GEN not if them.ACC PRT who.NOM it.ACC followed.NOM.PL not  
 they.are not feel.sorry.SUBJ us.DAT feel.sorry.GER I.would.think.SUBJ  
 'Concerning our advice, I think we should not regret it, not even if those who didn't take it, didn't regret that decision.' (= Cic. ad Fam. 9.5.2)
- (37) *Et eo die [FP [vP [CP tabernacula statui]<sub>i</sub> passus t<sub>i</sub>]<sub>j</sub> [F° [NegP non [TP est t<sub>j</sub>]]]].*  
 and that.ABL day.ABL tents.ACC set.up.INF.PASS permitted.NOM not he.is  
 'And on that day, he did not allow that tents were set up.' (= Caes. Bel. Civ. 1.81)

Now given that sentential negation *non* or *ne* is always linearly to the left of an inflected verb, in NegP, it is by transitivity always to the left of a postverbal presentational focus, itself in Spec,FocvP<sup>12</sup>. The sentences in (38-39), both from Petronius' *Satyricon*, seem to confirm that the order **Neg-V<sub>fin</sub>-DP<sub>Foc</sub>** is indeed attested. They both contain a postverbal direct object which is (completely non-predictable) new information.

- (38) a. *[...] Myron, qui paene animas hominum ferarumque aere comprehenderit, non inuenit heredem.*  
 Myron.NOM who.NOM almost souls.ACC men.GEN beasts.GEN-and bronze.ABL had.caught  
 not found.PF heir.ACC  
 'Myron, who almost managed to capture the souls of men and animals in bronze, did not find a heir.' (= Petr. Sat. 88)
- b.  $[FP \text{ Myron}_k [NegP \text{ non } [TP [T^\circ \text{ inuenit}_j [FocvP \text{ heredem}_i [vP/VP \text{ t}_i \text{ t}_j \text{ t}_k ]]]]]]$ .
- (39) a. *Etiamsi grauem iniuriam accepi, homini tamen misero non inuideo medicinam.*  
 although heavy insult.ACC I.received man.DAT still ill-fortuned.DAT not I.envy medicine.ACC  
 'Even though I was heavily wounded, I do not begrudge a poor man a remedy.'  
 (= Petr. Sat. 129)
- b.  $[...] [NegP \text{ non } [TP [T^\circ \text{ inuideo}_j [FocvP \text{ medicinam}_i [vP/VP \text{ t}_i \text{ t}_j ]]]]]]$ .

<sup>12</sup> Devine & Stephens (2006: 183) make the following remark about the position of the negative marker *non* 'not': 'The negative here seems to be in the focus projection or in a negative phrase which competes with the focus phrase'. I leave an investigation of the position of sentential negation (*non* and *ne*) in Latin for future research.

In addition, one could think that the slightly more complex example in (40) instantiates the same phenomenon. However, the postverbal constituent is a remnant DP, out of which the noun *partem* ('part') has been scrambled. Since the remnant contains the most contentful word, *uecesimam* ('twentieth'), I analyse this postverbal remnant constituent as a presentational focus (cf. the similarities with the 'straddled' configurations to be discussed in section 4.1.2.1 (examples (64-65))).

- (40) *Has aduersus copias spes omnis consistebat Datami in se locique natura:*  
 those against troops.ACC hope all.NOM consisted Datames.DAT in REFL place.GEN-and nature.NOM  
*namque huius partem<sub>i</sub> non habebat [DP uicesimam t<sub>i</sub> militum].*  
 PRT-and this.GEN part.ACC not he.had.IMPF twentieth.ACC soldiers.GEN  
 'Confronted with such troops, Datames' only hope resided in himself and in his  
 favourable position, for he twenty times less soldiers than his opponent.'  
 (= Nep. Dat. 8.3)

### 2.3.2.2 Auxiliaries and transitive infinitives

In this section I will briefly consider the distribution of transitive infinitival verbs which are themselves the complement of a finite verb. I will loosely refer to these selecting finite verbs as 'auxiliaries', abstracting away from the question of whether they are raising or control verbs. I don't know whether the distinction is relevant for the topic I am mainly interested in, viz. word order in verbal complexes. I refer to the study in Zennaro (2006) for discussion of infinitival complementation in Latin.

A first verb that is often followed by an infinitival complement is *uideor* 'seem', arguably a raising verb. Under the analysis developed here, the order O-V-Aux in (41-42) is derived by short movement of the object over the infinitive, and raising of the vP across the inflected form of *uideor*. In (41), for instance, the object *uulnera* 'wounds' moves over *perducere* 'bring', and the entire chunk *uulnera perducere* moves to a position to the left of *uidetur* 'it seems'.

- (41) *Est etiam coloris fere rufi, quod celeriter ad cicatricem [vP uulnera<sub>i</sub>*  
 it.is PRT colour.GEN almost red.GEN which.NOM quickly to scar.ACC wounds.ACC  
*perducere t<sub>i</sub>] uidetur t<sub>j</sub>.*  
 bring.INF seems  
 'There is also one (sc. a kind of plaster) which is almost red and which seems to  
 bring wounds quickly to a scar.' (= Cels. 5.19.5)

- (42) *Sed iam capitibus Geminorum [vP [circulum aestiuum]<sub>i</sub> tangere t<sub>i</sub>] uidetur t<sub>j</sub>.*  
 but PRT heads.ABL Gemini.GEN circle.ACC summer-.ACC touch.INF seems  
 'But the summer circle seems to touch the heads of the Gemini.' (= Hyg. Ast. 1.7)

Example (43) shows that negation intervenes between the fronted vP and INFL:

- (43) *[FP [vP [Praetermitti ab censoribus et neglegi macula iudiciorum]]<sub>j</sub>*  
 disregard.PASS.INF by censor.ABL and neglect.PASS.INF stain.ABL judgments.GEN  
*posse t<sub>j</sub> [NegP NON [TP uidebatur t<sub>i</sub>]]].*  
 be.able.to.INF not it.seemed.IMPF  
 'It did not seem possible that the tarnished reputation of the courts be neglected as well  
 by the censors.' (= Cic. pro Clu. 130)

In (44), the deponent raising verb appears in the perfect tense. The sequence **DP<sub>O</sub>-V<sub>inf</sub>-Part-Aux** is fully 'head-final' (i.e. all complements are linearized to the left of their selecting heads):

- (44) *[...] etsi [...] tum primum [vP [lucem<sub>i</sub> aspicere t<sub>i</sub>]]<sub>j</sub> uisi t<sub>j</sub>]<sub>k</sub> sunt t<sub>k</sub>, tamen ipsa*  
 although then first.ADV light.ACC look.at.INF seemed.NOM they.are PRT self.NOM  
*lux ita deforme intuentibus agmen omni morte tristior fuit.*  
 light.NOM so hideous.ACC looking.DAT.PL crowd.ACC whole.ABL death.ABL sadder.NOM was.PF  
 'Although it seemed as if it was the first time they saw the light of day, still that very  
 light was more cruel form them than death, since it showed to them that hideous  
 crowd.' (= Liv. aUc 9.6.3)

6 additional examples are given in (45-57), with the auxiliaries *debeo* 'have to', *posse* 'be able' and *uelle* ('want'). The second example of each pair contains a marker of sentential negation, with *non* 'not' intervening between INFL and the complex **Obj-V<sub>inf</sub>**.

- (45) a. *[...] excusationem damus liberis et illos segniores ad referendam*  
 excuse.ACC we.give children.DAT and them.ACC slower.ACC to render.GER.ACC  
*gratiam facimus quibus [vP stimulos<sub>i</sub> adicere t<sub>i</sub>]]<sub>j</sub> debemus t<sub>j</sub>.*  
 gratitude.ACC we.make who.DAT.PL stimuli.ACC add.INF we.have.to  
 '... we provide the children with an excuse and we make them less prone to express  
 their gratitude, whereas we ought to encourage them.' (= Sen. Ben. 3.36.2)

- b. *[vP [seruitutis auctores]]<sub>j</sub> sequi t<sub>j</sub>] NON debetis t<sub>i</sub>.*  
 slavery.GEN proponents.ACC follow.INF not you.PL.have.to  
 'You should not follow the people who plead for slavery.' (= Cic. Phil. 10.18)

- (46) a. *Si hoc fieri potest ut in hac ciuitate [...] quisquam nullis*  
 if this.NOM happen.INF can that in this.ABL community.ABL somebody.NOM no.ABL  
*comitiis [vP [imperium aut potestatem]<sub>i</sub> adsequi t<sub>i</sub>]]<sub>j</sub> possit t<sub>j</sub>, [...].*  
 elections.ABL authority.ACC or power.ACC obtain.INF can.SUBJ  
 'If it is possible in this that somebody can attain authority and power in this  
 community without being elected... .' (= Cic. Lex agr. 2.29)

- b. *Multi duces [...] [vP regiam intrare]<sub>i</sub> NON poterant t<sub>i</sub> [...].*  
 many.NOM leaders.NOM palace.ACC enter.INF not could.IMPF  
 'Many leaders were not able to enter the palace.' (= Q. Curt. Hist. 10.6.2)

- (47) a. *Nisi enim [...] [immortalitatem<sub>i</sub> optare t<sub>j</sub>] uellet t<sub>j</sub>, quid non adeptus est*  
 unless PRT           immortality.ACC   wish.INF   he.wanted.SUBJ   what.ACC   not obtained.NOM   he.is  
*quod homini fas esset optare?*  
 what.ACC   man.DAT   allowed.NOM   it.were.SUBJ   wish.INF  
 'Unless he had longed for immortality, what didn't he obtain that is suitable for a  
 mortal being to long for?' (= Cic. Lael. 11)
- b. *Nulla est igitur haec amicitia cum alter [<sub>vP</sub> uerum<sub>j</sub> audire t<sub>j</sub>]<sub>i</sub> NON uult t<sub>i</sub>*  
 no.NOM   is   PRT   this.NOM   friendship.NOM   since one.NOM   true.ACC   hear.INF   not   wants  
*alter ad mentiendum paratus est.*  
 other.NOM   to lying.GER.ACC   prepared.NOM   is  
 'There can be no friendship when one does not want to hear the truth and the other is  
 willing to tell lies.' (= Cic. Cat. 98)

### 2.3.3 Round-up

In section 2, I have laid the ground for tackling Hypothesis I, repeated here below:

- (6) Hypothesis I:  
 In Latin, a presentational focus XP moves to FocP iff XP is dominated by YP and YP  
 c-commands FocvP.

It should be clear by now that I would like to equate YP in (6) with the full vP from the derivation represented in (29) and with the remnant vP from the tree in (30). This will amount to a derivation whereby XP, embedded in vP is 'smuggled' past FocvP. In section 3.1, I briefly present the concept 'smuggling' as it has been developed in the current literature. I will then implement a smuggling derivation to account for Latin LEF2 (section 3.2), and in particular I will show that such a derivation can account for the fact that though being a presentational focus, the LEF2 constituent still can end up in CP.

## 3 A 'smuggling' derivation

### 3.1 Smuggling and locality

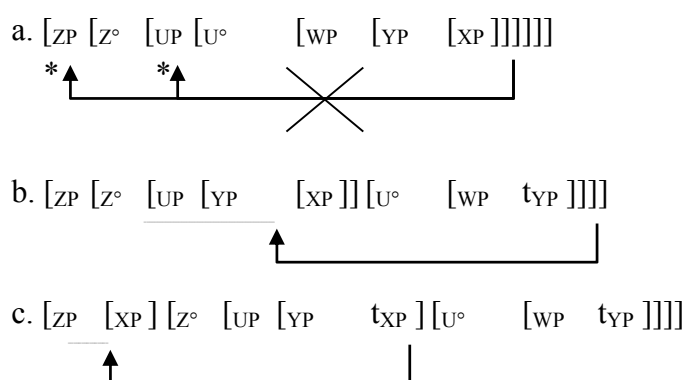
For general discussion on the phenomenon of smuggling and the possibilities it offers to avoid an intervention effect, I refer to Collins (2005a,b), Belletti 2010, Roberts (2010: passim). The following definition is taken from Collins (2005a: 97):



Suppose a constituent YP contains XP. Furthermore, suppose that XP is inaccessible to Z because of the presence of W (a barrier, phase barrier, or an intervener for the Minimal Link Condition and/or Relativized Minimality), which blocks a syntactic relation between Z and XP (e.g. movement, Case checking, agreement, binding). If YP moves to a position c-commanding W, we say that YP smuggles XP past W.

The derivation in question is schematically represented in (48). (48a) shows that movement of XP to Spec,UP or Spec,ZP is disallowed due to the presence of WP. However, if YP moves to Spec,UP, from where it c-commands WP (48b), it becomes possible for XP to move to Spec,ZP (48c).

(48) **XP-Smuggling**



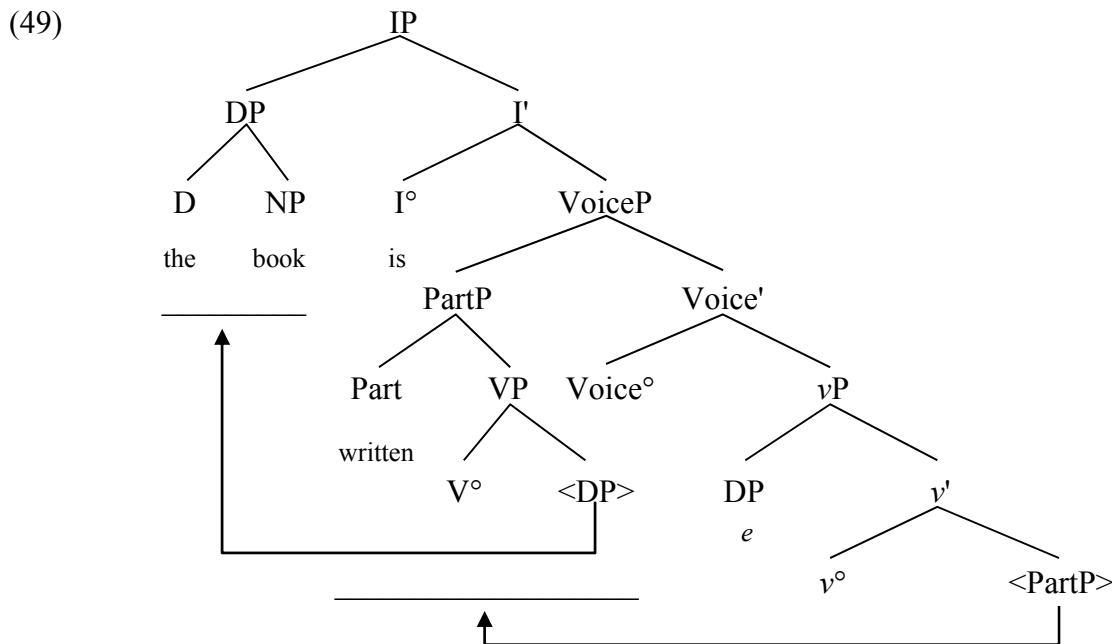
In the next section I will discuss a number of examples of derivations involving smuggling<sup>13</sup>.

### 3.1.1 English passives

Collins (2005a,b) offers a new analysis of the syntax of English passives and raising verbs, which both involve movement so called A movement, i.e. phrasal movement that targets an argument position. Under the assumption that the subject of an English passive sentence originates as a complement to the verb (the position where an argument is assigned theta role of Theme by the lexical verb) and that it ends up in the canonical subject position outside vP (say Spec,TP), it is surprising that it can raise to its surface position past the position where the agent theta-role is assigned, namely Spec,vP. Collins proposes a mechanism that enables an argument to move to an A-position past another A-position without giving rise to a Relativized Minimality violation.

<sup>13</sup> A short note on terminology is in order. I assume that 'smuggling' does not exist as a primitive operation. I consider the avoidance of an intervention effect to be an accidental by-product of two (or possibly more) independently motivated operations. Assuming that a given operation takes place only to allow for a second operation to be licit at a later point in the derivation would cause severe look-ahead problems.

Collins (2005b) suggests that English passives are derived through movement of a verbal projection ('PartP', for Participle Phrase) to the specifier of VoiceP (cf. Kratzer 1996), a functional projection that dominates  $vP$  where the diathesis of sentence is encoded. Crucially, PartP contains VP with the direct object. This argument DP can thus said to be 'smuggled' past Spec, $vP$ , which is the base position of the subject and by this token an argument position. From its derived position in Spec, VoiceP, the internal argument can be subextracted to Spec, IP. The same movement without the intermediate step, would have caused a Relativized Minimality violation. The derivation as proposed by Collins (2005b: 82) is sketched in (49):



### 3.1.2 Italian VOS

Another smuggling derivation was proposed by Belletti (2004: 36) to account for the VOS word order in some Italian sentences, which some speakers are slightly marked. As we have seen earlier (ch. 6, section 2.1.2), Belletti (2001a, 2004) argues that like TP,  $vP$  is associated with a periphery and that  $vP$  is dominated by a set of topic and focus projections. Her analysis of (50b) involves first of all movement of the subject from its  $vP$ -internal position to Spec, FocP, after which the remnant  $vP$  itself is moved to the Spec, TopP. The felicitous binding of the anaphor *propri* 'own' by the sentence final subject corroborates the claim that the underlying order is in fact SO, principle A being satisfied under reconstruction (cf. ch. 1, section 3.4.2.1):

- (50) a. *Chi ha salutato i propri genitori?*  
 who has greeted his own parents  
 'Who greeted his own parents?'  
 b. % *Ha salutato i propri<sub>i</sub> genitori Gianni<sub>i</sub>.*  
 has greeted his own parents Gianni  
 'Gianni<sub>i</sub> greeted his<sub>i</sub> own parents.'

(51) [TP Ha [TopvP [vP t<sub>i</sub> salutato i propri genitori]<sub>j</sub> [FocvP Gianni<sub>i</sub> t<sub>j</sub>]]].

### 3.1.3 Clause final functional adverbs

As I hinted at the end of the section 2.2, movement of a rather large portion of the extended projection of the verb has been invoked by a number of scholars to account for the clause-final occurrences of (circumstantial) adjuncts (see a.o. Costa 1997, Cinque 2006).

Cinque (1999: 21ff.) applies this mechanism to account for apparent exceptions to the universal hierarchy of functional projections and the concomitant rigid ordering of adverbs (see ch. 1, section 2.4). (52a) shows the basic order of the adverbials *di già* 'already' and *completamente* 'completely'. (52b) shows that the opposite ordering is ungrammatical. In (52c), the linear order between the two adverbs is inverted, with full grammaticality of the sentence.

- (52) a. *Aveva di già completamente [vP perso [la testa]]*.  
           he.had already completely lost the head  
           'He had already completely lost his mind.'  
       b. \* *Aveva completamente di già [vP perso [la testa]]*.  
       c. *Aveva completamente [vP perso [la testa]] di GIÀ*.

In the grammatical example (52c), where the adverbs do not surface in the expected order, the higher adverb follows the VO-complex (i.e. the direct object and rightward circumstantial adjuncts). The sentence is most natural when the postverbal adverb is prosodically more prominent.

The ungrammaticality of the b-sentences can be explained as a Relativized Minimality violation. For the c-examples, Cinque proposes a derivation where the chunk containing both the verb phrase and the lower of the two adverbs moves past the higher adverb, thus circumventing a minimality violation:

- (53) a. *Aveva [TPanterior di già [AspSgCompletive completamente [vP perso la testa]]]*.  
       b. \* *Aveva [FP completamente [TPanterior di già [AspSgCompletive ~~completamente~~ [vP perso la testa]]]*.  
       c. *Aveva [FP [AspSgCompletive completamente [vP perso la testa]] [TPanterior di GIÀ [AspSgCompletive ~~completamente~~ [vP perso la testa]]]]]*.

Note that the exact nature of the functional projection 'FP' hosting the moved constituent in (53c) is not of primary importance: the point is that in (53b), movement of a bare adverb to the same projection is disallowed. According to Cinque, this ungrammaticality is due to a violation of Relativized Minimality: the two functional adverbs are of the same feature class,

so the lower of the two adverbs cannot move across the higher to Spec,FP. The verb phrase is of a different feature class, so no minimality violations arises if it targets the same position.

Strong evidence for a movement derivation for cases like (53c) comes from the fact that scope is computed under reconstruction, with the adverb base generated in the higher position scoping systematically over the lower one, i.e. against linear order (see Cinque 1999: 21, his ex. (92a-b)):

- (54) a. *Da allora, non accetta i nostri inviti mica più sempre.*  
 'Since then, he doesn't accept our invitations not any longer always.'  
 b. \* *Da allora, non accetta i nostri inviti sempre mica più.*  
 c. *Da allora, non accetta sempre i nostri inviti mica PIÙ.* (*mica > più > sempre*)

Belletti & Rizzi (to appear) give more examples of how moving 'verbal chunks' can avoid intervention in the lower part of the clause.

To wrap up this section, I would like to conclude that there is substantial empirical evidence that the process of 'smuggling' offers a mechanism to circumvent minimality violations. I will now return to the Latin LEF2 data.

## 3.2 Details of the Latin derivation

I will now analyze one LEF2-derivation in detail. As usual, but especially in a very complex derivation with lots of movement operations, it is important to make sure that all locality constraints are respected.

### 3.2.1 Some notes on locality

In the case at hand, the feature that triggers LEF2 should be sufficiently different from the quantificational operator that derives the AC. I propose the following feature matrices:

(55) Feature composition of attracting focus heads:

- a.  $\text{Foc}^\circ$  [+ Foc] = identificational focus  
 b.  $\text{Focv}^\circ$  [+ Foc] = presentational focus

(56) Feature composition of attracted focus(-like) phrases:

- a.  $\text{OP}_{\text{AC}}$  [+ Wh] = operator that derives AC  
 b.  $\text{XP}_{\text{Foc}}$  [+ Wh, + Foc] = identificational focus  
 c.  $\text{XP}_{\text{Focv}}$  [+ Foc] = presentational focus

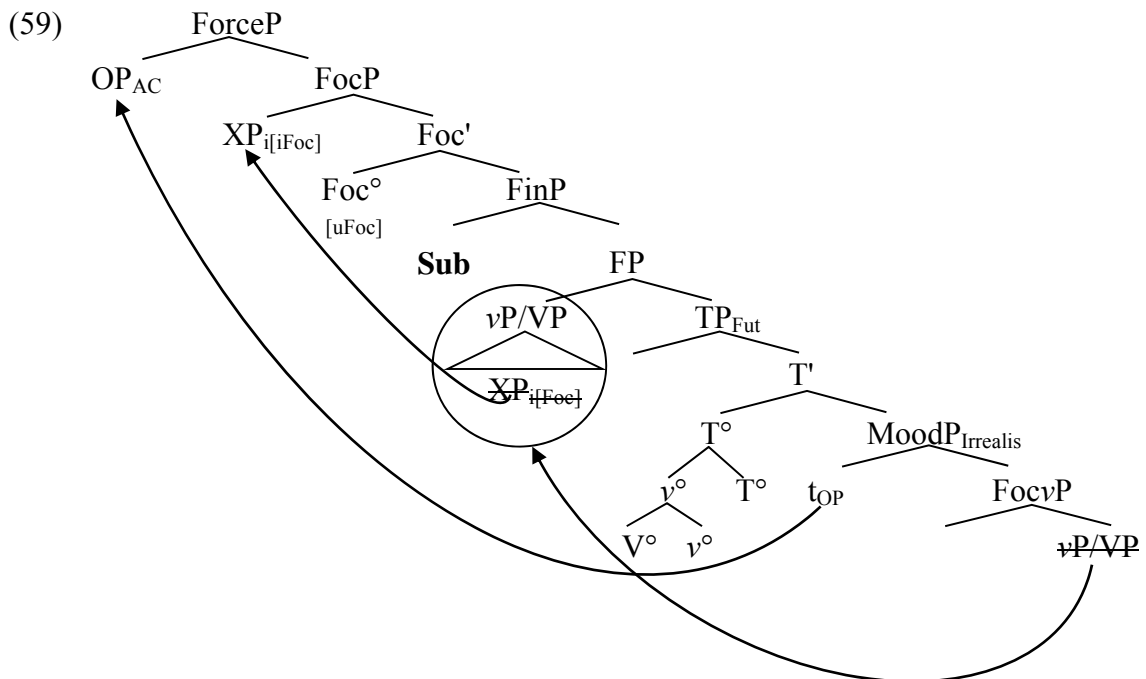
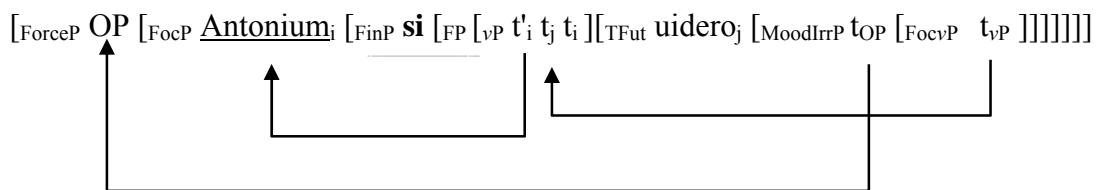
### 3.2.2 An example: LEF2 of a direct object

Having put all these elements in place, I now turn some example derivations. First of all, consider cases like (57), where a direct object has undergone LEF2 in a conditional clause:

- (57) [*Antonium*; [*si* *t<sub>i</sub>* *uidero*]], [...].  
 Antonius.ACC if I.will.have.seen  
 'If I will see Antonius,... .' (= Cic. ad Att. 14.19.4)

The details of the derivation of (57) would be as in (58-59):

- (58) LEF2 of an object DP:



## 4 Decline and loss of LEF2

I now turn to Hypothesis II, which was formulated in section 1.2 and is repeated below:

(7) Hypothesis II:

There is a correlation between the loss of LEF2 and the increased frequency of VO word order observed in the history of Classical Latin.

As I hinted at above (cf. the examples in (8-11)), I will propose that the loss of the focussing strategy displayed by LEF2 in the CP area of the clause is somehow compensated for by a focussing strategy at a lower level in the clause which has a VO order as a by product. The prime cause of this is evolution is the loss of  $vP$  movement, which is in my approach in itself a precondition for LEF2. If  $vP$  movement is lost then a presentational focus contained in  $vP$  is targeted by Foc $vP$ , the closer focussing head and FocP will no longer be attracting presentational foci. As a result: the presentational focus moves to specFoc $vP$ , if we assume that V continues to move to T this results in VO order. The increased frequency of V-XP would then contribute to the change to a VO-grammar.

I will first give an overview of the extant literature on verb positions and the 'Nachfeld' in Latin (sections 4.1 and 4.2). In section 4.4, I will look at the consequences of the loss of  $vP$  movement for the general architecture of the Latin clause, and I will speculate on the reasons that caused  $vP$  movement to become obsolete.

### 4.1 Not so strictly INFL-final: V-XP order in Latin

As outlined in the introductory chapter, the standard assumption is that in Latin (S)-IO-DO-V represents the unmarked order, i.e. the order which is displayed by a sentence with broad scope focus (see ch. 1, sections 3.2.4.2 and 4.1). It seems correct to characterize Latin as an INFL-final language<sup>14</sup>. However, from the earliest texts, constituents can appear in a postverbal position, but not every linear string V-XP has the same syntax and interpretation. Furthermore, as will be shown immediately, a(n ill-documented) diachronic evolution takes place.

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<sup>14</sup> When a sentence contains an analytical verb form (i.e. when the lexical root and the inflectional morphemes do not appear on the same word), most often the inflected verb follows the lexical verb. It seems therefore better to call Latin INFL-final rather than verb final.

### 4.1.1 Previous accounts

Unfortunately, the statistical data on word order frequencies in Latin which are available are not always very reliable. Philological studies on verb positions, like Schneider (1912), Linde (1923) and Koll (1965), tend to disregard the nature of postverbal material: various types of postverbal material such as heavy complement clauses and extraposed relative clauses are treated on the same footing as postverbal nominal objects and adjuncts of different kinds and sizes. Furthermore, clause type and illocutionary force of both main and embedded clauses are not taken into account. This point is relevant because imperatives and finite verbs in matrix questions tend to appear in clause-initial position. Finally, in certain kinds of literary prose (e.g. the speeches of Cicero) it is important to take into account the role of so called *clausulae* (i.e. the tendency to let the end of syntactic units coincide with certain rhythmic patterns, and conversely, the tendency to avoid other rhythmic patterns all together).

This being said, I give an overview of the figures presented in Linde (1923) in Table 4. This study looks at the distribution of the Latin verb: on the basis of the data that are discussed I tentatively infer that only finite verbs were taken into account, but this is not stated explicitly. Two (rough) tendencies can be observed: verb final word order is more frequent in embedded clauses than in main clauses, and verb final clauses are more frequent with earlier authors than with late authors.

(60)

| Author                 | Date                     | Work                                | Verb final word order: |            |
|------------------------|--------------------------|-------------------------------------|------------------------|------------|
|                        |                          |                                     | matrix                 | embedded   |
| <i>Cato</i>            | ca. 160 BC               | <i>De Agricultura</i> 1-27          | 70%                    | 86%        |
| <i>Caesar</i>          | ca. 50-40 BC             | ? ('Buch II')                       | 84%                    | 93%        |
| <i>Sallustius</i>      | ca. 40-30 BC             | <i>Bellum Catilinae</i> 1-36        | 75%                    | 87%        |
| <i>Anonymus</i>        | ca. 40 AD                | <i>Bellum Africum</i> 1-36; 81-98   | 68%                    | 73%        |
| <i>Varro</i>           | 36 BC                    | <i>De Agricultura</i> 1-11          | 33%                    | 44%        |
| <i>Cicero</i>          | ca. 84-83 BC             | <i>De inuentione</i> 1.1-22         | 50%                    | 68%        |
|                        | ca. 68-43 BC             | <i>Epistulae</i> (?)                | 54%                    | 62%        |
|                        | 51 BC                    | <i>De re publica</i> 1.1-32         | 35%                    | 61%        |
|                        | 44 BC                    | <i>Philippica</i> 1                 | 52%                    | 70%        |
| <i>Liuius</i>          | ca. 10 BC-20 BC          | <i>Ab Urbe condita</i> 30.30-45     | 63%                    | 79%        |
| <i>Seneca</i>          | ca. 40-50 AD             | <i>Epist.</i> 1; 2; 6-10; 15-16; 24 | 58%                    | 66%        |
| <i>Petronius</i>       | ca. 50 AD                | <i>Satyricon</i> (?)                | 51%                    | 67%        |
| <i>Tacitus</i>         | ca. 100 AD               | <i>Germania</i> 1-37                | 64%                    | 86%        |
| <i>Gaius</i>           | ca. 150-170 AD           | <i>Instit.</i> 1.1-38; 4.160-187    | 65%                    | 80%        |
| <i>Apuleius</i>        | ca. 160 AD               | <i>Amor et Psyche</i> (?)           | 58%                    | 62%        |
| <i>Firmicus M.</i>     | ca. 350 AD               | ???                                 | 56%                    | 64%        |
| <i>Victor Vitensis</i> | ca. 585 AD <sup>15</sup> | <i>Hist. persec. Africanae</i>      | 37%                    | 63%        |
| <i>Egeria</i>          | 540 AD                   | <i>Peregrinatio</i> (?)             | 25%                    | 37%        |
| <b>Total:</b>          |                          |                                     | <b>57%</b>             | <b>70%</b> |

Table 4: percentages of verb final word order in Latin; figures from Linde (1923: 154-156).

The discrepancy between the values given for Caesar and Varro, who were contemporaries, immediately suggests that it will not at all be straightforward to draw a coherent diachronic picture.

Another study which deals with frequencies of distributional patterns is Bauer (1995). However, this author only presents quantitative data from older studies. At this point, a large-scale corpus study of word order patterns in Latin is definitely a desideratum if we want to formulate reliable descriptive generalisations.

Before having a closer look at 'postverbal behaviour' in Latin, consider the following quote from Devine & Stephens (2006: 133):

Evidently the process of transition from OV to VO order is sensitive to the semantic and pragmatic status of the object phrase<sup>16</sup>.

<sup>15</sup> sic in Ziegler & Sontheimer (1970), vol. 5, col. 1259, s.v. Victor. Linde (1923) situates the text of Victor in the late fifth century.

<sup>16</sup> In the recent literature on word order changes, many other scholars have stressed the role of information structure. For more discussion, the reader is referred to Faarlund (2000), Hinterhölzl (2004, 2009, 2010), van



Given that (especially in the earlier stages of the Latin language) all orders deviant from the discourse neutral order SOV(Aux) were associated with specialized pragmatic meanings (cf. the 'discourse configurability' hypothesis from ch. 1), it follows that all the postverbal XPs are best interpreted as having a non-canonical pragmatic value.

In the following paragraphs I will give a (rather sketchy) overview of a number of configurations involving a postverbal constituent, paying special attention to the discourse status of the postverbal constituents.

#### **4.1.2 VO-syntax: not a unitary phenomenon**

The best syntactic treatment of postverbal syntax in Latin is found in Devine & Stephens (2006: 117ff. and especially 125ff.: 'V-bar-syntax'): the discussion in the upcoming sections will be mainly based on this work, although it should be said that I do not accept all the details of their analyses.

Though many points of Latin word order remain to some extent unclear, the following rough descriptive generalizations can be made with some confidence:

- (61)
- a. There is no evidence of a strict head-final stage in Latin: in the historical stage, the possibility of XPs occurring postverbally has always existed<sup>17</sup>.
  - b. Initially, mainly PPs and especially argumental PPs are found in postverbal position. Apart from these, heavy clausal constituents (finite clause or infinitivals as direct objects or as subjects of unaccusative predicates) often follow the inflected verb.
  - c. The VO order becomes productive only later, esp. from Livy (10 BC-20 AD) onwards, although variation between single authors remains considerable.

With Devine & Stephens (2006), I will distinguish between a number of different postverbal constituents, namely destressed 'tail' constituents and presentational foci. The latter are presumably not a homogeneous class.

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Kemenade (2009), Hróarsdóttir (2010) and to the collections of papers in Hinterhölzl & Petrova (eds.) (2009) and Ferraresi & Lühr (eds.) (2010).

<sup>17</sup> It is sometimes claimed that the coexistence of OV and VO reflects a transition from strict OV to strict VO, but there is no textual evidence for a (stable) stage of strict OV (see esp. Bauer (1995), who explicitly compares a hypothesized earlier stage of Latin with a strictly head-final language like Japanese).

#### 4.1.2.1 Postverbal I: distressed 'tails'

One set of constituents that regularly follow the finite verb in Latin are referred to by Devine & Stephens (2006) as 'tail constituents'. An example of such a postverbal tail constituent is the (underscored) direct object *exercitum* 'army' in (62) (from Devine & Stephens 2006: 128):

- (62) *[..] magnoque numero iumentorum in flumine supra atque infra constituto*  
 large.ABL-and number.ABL animals.GEN.PL in river.ABL above and down placed.ABL  
*traducit exercitum.*  
 he.leads.across army.ACC  
 'Having placed a great number of beasts of burden at either side of the river, he led his army across the river.' (= Caes. Bel. Civ. 1.64)

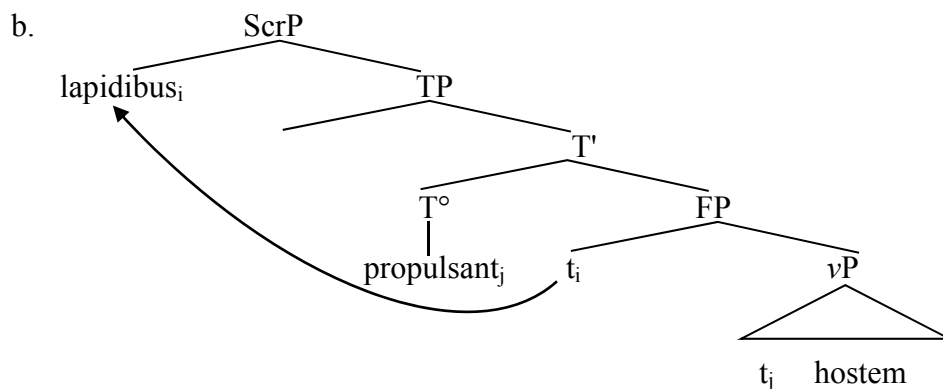
Devine & Stephens (2006: 17) define tail-constituents (cf. Vallduví 1992) as follows:

Tails serve to lexically instantiate arguments that are obligatorily projected but are not topics or foci, and at the same time to confirm the hearer's assumptions or refresh his memory about old or inferable information.

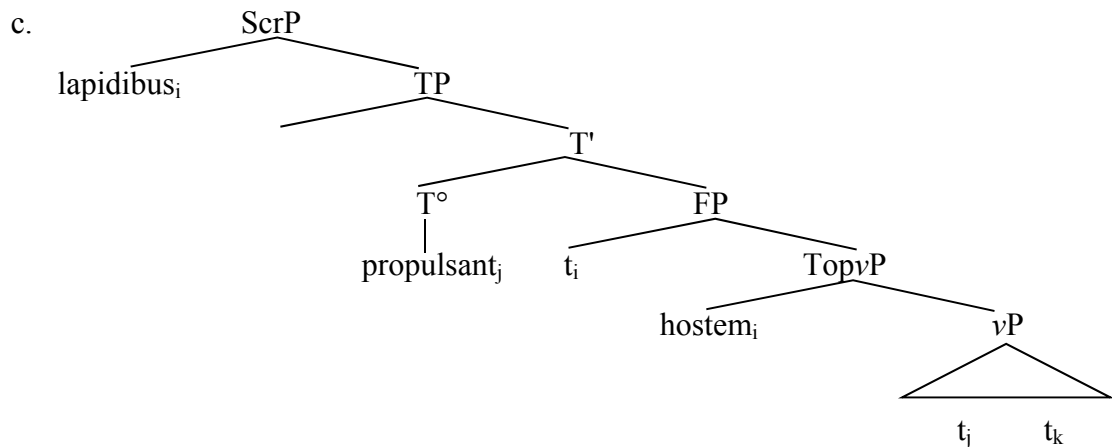
In the earlier stages of Latin, the derivation of tail-constituents might involve some process of right dislocation or extraposition: I will not try to offer a syntactic analysis for such examples here.

In later stages, when leftward movement of a *vP* remnant had become obsolete, an additional derivation becomes available, which involves stranding of the direct object, coupled with raising of the other elements contained in the verb phrase. The sentence in (63a) could for instance be analysed as in (63b) (partly based on Devine & Stephens 2006: 133): both the verb *propulsant* 'they chase away' and the instrumental adjunct *lapidibus* 'with stones' move leftward (on their own), and the direct object *hostem* remains in its base position within *vP*:

- (63) a. *inde lapidibus propulsant hostem.*  
 from.there stones.ABL they.chase.away enemy.ACC  
 'With stones they chase the enemy away.' (= Liv. aUc 10.41.12)



Alternatively, and perhaps more likely, it might be the case that the direct object undergoes short (string vacuous) movement to a low topic projection (TopvP) (cf. Belletti (2004), Devine & Stephens (2006) and the tree in (69) in ch. 1, section 4.2.2):



I will give some additional illustration of this 'tail' configuration. The minimal pair in (64-65) comes from Columella. Both (64) and (65) are taken from a passage where the author discusses the tasks of the *uilicus*, the overseer of a farm. On two occasions, he mentions that in a following passage, he will say more about the duties of the *uilica*, the overseer's wife:

(64) *Hoc idem tempus est aridis uuis ficisque conficiendis, de quibus <...>*  
 that same time.NOM is dry.DAT raisins.DAT figs.DAT-and prepare.GER.DAT about which.ABL  
*suo loco dicemus, cum uilicae persequemur officia.*  
 its place.ABL we.will.speak when bailiff's.wife.GEN we.will.discuss tasks.ACC  
 'This is also the time for preparing dried raisins and figs, about which we will speak in the appropriate place, when we will discuss the duties of the overseer's wife.'  
 (= Col. Agr. 11.2.62)

(65) *Hoc etiam tempore, qui consueuerunt uina condire, aquam marinam*  
 this.ALB also time.ABL who.NOM grew.used.to wines.ACC flavour.INF water.ACC sea-.ACC  
*praeparant [...]; de qua conficienda praecipiam, cum uilicae*  
 they.prepare about which.ABL preparing.ABL I.will.prescribe when overseers's.wife.GEN  
*officia persequar.*  
 tasks.ACC I.will.discuss  
 'Also in this period people who have the habit of flavouring wines purchase sea-water; about the preparation of this I will give instructions when I discuss the duties of the overseer's wife.' (= Col. Agr. 11.2.64)

In (64) the preverbal constituent *uilicae* seems to be extracted out of the complex DP *uilicae officia* 'the tasks of the overseer's wife'. This yields a pattern in which two parts of a discontinuous phrase straddle the finite verb. On the other hand, in (65), the entire DP has moved to the left of the verb *persequar* 'I will discuss'. However, for (64) one could imagine a derivation in which *uilicae* is actually a remnant DP, containing the trace of *officia*, which

itself has moved to Spec,TopvP. The advantage of assuming short movement to a specialized functional projection over a stranding analysis without movement is that the former immediately gives us a particular pragmatic interpretation.

In any event, the pragmatic difference between (64) and (65) was presumably very small and very hard to pin down without having access to prosodic information. I now turn to the second class of postverbal constituents, namely postverbal foci.

#### 4.1.2.2 Postverbal II: presentational foci

I presume that presentational foci, if not moved to CP by LEF2, are always located in one and the same projection, namely FocvP, were it receives its particular pragmatic interpretation. According to Devine & Stephens (2006: 119-136), the availability of postverbal foci is subject to some interesting diachronic changes. Comparing a republican author like Caesar, and an author from the early empire like Livy, we see that the latter is far more liberal in allowing for foci to appear postverbally. More specifically, in Caesar, postverbal foci are mainly argumental PPs (in particular locative or goal phrases), whereas Livy also productively places (certain kinds of) direct objects in postverbal position.

Let's first look at postverbal argument PPs in Caesar. Consider the examples in (66-67), with the linear order **DP<sub>obj</sub>-V<sub>fin</sub>-PP<sub>foc</sub>**, with the PP as presentational focus, conveying new information (Devine & Stephens (2006: 120).

(66) *Exercitum reducit [PP ad mare].*  
 army.ACC leads.back to sea.ACC  
 'He led the army back to the sea.' (= Caes. Bel. Gal. 5.23)

(67) *Victus ex proelio profugit [PP in prouinciam].*  
 defeated.NOM from battle.ABL he.fled.PF to province.ACC  
 'Defeated, he fled away from the battle to the province.' (= Sal. Iug. 13.4)

With Schweikert (2005: 123-129) and Cinque (2006), I will assume that argumental PPs are base generated higher than vP (e.g. in a projection labelled 'DirP' for Directional Phrase in (68)). A derivation of a sentence like (66) would look like in (68).

(68)  $[_{FP} [_{vP} \text{Exercitum}_k t_j t_k] [_{TP} \text{reducit}_j [_{FocvP} [_{PP} \text{ad mare}]_i [_{DirP} t_i t_{vP} ]]]]$ .

As indicated in (68), the finite verb canonically moves to T. Moreover, I assume that in a feearly early writer like Sallust, vP movement was fully operative: this is indicated in (68) where the vP moves as usual to Spec,FP, containing the direct object *exercitum* 'army' as the only phonologically overt element. Finally, the directional PP *ad mare* 'to the sea', which is

base generated above vP, remains downstairs, which means that it can move to Spec,FocvP, where it is interpreted as a presentational focus.

On the other hand, argumental PPs, like the locate in Tusculano 'in the Tusculan estate' in (69), can undergo LEF2:

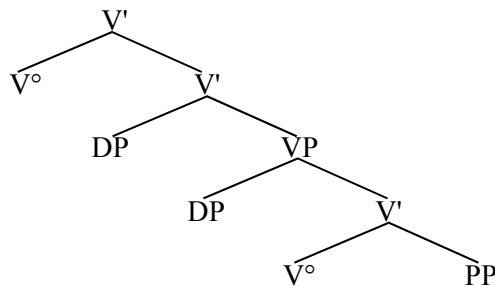
- (69) *Conloqui uidebamur [[PP in Tusculano]<sub>i</sub> [cum t<sub>i</sub> essem]].*  
 talk.together.INF we.seemed.IMPF in Tusculan.ABL when I.was.SUBJ  
 'It seemed as if we were discussing, when I was in the Tusculan estate.'  
 (= Cic. ad Att. 13.17-18.2)

This is not predicted by the proposal which involves base generation in a fairly high functional projection. However, it is well known that in many languages, circumstantial adjuncts and, be it to a lesser extent, argumental PPs can appear in sentence-final position (see e.g. Larson 1988, Costa 1997 and Shaer 2004). For instance, in English (70), the directional PP *to the sea* follows the direct object *the army*, suggesting a fairly low position for the PP;

- (70) *Rumpelstiltkin led [DP the army] [PP to the sea].*

In Larson (1988) it was proposed that sentence-final adjuncts are hosted in so called (empty) VP-shells (illustrated in (71)), which can optionally be projected below the domain where the verb's arguments are base generated (see also Larson (2004) for a recent defense of this theory).

- (71)

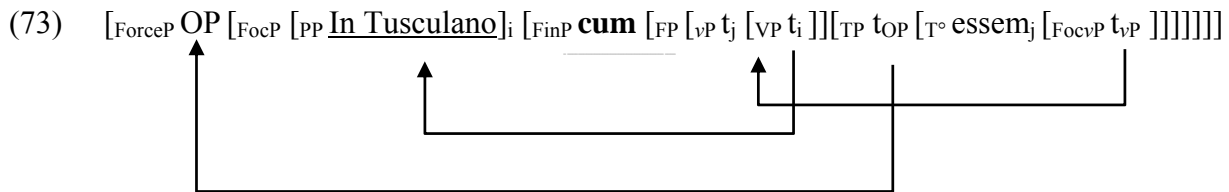


The fact that PPs could undergo LEF2 (69) seems to suggest that something like a VP-shell structure needs to be assumed, be it as a primitive (Larson 1988, 2004) or as a representation derived by means of movement (see Costa 1997; Cinque 1999, 2006; Hinterhölzl 2004; Belletti & Rizzi to appear). (69) would thus be derived as in (72):

- (72) *[TP Rumpelstiltkin<sub>j</sub> [vP t<sub>j</sub> led [DP the army]]<sub>i</sub> [PP to the sea] t<sub>i</sub>].*

One could then hypothesize that the derivation of sentences like (69), where a PP has undergone LEF2, were as in (73), with the PP sitting higher than the trace of the moved

remnant *vP*. The main difference with the derivation in (68) is of course the position of the PP with respect to *FocvP*.



Another suggestion to account for the optional LEF2 behaviour of argument PPs is to say that the size, and more specifically the upper boundary of the verbal chunk moved to *Spec,FP* was not fixed: PPs could or could not be included, depending on their position with respect to the 'cut off point'.

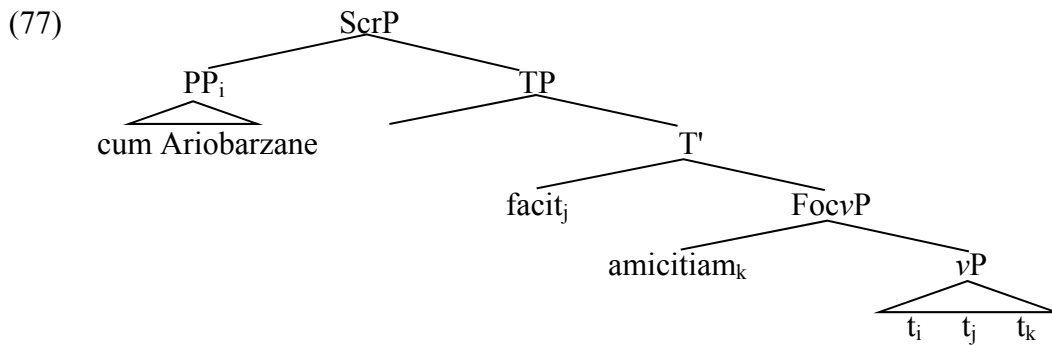
I will now look at the behaviour of direct objects as postverbal foci. According to Devine & Stephens (2006: 127), postverbal direct objects which have the pragmatic value of a presentational focus become productive only later than similar focus on PPs (cf. the contrast between Caesar and Livy). The first examples in the classical era are restricted to a specific subclass of direct object DPs, viz. non-referential nouns denoting an abstract concept, like *fugam* 'flight', *cursum* 'course' or *amicitiam* 'friendship' in (74-76):

(74) *Deinde omissis plerique armis capessunt fugam.*  
 then left.behind.ABL most.NOM arms.ABL take flight.ACC  
 'Subsequently, the majority left their weapons and fled away.' (= Liv. aUc 33.9.11)

(75) *Eoque omnes ex Italia missae onerariae derigebant cursum.*  
 there-and all.NOM from Italy.ABL sent.NOM ships.of.burden.NOM directed.IMP course.ACC  
 'And all the vessels sent from Italy set forth in that direction.' (= Liv. aUc 37.27.1)

(76) *Clam cum Ariobarzane facit amicitiam, manum comparat, urbes munitas  
 suis tuendas tradit.*  
 secretly with A.ABL he.makes friendship.ACC, group.ACC he.gathers cities.ACC fortified.ACC  
 his.DAT to.be.protected.ACC he.hands.over  
 'In secret, he made friendship with Ariobarzanes, he gathered a number of soldiers and left the protection of his fortified cities to his loyalists.' (= Nep. 14.5.6)

Since direct objects are necessarily base generated inside the verb phrase, a derivation along the lines of (68) is excluded. I therefore conclude that sentences like (74-75) were only possible in a grammar where movement of *vP* to *Spec,FP* was either optional or impossible. (77) then shows (a slightly adapted version of) the derivation of (76) proposed by Devine & Stephens (2006: 134), with 'ScrP' for 'ScrambleP':



In the last section of this chapter, I will say some closing words about the diachronic evolution of LEF2.

## 4.2 Loss of $\nu$ P movement and its consequences

As we have seen in section 1 of this chapter, LEF2 started to decline during the first century BC. Given the evidence (admittedly very sketchy) data concerning the diachrony of postverbal presentational foci, and more specifically the fairly late availability of object DPs in this function and position, it seems not unlikely to correlate the loss of LEF2 to the loss of  $\nu$ P-movement. Recall that under the present analysis,  $\nu$ P movement is a precondition for LEF2. I will at present briefly speculate on a possible reason that could have underlied the decline of  $\nu$ P-movement.

Following standard assumptions in the generative literature, I will adopt the view that language-specific parameter setting happens during the process of (first) language acquisition (Lightfoot 1991, 1998, 2006; Hale 1998; Roberts & Roussou 2003).

I propose that the loss of  $\nu$ P movement is to be attributed to the fact that the language acquirer ceased to analyse the relevant movement operation as fronting of one single category. Take a simple SOV-sentence. In a grammar with LEF2/  $\nu$ P-movement, such a sentence would have to be represented as in (78a):

(78) a.  $[_{FP} [_{\nu P/VP} \mathbf{S} \mathbf{t}_v \mathbf{O} ] [_{NegP} [_{TP} [_{T^\circ} \mathbf{V} [_{Top\nu P} [_{Foc\nu P} [_{Foc\nu^\circ} \mathbf{t}_{\nu P/VP} ]]]]]]]]]]$

Now imagine that instead of analyzing the surface string in (78a) as movement of the large remnant  $\nu$ P to Spec,FP, the same string was 'rebracketed' by the language acquirer as in (78b), where the verb's argument have moved indepently to separate functional projections (FP and EP):

b.  $[_{FP} \mathbf{S} [_{EP} \mathbf{O} [_{NegP} [_{TP} [_{T^\circ} \mathbf{V} [_{Top\nu P} [_{Foc\nu P} [_{\nu P/VP} \mathbf{t}_s \mathbf{t}_o ]]]]]]]]]]$

From the moment that language acquirers assume that each DP, participle or PP has to move on its own, it is likely that sooner or later, some items are stranded downstairs. This seems to be the case with the data I discussed in the previous section, where it was shown that the first object DPs that appear as postverbal presentational foci are non-referential nouns. A relevant example is repeated here:

- (76) *Clam cum Ariobarzane facit amicitiam, manum comparat, urbes munitas*  
 secretly with A.ABL he.makes friendship.ACC, group.ACC he.gathers cities.ACC fortified.ACC  
*suis tuendas tradit.*  
 his.DAT to.be.protected.ACC he.hands.over  
 'In secret, he made friendship with Ariobarzanes, he gathered a number of soldiers and left the protection of his fortified cities to his loyalists.' (= Nep. 14.5.6)

Arguably, non-specific, non-referential, non-D-linked DPs are likely candidates for not being affected by movement to the (high) middle field (cf. Hróarsdóttir (2010) (discussed in section 6.3.2), Diesing (1992) on German scrambling and Bobaljik & Thráinsson (1998: 54) on the discourse status of object DPs that undergo Object Shift in Icelandic). Observe that from the moment that  $\nu$ P movement does not take place any more, presentational foci cannot move to FocP skipping Foc $\nu$ P without causing a minimality violation: they can, so they should move to Spec,Foc $\nu$ P. This explains why LEF2 is eventually lost altogether.

One might also think that the loss of  $\nu$ P movement in Latin may have had an influence on eventual (but actually much later) shift to a generalized VO-syntax in the early Romance languages. An increased frequency of V-XP order in the Primary Linguistic Data (i.e. the acoustic linguistic signal that a language acquirer is confronted with and on the basis of which (s)he constructs its own grammar) could have led the language acquirer to attribute to the order VO (or V-XP) a less marked status. One might then hypothesize that this served as an (indirect) contribution to the eventual shift to VO as the unmarked order.

## 5 Conclusion

In this chapter, I have suggested that LEF2 be analyzed in terms of a 'smuggling derivation' whereby a presentational focus is moved past Foc $\nu$ P, leaving FocP in CP the only possible host for the focal constituent. I suggested that LEF-constituents are contained in a (remnant)  $\nu$ P constituent, which moves to the TP-domain to satisfy the EPP-requirement. The position of sentential negation in finite clause provides independent evidence for assuming (remnant)  $\nu$ P-movement.



Furthermore, I've looked at the diachronic evolution of LEF2, and I tried to correlate the loss of LEF2 with another diachronic change that took place in the same period, namely the increasing frequency of non verb-final or non INFL-final clauses. I suggested that the decline of *v*P movement and LEF2 was compensated by postverbal presentational foci. If this last idea is on the right track, the interaction between LEF2 and postverbal presentational foci lends further support to the hypothesis developed in chapter 6, namely that LEF2 phrases themselves are presentational foci.

As I already indicated in the introduction to this chapter, much of what I said in the previous pages is fairly speculative. It goes without saying that my analysis makes a number of rather strong predictions: these remain to be investigated in future research.



# Appendix

## Appendix I: Position of ACs with respect to the superordinate clause

In this first appendix, I provide some more details concerning my classification of the adverbial clauses from my corpus sample, and more specifically about the position the ACs occupy in the clause they are embedded by.

In a configuration containing an embedded (CP2) and a superordinate CP1 clause, a number of different combinatorial possibilities arise. I distinguish 6 main categories (1\* to 6\* in (1)), two of which (viz. 2\* and 3\*) can be subdivided, yielding 12 relevant structures. In Type 1, the AC CP2 is absolutely clause-initial, and in Type 12, the AC is absolutely clause final. Type 7 is the rare case of a clause-medial AC. The 9 other types represent the patterns in which some constituent has been fronted. Type 2, 3 and 11 are the only unambiguous cases of LEF.

- (1)
- |    |                                                                                       |                                 |                 |           |
|----|---------------------------------------------------------------------------------------|---------------------------------|-----------------|-----------|
| 1* | [CP1 [CP2 <b>Sub</b>                                                                  | ][CP1                           | ]               | = Type 1  |
| 2* | [XP ][CP2 <b>Sub</b>                                                                  | ][CP1                           | ]               |           |
|    | [CP1 [CP2 [XP] <sub>i</sub> [CP2 <b>Sub</b> e <sub>i</sub> ]][TP1                     | ][CP1                           | ]               | = Type 2  |
|    | [CP1 [CP2 [XP] <sub>i</sub> [CP2 <b>Sub</b> t <sub>i</sub> ]][CP1 pro <sub>i</sub> ]] |                                 |                 | = Type 3  |
|    | [CP1 [XP] <sub>i</sub> [CP1 [CP2 <b>Sub</b> ] e <sub>i</sub> ]]                       |                                 |                 | = Type 4  |
|    | [CP1 [XP] <sub>i</sub> [CP1 [CP2 <b>Sub</b> pro <sub>i</sub> ]][CP1 t <sub>i</sub> ]] |                                 |                 | = Type 5  |
|    | [XP] <sub>i</sub> [CP2 <b>Sub</b> e <sub>i</sub> ]][CP1 e <sub>i</sub> ]]             |                                 |                 | = Type 6  |
| 3* | [CP1 [CP2 <b>Sub</b>                                                                  | ]                               |                 | = Type 7  |
| 4* | [XP ][CP1                                                                             | ]                               | [CP2 <b>Sub</b> | ]         |
|    | [CP1 [XP ] <sub>i</sub> [CP1                                                          | ][CP2 <b>Sub</b> e <sub>i</sub> | ]               | = Type 8  |
|    | [CP1 [XP ] <sub>i</sub> [CP1 pro <sub>i</sub> ]][CP2 <b>Sub</b> t <sub>i</sub>        | ]                               |                 | = Type 9  |
|    | [XP ] <sub>i</sub> [CP1 e <sub>i</sub> ]][CP2 <b>Sub</b> e <sub>i</sub>               | ]                               |                 | = Type 10 |
| 5* | [CP1 [CP2 [XP ] <sub>i</sub> [CP2 <b>Sub</b> e <sub>i</sub>                           | ]]]                             |                 | = Type 11 |
| 6* | [CP1                                                                                  | [CP2 <b>Sub</b>                 | ]               | = Type 12 |

A crucial observation is that I of Type 6, in which a fronted category is coreferential with an empty category in a clause-initial AC CP2 and with an empty category in the superordinate clause CP1, have not been taken into account in my investigation of LEF. Consider the example in (2):

- (2)
- a. *Vilicus si nolet male facere, non faciet.*  
 Overseer.NOM if he.will.want badly act.INF not he.will.do  
 'If the overseer will not want to act badly, he won't.' (= Cat. Agr. 5.2)
- b. [CP1 [CP2 Vilicus<sub>i</sub> [si t<sub>i</sub> nolet male facere]], pro<sub>i</sub> non faciet].
- c. [CP1 Vilicus<sub>i</sub> [CP2 si pro<sub>i</sub> nolet male facere], t<sub>i</sub>/pro<sub>i</sub> non faciet].

Here it is absolutely impossible to tell whether *vilicus* 'overseer' is (i) an LEF constituent extracted from the *si*-clause (2b), (ii) a base generated Hanging Topic ((2c) with *pro* in the main clause) or (iii) a topic extracted from within the main clause to a position to the left of a clause-initial AC ((2c) with a trace in the main clause). The pattern in (2b) is very well attested in cases where no null element coindexed with the fronted constituent is present in the clause-initial AC, as in (3-5) (with a fronted main clause subject in (3-4) and a fronted direct object in (5), abstracting away from the question of the constituent has been moved to or base generated in its left peripheral position):

- (3) [CP1 [Cucumis et cucurbita]<sub>i</sub> [[CP2 cum copia est aquae], [t<sub>i</sub> minorem curam desiderant]]].  
 cucumber.NOM and gourd.NOM when host.NOM there.is water.GEN less.ACC  
 care.ACC desire  
 'The cucumber and the gourd require less care, when there is sufficient water.'

(= Col. Agr. 11.3.48)

- (4) [<sub>CP1</sub> *Haec*]<sub>i</sub>, [[<sub>CP2</sub> *si maiorem inpensam uitabis*], [<sub>t<sub>i</sub></sub> *possunt melli admisceri*  
 these.ACC if greater.ACC cost.ACC you.will.avoid can honey.DAT be.mixed.INF  
*et ita seruari*]].  
 and thus be.saved.INF  
 'These can be mixed with honey and preserved like that, if you want to avoid a greater  
 cost.' (= Col. Agr. 12.59.5)

- (5) [...] [<sub>CP1</sub> [*bene moratam disciplinam*]]<sub>i</sub>, [[<sub>CP2</sub> *cum senectus aduenerit*, [<sub>t<sub>i</sub></sub>  
 well of.nature.ACC discipline.ACC when old.age.NOM arrives.FUT.EX  
*obtinebit*]].  
 he.will.obtain  
 'He will obtain a well-ordered discipline when old age arrives.' (= Col. Agr. 1.8.20)

For completeness' sake, The Table in 6 gives an overview of the absolute numbers of attestations of each position:

(6)

|                                    | <i>cum</i> | <i>si</i> | <i>ut</i> |
|------------------------------------|------------|-----------|-----------|
| <b>POSITION</b>                    | <b>#</b>   | <b>#</b>  | <b>#</b>  |
| <b>Type 1</b>                      | 740        | 1341      | 306       |
| <b>Type 2</b>                      | 249        | 236       | 32        |
| <b>Type 3</b>                      | 0          | 1         | 0         |
| <b>Type 4</b>                      | 119        | 149       | 86        |
| <b>Type 5</b>                      | 40         | 14        | 6         |
| <b>Type 6</b>                      | 196        | 108       | 43        |
| <b>Type 7</b>                      | 30         | 25        | 18        |
| <b>Type 8</b>                      | 0          | 1         | 0         |
| <b>Type 9</b>                      | 0          | 0         | 0         |
| <b>Type 10</b>                     | 0          | 0         | 1         |
| <b>Type 11</b>                     | 10         | 8         | 40        |
| <b>Type 12</b>                     | 923        | 929       | 1762      |
| <b>parenthetical</b>               | 6          | 68        | 687       |
| <b>complement to a preposition</b> | 26         | 109       | 11        |
| <b>uncertain</b>                   | 21         | 57        | 30        |
| <b>Total:</b>                      | 2360       | 3046      | 3022      |

## Appendix II:

### Predicates taking a clausal complement introduced by *ut*

1. *(non) abnuo ut* (Liv. aUc. 28.18.4)
2. *(tantum) absum/abest ut* (with 2nd *ut*-clause = AC) (Anon. Bel. Alex. 22.1)
3. *(eo) accedit ut* (Liv. aUc 1.49.4)
4. *accendo ut* (Pli. Epi. 10.41.5)
5. *accidit ut* (Cic. Ver. act. sec. 3.172.12)
6. *acclamo ut* (Tac. Ann. 1.19.4)
7. *addo ut* (Sal. Cat. 51.21; *additum est ut*: Pli. Epi. 3.9.17)
8. *(eo) (rem) adduco ut* (Cic. Fam. 13.57.1.7)
9. *adfero ut* (Liv. aUc 23.26.9)
10. *adhibeo diligentiam ut* (Cic. Att. 11.7.5)
11. *adhortor ut* (Liv. aUc 3.21.)
12. *adicio ut* (Liv. aUc 2.27; Pli. Pan. 69.3)
13. *adipiscor ut* (Cic. Ver. act. sec. 3.51.11)
14. *adiuvo ut* (Cic. Fam. 5.2.9.14; Liv. aUc 5.34.8)
15. *admoneo ut* (Pli. Epi. 8.24.1)
16. *adnitor ut* (Pli. Epi. 4.26.3)
17. *adoro ut* (Liv. aUc. 21.17.4)
18. *(?) adpiciscor ut* (Fro. Epi. Haines I.226)
19. *(?) adscribo ut* (Liv. aUc. 38.38.18)
20. *adsentior ut* (Cic. Att. 15.13.1.2; Cic. Fam. 1.9.8.2)
21. *adsequor ut* (Cic. Fam. 13.49.5)
22. *adstruo alicui ut* (Pli. Pan. 38.2)
23. *(ita) adsuefacio ut* (Liv. aUc 24.48.11-12)
24. *affero ut* (Liv. aUc 23.27.9)
25. *agito ut* (Liv. aUc 5.51.8)
26. *(id/sic) ago ut (cum aliquo)* (Cic. Att. 9.7.1)
27. *animaduerto ut (animum alicuius aduerto ut*: Tac. Hist. 3.48.1)
28. *appono ut* (Tac. Ann. 3.38.2)
29. *attendo ut* (Pli. Epi. 6.30.3)
30. *auctor sum ut* (Cic. Att. 15.5.2.3; *auctoritus intercedit ut*: Cic. Fam. 15.2.4)
31. *aufero (precibus) ut* (Apu. Mag. 72.6)
32. *(aliquis/aliquid) causa est ut* (Cic. Fam. 6.10.5.7)
33. *(ita) casus fert ut* (Liv. aUc 7.6.9)
34. *caueo ut (est cautum ut*: Pli. Epi. 3.9.30)
35. *cedo (alicui) ut* (Liv. aUc 6.42.3)
36. *censeo ut* (Cic. Cat. 3.14.8)
37. *alquem certiolem facio ut* (Cic. Att. 2.24.2.18)
38. *certo (cum aliquo) ut* (Cic. Ver. act. sec. 3.9.10; *certamen ut*: Liv. aUc 26.36.11)
39. *clamito ut* (Tac. Ann. 14.5.3)
40. *clamo ut* (Cic. Ver. act. sec. 2.47.14; *clamor ut*: Liv. aUc 8.32.1)
41. *cogito ut* (Hyg. Astr. 2.17.3)
42. *cogo ut* (Anon. Bel. Afr. 79.1)
43. *cohortor ut* (Sal. Cat. 21.5)
44. *colligo ut (ratio colligit ut)* (Col. Agr. 11.2.47)

45. *committo ut* (Cic. Att. 3.10.2.15)
46. *commoueo ut* (Cic. Fam. 13.22.1)
47. *(ita) comparo ut* (with *ita*: Pli. Pan. 46.7; without *ita*: Liv. aUc. 25.13.9)
48. *compello ut* (Tac. Ann. 15.10.4)
49. *competit ut* (Col. Agr. 2.18)
50. *comprehendo ut (eadem lege comprehensum est ut*: Pli. Epi. 10.79.1)
51. *compono ut* (Tac. Ann. 4.68.2)
52. *concedo ut (concessum alicui)* (Cic. Ver. act. sec. 1.32.12; *concessio ut*: Var. Agr. 1.17.7)
53. *concito ut* (Liv. aUc 6.8)
54. *conclamo ut* (Caes. Bel. Gal. 5.26.4)
55. *concurrit ut* (Pli. Epi. 4.15.6)
56. *confido ut* (Pli. Epi. 2.5.6-7)
57. *confirmo aliquem ut* (Sal. Iug. 23.2)
58. *congruit ut* (Pli. Epi. 7.2.1)
59. *coniuro ut* (Liu. aUc 2.12.15)
60. *consentio ut* (Tac. Ann. 13.23.1) (also: *consensus ut*: Cic. Fam. 3.3.1)
61. *consequor ut* (Cic. Fam. 5.8.2; *consequens erat*: Tert. P.H. 26.1)
62. *considero ut* (Cic. Att. 11.13.4)
63. *(tanti) constat ut* (Pli. Epi. 2.14.6)
64. *(alicui) constat mens ut* (Liv. aUc 8.19.6)
65. *constituo ut* (Sal. Cat. 43.1; *constitutum habeo ut*: Anon. Bel. Hisp. 19.3)
66. *consuefacio ut* (Var. Agr. 2.9.13)
67. *consulo ut* (Cic. Cat. 2.26.3)
68. *contendo (a aliquo) ut* (Cic. Fam 13.7.3)
69. *contentio ut* (Cic. Fam. 1.9.19)
70. *contestor (deos) ut* (Caes. Bel. Gal. 4.25.4)
71. *(ita) contingit (alicui) ut* (Pli. Pan. 21.3)
72. *conuenit (alicui cum aliquo) ut* (with *id*: Tac. Hist. 3.64.2)
73. *corrumpo (aliquem) ut* (Pli. Epi. 1.7.5; Liv. aUc 45.5.12)
74. *cupio ut* (Pli. Epi. 10.47.1; *cupiditas ut*: Cic. Fam. 5.12.1.5)
75. *curo ut/curae est alicui ut/cura adhibetur ut/sibi curam sumpsit ut,...* (Pli. Epi. 7.33.2)
76. *custodire ut* (Col. Agr. 3.10.5)
77. *decerno ut* (cf. *senatus/patres decreuit/decreuerunt*) (Sal. Cat. 36.3)
78. *huc decidit ut* (Tac. Ann. 3.59.3)
79. *eo decursum est ut* (Liv. aUc 22.31.10)
80. *deduco (aliquem) ut* (Cic. Ver. act. sec. 2.10.8)
81. *eo deducta est res ut* (Liv. aUc. 30.40.11)
82. *(id) deest ut* (Pli. Epi. 8.6.9)
83. *defendo ut* (Cic. Att. 5.17.5)
84. *denego ut* (Var. Agr. 2.10.9)
85. *denuntio ut* (Cic. Fam. 11.25.1.2; Apu. Apo. 63.2)
86. *deos facio testes ut* (Liv. aUc 1.22.7)
87. *desidero ut* (Gel. Noct. 4.18.7)
88. *destino ut* (Tac. Ann. 15.65)
89. *dico ut* (Pli. Epi. 7.1.4)
90. *dissero ut* (Liv. aUc 33.12.6-7)
91. *(hoc) do ut (datum est alicui ut*; Var. Agr. 1.2.17; Cic. Fam. 6.8.1)
92. *duco ut* (Pli. Epi. 7.27.2)

93. *edico ut* (Cic. Ver. act. sec. 2.94.12)
94. *edo ut* (Liv. aUc 42.2.)
95. *efficio ut* (Cic. Fam. 16.8.2.7)
96. *efflagito ut* (Cic. Ver. act. sec. 1.63.7)
97. *elaboro ut* (Pli. Epi. 3.9.14)
98. *elicio ut* (Pli. Epi. 9.18.1)
99. *emercor ut* (Tac. Ann. 13.44.1)
100. *emoneo ut* (Cic. Fam. 1.7.9.2)
101. *enitor ut* (Cic. Fam. 16.21.2.3)
102. *est alicuius ut* (Cic. Fam. 10.1.2.6; *in uostra manu est ut*: Sal. Iug. 14.13)
103. - *pred.* *est ut* + subject clause (AP: *difficile est ut*, Pli. Epi. 4.15.7; AdvP: *parum est ut*, Pli. Pan. 60.1; *prius est ut*, Tert. P.H. 2.2); also: *paratus, intentus, ... sum ut* (Tac. Ann. 2.16.3)
104. *excieo (aliquem aliquo) ut* (Liv. aUc 27.6.1)
105. *excito aliquem ut* (Cic. Fam. 16.18.1)
106. *excipio ut* (Pli. Pan. 68.1)
107. *exclamo ut* (Liv. aUc 4.38.2-3)
108. *excogito ut* (Cic. Att. 1.16.2.2)
109. *exigo ut* (Pli. Pan. 46.2)
110. *exoro ut* (Cic. Fam. 16.21.3.6)
111. *expedio ut* (Tac. Ann. 3.69.3)
112. *experior ut* (wagen, op het spel zetten)
113. *expeto ut* (Tac. Ann. 6.8.1)
114. *expugno ut* (Cic. Ver. act. sec. 2.130.7)
115. *exposco ut* (Liv. aUc 39.49.10)
116. *expostulo ut* (Tac. Ann. 12.46.2)
117. *exprimo ut* (Cic. Ver. act. sec. 3.112.4)
118. *exsequor ut* (Pli. Epi. 5. 20.8)
119. *exspecto ut* (Cic. Att. 7.26.3.4)
120. *exstimulo ut* (Tac. Ann. 4.59.3)
121. *extundo alicui ut* (Col. Agr. 11.1.1)
122. *(ita, sorte) euenit ut* (Pli. Pan. 41.4)
123. *euinco ut* (Liv. aUc. 3.4.1)
124. *euoco ut* (Pli. Epi. 3.7.15)
125. *facio ut* (Cic. Ver. act. sec. 2.10.6; with *tantum*: Cic. Fam. 13.6.2)
126. *facultatem do ut* (Cic. Fam. 13.4.4)
127. *faueo ut* (Pli. Epi. 6.25.5)
128. *(rogationem populum/legem,...) fero ut* (Cic. Att. 1.18.4; also *latum est ut*)
129. *festino ut* (Cic. Att. 14.21.1)
130. *fit ut/factum est ut* (Cic. Ver. act. sec. 2.171.7)
131. *flagito (aliquem) ut* (Cic. Fam. 10.16.1)
132. *fore/futurum ut* (Caes. Bel. Civ. 3.92.3)
133. *formo ut* (Tert. Apo. 28.2)
134. *hortor ut* (Pli. Epe. 1.1.1; also: *accedebat hortator ut*: Cic. Att. 1.11.1)
135. *illicio ut* (Liv. aUc. 10.17.6)
136. *impello ut* (Liv. aUc 26.33.3)
137. *impero ut* (Cic. Fam. 15.4.2)
138. *impetro ut* (Pli. Epi. 1.8.11)
139. *imploro ut* (Cic. Cat. 2.29.9)
140. *incendo ut* (Pli. Pan. 73.5)



141. *incidit ut* (Anon. Bel. Afr. 1.3; with *ita*: Liv. aUc 6.34.6)
142. *incito ut* (Liv. aUc 6.21)
143. *inclamo alicui ut* (Liv. aUc. 24.44.10)
144. *inclinat (animus) ut* (Liv. aUc 1.24.1; with *eo*: Liv. aUc 6.21.6-7)
145. *includo ut (inclusum ut*: Liv. aUc 31.44.8)
146. *incumbo ut* (Cic. Fam. 10.19.2.1)
147. *indīco ut* (Liv. aUc. 1.5.2.5)
148. *induco aliquem ut* (Cic. Fam. 15.15.2.11-12)
149. *induco in animum (alicuius) ut* (Liv. aUc 2.5.7)
150. *in eo/hoc est ut* (Tac. Hist. 1.82.3)
151. *iniungo ut* (Pli. Epi. 3.18.1)
152. *alicui (naturā) insitum est ut* (Liv. aUc 29.21.10-11)
153. *insisto alicui ut* (Col. Agr. 12.3.9)
154. *instituo ut* (Var. Agr. 1.20.3; *institutum manet ut* Liv. aUc 7.2)
155. *insto (alicui) ut* (Cic. Ver. act. sec. 2.188.10)
156. *(mea,...) interest ut* (Cic. Fam. 12.18.2)
157. *inuito ut* (Pli. Epi. 9.18.1; *inuitatio ut*: Cic. Ver. act. sec. 2.66.4)
158. *iubeo ut* (Cic. Ver. act. sec. 4.28.1; Tac. Ann. 13.40.2)
159. *iuro ut* (Anon. Bel. Hisp. 26.2; *ius iuro ut*: Cic. Bel. Gal. 5.6.6)
160. *iuvo ut* (Cic. Att. 7.23.3.3)
161. *laboro ut* (Cic. Ver. act. sec. 1.65.10; with *id*: Sal. Iug. 96.2)
162. *loco ut* (Cato Agr. 15)
163. *(AP/AdvP) manet ut* (Liv. aUc 1.31.4)
164. *mando (alicui) ut* (Cic. Ver. act. sec. 3.88.7)
165. *memini ut* (Col. Agr. 11.2.55)
166. *id mereo(r) ut* (Cic. Fam. 14.6.6)
167. *miror ut* (Pli. Epi. 1.22.7)
168. *mitto ut* (Tac. Ann. 11.32.2)
169. *moneo ut* (Cic Fam. 15.2.6)
170. *moris est alicuius ut* (Cic. Ver. act. sec. 1.66.11)
171. *moueo (aliquem) ut* (Liv. aUc 37.28.1)
172. *natura fert ut* (Cic. Att. 13.10.1.3)
173. *negotium do/habeo ut* (Cic. Fam. 5.6.1.9; Apu. Mag. 33.4)
174. *nitor ut* (Tac. Ann. 2.51.1)
175. *nuntio ut* (Liv. aUc 27.29.5)
176. *nuntius (di)missus ut* (Caes. Bel. Gal. 4.19.2) (also: *litterae, legatus,..*)
177. *obsecro ut* (Cic. Ver. act. sec. 2.75.2)
178. *obseruo ut* (Liv. aUc 2.5.10)
179. *obtestor ut* (Sal. Iug. 107.2)
180. *obtineo ut* (Pli. Pan. 46.1)
181. *obtingit alicui ut* (Cic. Ver. act. prima 21.7)
182. *operam do ut* (Cic. Ver. act. sec. 4.100.5)
183. *oportet ut* (Hyg. Ast. 1.7)
184. *opto ut* (Cic. Cat. 2.15.7)
185. *oro ut* (Pli. Epi. 5.1.2)
186. *paciscor (cum aliquo) ut (pacti sunt ut, pactus ut, Pli. Pan. 67.7)*
187. *pango ut* (Tac. Ann. 15.6.1)
188. *paro ut* (Cic. Att. 2.18.4.4)
189. *patior ut* (Caes. Bel. Gal. 1.45.1)
190. *pellicio ut* (Liv. aUc 26.7.6)

191. *(eo) perduco aliquem/aliquid ut* (Liv. aUc 2.1.6)  
 192. *(per)duco huc/in hoc/eo ut* (Vel. Pat. Hist. 3.1.5)  
 193. *perficio ut* (Cic. Ver. act. sec. 3.113.14)  
 194. *permitto ut* (Cic. Ver. act. sec. 2.45.3)  
 195. *perpello ut* (Liv. aUc 25.27.3)  
 196. *perpetior ut* (Cic. Ver. act. sec. 3.129.17)  
 197. *perpetro ut* (Tac. Ann. 12.58.1)  
 198. *persevero ut* (Anon. Bel. Alex. 35.2)  
 199. *persuadeo ut* (Sal. Iug. 32.1)  
 200. *rem/eo pertinet ut* (Pli. Pan. 53.1)  
 201. *illuc, huc, eo, eodem... peruenio ut* (Pli. Pan. 45.5)  
 202. *peruinco ut* (Tac. Hist. 3.74.2)  
 203. *peto ut* (Cic. Fam. 13.77.3.2)  
 204. *placet ut* (Pli. Pan. 4.1)  
 205. *plebes sciuit ut* (Liv. aUc 27.5.17)  
 206. *positum est in aliquo ut* (Cic. Att. 16.16B.8.8)  
 207. *non possum ut non* (Cic. Att. 4.6.2.5)  
 208. *litterae (tantum) potuerunt ut* (Cic. Fam. 13.24.2.4)  
 209. *postulo ut* (Cic. Ver. act. sec. 2.188.6)  
 210. *potestas ut (est in potestate, potestatem facere,...* (Cic. Fam. 13.39.4))  
 211. *praecipio ut* (Cic. Fam. 11.16.1.4)  
 212. *praedico ut* (Caes. Bel. Civ. 3.92.2)  
 213. *praemoneo ut* (Cic. Ver. act. prim. 23.15)  
 214. *praesto ut* (Cic. Fam. 16.21.3.1)  
 215. *praetermitto ut* (Cic. Att. 13.21a.2)  
 216. *precor ut* (Cic. Cat. 2.29.9)  
 217. *(eo) procedit ut* (Sal. Iug. 21.1)  
 218. *produco ut* (Fro. Epi. Haines II.32.4)  
 219. *proficio ut* (Cic. Cat. 1.27.2-3)  
 220. *(legem/rogationem) promulgo ut* (Caes. Bel. Civ. 3.20.5; Liv. aUc 42.19.1)  
 221. *pronuntio ut* (Caes. Bel. Gal. 5.33.4)  
 222. *prope (ad)est ut* (Pli. Pan. 6.2)  
 223. *(hoc) propero ut* (Apu. Flor. 16.25)  
 224. *proueho ut* (Pli. Epi. 9.19.5; with *eo*: Tac. Ann. 4.10.2)  
 225. *provideo ut* (Cic. Att. 8.3.2)  
 226. *pugno ut* (Cic. Att. 1.14.5)  
 227. *quaeso ut* (Cato Agr. 141.2)  
 228. *redimo ut* (Fro. Ep. Haines I.244)  
 229. *refero ut* (Liv. aUc 26.23.3)  
 230. *(id) refert ut* (Col. Agr. 2.10.5; Cato Agr. 73)  
 231. *relinquitur ut/reliquum est ut* (Cic. Ver. act. sec. 3.176.10)  
 232. *repeto ut* (Liv. aUc 3.33.2)  
 233. *respondeo ut* (Anon. Bel. Hisp. 3.7)  
 234. *restat ut* (Anon. Bel. Afr. 57.2)  
 235. *res est ut* (Liv. aUc 23.5.11)  
 236. *eo res reuoluit ut* (Liv. aUc 5.11.2)  
 237. *rogo ut* (Pli. Pan. 78.1)  
 238. *rogito ut* (Liv. aUc 8.36.6)  
 239. *sancio ut* (Cic. Ver. act. sec. 1.108.8; *sanctum habeo ut*: Caes. Bel. Gal. 6.20.1)  
 240. *scribo ut* (Cic. Fam. 5.11.2)

241. *senatus consultum factum est ut* (Pli. Epi. 3.4.3)  
 242. *sequitur ut* (Cic. Ver. act. sec. 3.163.7)  
 243. *seruo ut* (Rhet. Her. 1.11)  
 244. *significo ut* (Pli. Epi. 7.27.9)  
 245. *signum do ut* (Cic. Ver. act. sec. 5.88.3)  
 246. *sino ut* (Tac. Ann. 1.43.2)  
 247. *sollicito ut* (Cic. Fam. 15.2.6)  
 248. *specto ut* (Cic. Fam. 5.8.3; with *eo*: Cic. Fam. 13.4.3)  
 249. *spero ut* (Liv. aUc 34.27.3)  
 250. *stat ut* (Plin. Epi. 10.6.2)  
 251. *statuo ut* (Cic. Ver. act. sec. 2.103.9)  
 252. *stimulo ut* (Liv. aUc 44.17.6)  
 253. *studeo ut* (Anon. Bel. Alex. 1.4-5)  
 254. *suadeo ut* (Pli. Pan. 63.8)  
 255. *subigo ut* (Tac. Ann. 2.40.3)  
 256. *subinuito ut* (Cic. Fam. 7.1.6.3)  
 257. *suborno ut* (Liv. aUc 24.31.14-15)  
 258. *sufficit ut* (Pli. Pan. 30.5)  
 259. *(hoc) mihi sumo ut* (Cic. Fam. 6.5.2)  
 260. *superest ut* (Pli. Epi. 6.26.3)  
 261. *suppedito ut* (Liv. aUc 28.22.15)  
 262. *tempto (aliquem) ut* (Liv. aUc 4.2.7)  
 263. *tendo ut* (Liv. aUc 4.50.8.1)  
 264. *teneo ut* (Pli. Epi. 6.5.1)  
 265. *tesseram do ut* (Liv. aUc 28.14.7)  
 266. *traditum est ut* (Liv. aUc 2.1.11)  
 267. *tribuo ut* (Cic. Fam. 11.27.5)  
 268. *urgeo ut* (Tac. Ann. 2.70.1)  
 269. *usu uenit ut* (Liv. aUc 6.20.2)  
 270. *ualeo ut* (Tac. Ann. 1.79.4)  
 271. *(illuc, huc, eo,...) uenio/uentum est ut* (Anon. Bel. Alex. 14.1)  
 272. *in morem uenit ut* (Liv. aUc 42.21.7; *in religionem uenit ut*: Liv. aUc 10.37.12)  
 273. *ueri simile est ut* (Cic. Ver. act. sec. 4.11.13)  
 274. *uereor ut* (Pli. Epi. 1.9.17)  
 275. *uideo ut* (Liv. aUc 7.14.3)  
 276. *alicui uidetur ut (uisum est ut)* (Liv. aUc 27.6.10)  
 277. *uigilo ut* (Cic. Fam. 2.10.4)  
 278. *uinco ut* (Cic. Fam. 5.4.2.7; with *ita*: Cic. Ver. act. sec. 2.25.11)  
 279. *uincit auctoritas senatus/sententia,... ut* (Liv. aUc 27.35.9)  
 280. *ueneror ut* (Cic. Cat. 2.29.9)  
 281. *uociferor ut* (Liv. aUc 27.50.9)  
 282. *uolo ut* (Cic. Fam. 11.18.3)



## List of Abbreviations

|       |                                       |
|-------|---------------------------------------|
| AC    | Adverbial Clause                      |
| AgrOP | Agreement Object Phrase               |
| AgrP  | Agreement Phrase                      |
| AgrSP | Agreement Subject Phrase              |
| AP    | Adjective Phrase                      |
| AdvP  | Adverb Phrase                         |
| Aux   | Auxiliary                             |
| CLD   | Contrastive Left Dislocation          |
| CILD  | Clitic Left Dislocation               |
| CP    | Complementizer Phrase                 |
| DemP  | Demonstrative Phrase                  |
| DM    | Distributed Morphology                |
| DO    | Direct Object                         |
| DP    | Determiner Phrase                     |
| ec    | empty category                        |
| EPP   | Extended Projection Principle         |
| FF    | Focus Fronting                        |
| FinP  | Finiteness Phrase                     |
| FocP  | Focus Phrase (identificational focus) |
| FocvP | Focus Phrase (presentational focus)   |
| FP    | Functional Projection                 |
| HMC   | Head Movement Constraint              |
| HTLD  | Hanging Topic Left Dislocation        |
| INFL  | Inflection                            |
| IO    | Indirect Object                       |
| IP    | Inflection Phrase                     |
| IntP  | Interrogative Phrase                  |
| LCA   | Linear Correspondence Axiom           |

|      |                                 |
|------|---------------------------------|
| LEF  | Left Edge Fronting              |
| LF   | Logical Form                    |
| MCP  | Main Clause Phenomenon          |
| ModP | Modifier Phrase                 |
| NegP | Negation Phrase                 |
| NP   | Noun Phrase                     |
| NumP | Numeral Phrase                  |
| O    | Object                          |
| PF   | Phonological Form               |
| PP   | Prepositional Phrase            |
| RM   | Relativized Minimality          |
| RP   | Resumptive Pronoun              |
| S    | Subject                         |
| SFF  | Subpart of Focus Fronting       |
| Spec | Specifier                       |
| TopP | Topic Phrase                    |
| TP   | Tense Phrase                    |
| UG   | Universal Grammar               |
| vP   | Light Verb Phrase ('little vP') |
| V    | Verb                            |
| VP   | Verb Phrase                     |

### **Abbreviations used in the glosses**

|       |            |
|-------|------------|
| ABL   | Ablative   |
| ACC   | Accusative |
| CL    | Clitic     |
| CS    | Causative  |
| DAT   | Dative     |
| FUT   | Future     |
| GEN   | Genitive   |
| GER   | Gerundive  |
| IMPF  | Imperfect  |
| IMPTV | Imperative |
| INF   | Infinitive |
| NOM   | Nominative |
| OPT   | Optative   |
| PART  | Participle |
| PF    | Perfect    |
| PL    | Plural     |
| REFL  | Reflexive  |
| SG    | Singular   |

SUBJ  
VOC

Subjunctive  
Vocative





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