

Structures and Strategies

Adriana Belletti

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To Luigi, and to our sons Marco and Leonardo.

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Introduction

The collection presented in this volume is a selection of articles that I wrote over the last almost twenty years up to now. The selection has been guided by the idea of designing an internally coherent volume, containing some of the most representative steps in the research conducted on the following two closely related domains:

- i. The establishment of the functional structure of the clause, with special reference to Verb Syntax, in the tradition initiated by Pollock's (1989) seminal article, in the spirit of the cartographic projects (Cinque 2002; Rizzi 2004b; Belletti 2004b).
- ii. The identification of discourse-related positions in the low portion of the clause structure and the properties of the clausal phase *edge*, a privileged position in minimalism (Chomsky 2005).

In my personal recollection, ii. is a natural, direct development of the research undertaken under i.

This is reflected in the title given to the volume, which synthesizes the essential guidelines of the research program illustrated by the assembled chapters, according to which the basic formal ingredients of grammar, the structures, are taken to directly condition the computation of both morpho-syntactic processes and the strategies of discourse operations.

As for the specific contents of the book, Chapter 10—'Answering Strategies: New Information Subjects and the Nature of Clefts'—and Chapter 11—'Pronouns and the Edge of the Clause'—are two new articles, especially written for this volume; Chapter 7—'Inversion as Focalization and Related Matters'—presents the last two sections of an article previously published with the same title in the reference indicated in the acknowledgments, dealing with word order issues directly related to those addressed in Chapter 6, but not discussed there. The remaining eight chapters correspond to articles that appeared in different volumes, journals, and proceedings, indicated in the acknowledgments, some of which are fairly difficult to access by now. They are republished here with no change, apart from minor formal readjustments. The different chapters are ordered in terms of both their thematic

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coherence and their chronological history. The volume is divided into Part I and Part II, accordingly. Part I: Clause Structure and Verb Related Syntax. Part II: The Syntax of (Some) Discourse Related Strategies.

Throughout the chapters of the volume, Italian is the language most closely investigated. However, all chapters adopt a comparative perspective, in particular with other Romance (e.g., French, Spanish, Brazilian Portuguese [BP]) and Germanic languages (e.g., English, German). The volume can thus be situated in the tradition of studies sometimes referred to as ‘The New Comparative Syntax’ (Haegeman 1997). I take this style of research to be one of the most innovative features of formal studies on natural language, often a source of major discoveries, that has been first undertaken within the Principle and Parameters model (Chomsky 1981, 2002), and that is best illustrated by R. Kayne’s contributions (e.g., Kayne 2000c; the articles recently collected in Cinque and Kayne 2005, and Kayne’s introduction), a constant source of inspiration over the years.

I want to devote these introductory pages to an outline and brief discussion of some of the themes addressed in the two parts of this volume; I will select those that I think are of particular relevance and that identify aspects that, also in retrospect (especially in connection to Part I), qualify as core topics and issues, both on the theoretical and on the empirical side.

PART I: CLAUSE STRUCTURE AND VERB RELATED SYNTAX

1 Functional Structure and Verb Movement

A central issue that accompanies all chapters of Part I is the lexical-functional distinction and its role in determining the overall clausal architecture. The lexical-functional distinction has played a crucial role in the theoretical debate during the late eighties and nineties of the last century, leading to a conception of clause structure that is at the same time abstract and rich, detailed and simple: The functional architecture of the clause explicitly contains positions (heads) expressing all relevant morphosyntactic features directly conditioning the syntactic computation; it is built through the recursive application of the same operation merging two such heads (or their projection, Chomsky 1994); it contains and dominates the lexical information expressed in the projection of the verb and its arguments.

The Pollockian conception—and its ancestor in Emonds (1978)—of clause structure as consisting of a split IP is at the base of all the chapters in Part I, but most specifically of Chapter 1—‘Generalized Verb Movement’—where the generalized application of the Verb (head) movement operation is argued to occur in Italian tensed and infinitival clauses in a uniform way. The respective order of the two inflectional heads assumed, Agr and T, has reversed the order originally proposed by Pollock (1989), on both morphological and conceptual grounds. In more current terms, influenced by minimalist assumptions, the label chosen for the highest head would probably not

be Agr, but a more specific head or set of DP-related heads (along the lines of the pioneering article by Shlonsky 1989; and also of the more recent work by Cardinaletti 2004; Sportiche 2007; see also Belletti 2001a for relevant discussion on Agr nodes). The essence of the arguments, however, remains unchanged. In particular, the comparison between Italian and French would still be captured in terms of the different scope of verb movement in the two languages in non-finite contexts, which Chapter 1 discusses in detail. The main comparative distinction between the two languages is also corroborated by the analysis of the nonfinite past participial morphology, discussed in Chapter 3—‘Verb Positions: Evidence from Italian’—where an aspectual head as well as a specific past participial agreement-type head are introduced. Verb movement to a non-finite inflectional head is shorter *and* optional in French, as opposed to Italian, with the aspectual head of the past participial morphology corresponding to the non-finite tense head of full clauses (to be combined with the low infinitival head also assumed in Chapter 5—‘Italian/Romance Clitics: Structure and Derivation’). A word of caution is in order here. As the writing of the different chapters took place at different times, slight changes in some analytical hypotheses across the different chapters typically reflect the constant development of the research ideas. The refinement of the analysis of the past participial structure throughout the different chapters is one case in point.

The conception of verbal morphological checking adopted in most of the chapters of Part I has left some crucial issues open, which are still not settled at present. One such issue is quite central: What is the ultimate triggering factor inducing verb movement? To put it in comparative terms: What is the head and the featural specification responsible for the parametric variation found across languages on the verb movement process? Some progresses, also in terms of the empirical coverage, have been made in this domain, but the deep question is still rather open. Partly different conceptions of the process have been proposed over the years, up to the reductionist idea that there is no real verb-head movement process at all, but just movement of chunks of the verb phrase; some of these movements mimic movement of a head since the moved phrase only contains the head V. Koopman and Szabolcsi (2000) is probably the most thoroughly developed version of this different conception, which is directly inspired by Kayne’s work making extensive use of remnant movement derivations, so that processes previously analyzed in terms of head movement are reinterpreted as phrasal movements, both in the domain of verb syntax and in the domain of nominal syntax (Cinque 2005; Shlonsky 2004). The crucial question about the featural trigger remains though, however the head versus phrasal movement issue is settled. The different scope of verb movement in non-finite contexts in Italian and French, discussed in Chapter 1, is particularly relevant for this question: The longer movement of Italian cannot be simply justified on the basis of a strong/overt verbal morphology, since the overt morphological shape of the infinitive is the same in both Italian and French. So, the overt shape of the

verbal morphology cannot be the relevant triggering feature. A particular proposal is developed in Chapter 1 that tries to formally characterize the different nature of the Agr affix in the two languages. A technical solution along those lines may be worth pursuing further. However, no such development has been attempted in this chapter or in later work. From the empirical point of view the scene is richer now, though, than it was at the time the article was written. Interesting work by Bobaljik (2002) based on variations in the scope and (at least apparent) admitted optionality of verb movement in Faroese and Kronoby, a Swedish dialect, suggests that verb movement can be considered driven by richness of morphology only as far as the agreement morphology is concerned; the richness of other verbal morphology (e.g., the tense morphology) may or may not be a relevant factor. There is a one-way implication holding: If rich agreement morphology > V moves (Holmberg and Platzack 1995; Roberts 1993b; Vikner 1997); the other direction of the implication does not hold, as Bobaljik's data and the Italian versus French infinitive data clearly indicate. It remains to be understood what the triggering factor in these cases might be exactly, why this factor correlates with the optional character of the movement, and to what extent the optionality is real. The research project is still pretty much open on this point and alive.

2 Case and Agreement

The relation between Case and agreement has come to the foreground within the minimalist program, both in its first formulations (Chomsky 1993, 1995) and also in the more recent developments, where Case is implemented in terms of the relation Agree, between a probe and a goal. The Case-agreement relation is central to the discussion of Chapters 2—'Agreement and Case in Past Participial Clauses in Italian'—and 5—'Italian/Romance Clitics: Structure and Derivation'—in particular, on the morphosyntax of past participial small clauses and clitic constructions respectively. The manifestation of agreement in ϕ -features of number and gender is also central to the discussion of Chapter 4—'(Past) Participle Agreement'—dealing with past participle agreement in Italian and French. The core idea is that agreement in ϕ -features is the overt morphological manifestation of a Spec-head relation between a phrase in the Spec position of a head carrying the agreeing feature (Kayne 1989a; Sportiche 1998). There are however cases where the agreement relation is established between a head and its complement, either its head (e.g., in the D-N relation), or its specifier at the edge. The idea developed in Chapter 2 capitalizes on the hypothesis that the second relation is established in past participial small clauses in Italian and that the agreement in ϕ -features between the past participle and its complement is also Case agreement. The proposed relation, which possibly corresponds in part to the one assumed for other related structures previously studied in the literature, the inflected infinitive of Portuguese studied in Raposo (1987)

and Aux-to-COMP structures of Italian studied in Rizzi (1982), could be implemented in more current terms as the establishment of the minimalist relation Agree (Chomsky 2004), occurring in a local configuration. Thus, the participial small clauses studied in Chapter 2 remain a relevant empirical domain to verify the formal conditions governing the Case-agreement system. A further relevant empirical domain in this connection is presented in Chapter 5 where the morphosyntax of Italian/Romance clitic pronouns is addressed in detail and where it is claimed that Romance-type clitic pronouns are a privileged, fairly complex area, which allows one to see the Case-agreement system at work in close relation with verb syntax. A special status is attributed in this chapter to the negative head for which the relation with Case agreement is only indirect, mediated through subject clitics of the northern Italian dialects type.

3 Verb Movement and Adverb Placement

The correlation between the verb movement process and the position of adverbs of different classes is a classical research topic that Chapters 1, 3, and, partly, 2 address in detail. Variations in this domain are interpreted as following from the interplay of two factors: the position of the adverb in the clause structure; and the presence and scope of verb movement. The adverb classes considered in Chapters 1–3 are basically three: negative adverbs, sentence adverbs, and so-called low adverbs. The classification of adverbs assumed is not particularly fine-grained, but it reflects currently assumed classifications of the time. The status of adverbs and their location in the clause structure is assumed to somehow be the reflex of their semantics, but how exactly this aspect should be expressed in structural terms is not developed at all and is implicitly left open for future research. It is assumed in various points in the chapters that adverbs are generally adjoined to the phrase they modify (adopting the ‘modification’ relation of Sportiche 1988): Sentence adverbs are adjoined to the root of the sentence, low adverbs are adjoined to the verb phrase; negative adverbs are either adjoined to some low functional head in the area of the verb phrase or fill the specifier of a higher negative phrase (cf. also Zanuttini 1997 for further development). Many word order variations within the same language (Italian) and among the different languages considered (French and English, in particular) follow from these assumptions. However, this was clearly an area where further knowledge and understanding were called for. And, indeed, a major progress in terms of both empirical coverage and overall explanation of adverb syntax was made some years after these chapters had been published with the appearance of Cinque’s (1999) monograph, a real landmark in this domain. Cinque’s influential hypothesis, supported by an impressive mass of data from numerous and diverse languages, is that adverbs fill the specifier of functional heads that enter the constitution of the functional

architecture of the clause, viewed as the verb extended projection. The modification expressed by different adverbs depends on the feature content of the different heads of which different adverbs are the specifiers. The assumption is that specifier and head automatically share the same feature content. There is a certain analogy here with the agreement in ϕ -features that holds between a given affixal head and its specifier, or, more generally, with the agreement occurring with respect to various types of interpretable features when 'criterial' conditions are at stake (Rizzi 2006). Cinque's hierarchy of interpretable heads (Belletti 2004b, introduction) is rigid across languages; it is a property of UG rooted in semantics as a specific kind of semantic selection that the child does not have to learn. Depending on the language type, the same content can be realized as the head or as the specifier of the same functional projection. This fundamental new insight was still missing at the time Chapters 1–3 had been written. Thus, although the style of the argumentation is essentially the same from Pollock (1989), passing through these chapters up to Cinque (1999) and the work generated from it (e.g., Laenzlinger 1997), the descriptive conclusions reached in Chapters 1–3 are not as fine-grained as they could have been a few years later.

Various other themes are addressed in the chapters of Part I, some of which are also central to Part II, such as the computation of clitic doubling structures, the shape of small clauses, the nature of topicalization/focalization processes (on which see the qualification following). Other themes identify specific issues such as the distinction between a negative sentence and a sentence that is interpreted as negated because in the scope of a higher negation, as in the case of the low adverbial clauses discussed in Chapter 3, the special status of auxiliaries as always higher in the clause structure than lexical verbs—their behavior in various northern Italian dialects strongly supports this proposal (Poletto 2000)—an idea that naturally leads to the further proposal that the high part of the IP/AgrP is rich and articulated, as advocated in more recent work by Cardinaletti (1997, 2004).

Before moving on to some comments on the themes central to the second part of this volume, let me indicate one last terminological note relative to Part I. Throughout most of the chapters in Part I, following current practice at the time, the term 'topicalization' is used to refer to the process that in the most recent chapters of Part II is labeled 'focalization.' This reflects a terminological shift that occurred in the late nineties with the split-CP cartographic analysis presented in Rizzi's (1997) work on the left periphery. As it is clear from the articles in Part II where the distinction is explicitly assumed, in the most recent cartographic works the term 'topicalization' is reserved to processes involving a topic/given constituent while the term 'focalization' is reserved to those processes where the constituent is focused/new. Since both processes may involve preposing into the left periphery, this may explain the opaque terminology at the time. A clear distinction between the two processes has been made explicit within the cartographic approach, which has reserved for them different positions in the split CP.

**PART II: THE SYNTAX OF (SOME)
DISCOURSE RELATED STRATEGIES**

4 The vP-Periphery

The chapters constituting the second part of this book all reflect recent, up to current research. They revolve around a set of coherent themes among which the central one is the cartographic analysis of postverbal subjects (and of some complement reordering operations). Special attention is devoted to postverbal subjects that are the focus of new information. Chapter 6—‘Aspects of the Low IP Area’—develops the analysis in full detail. The basic proposal there is that, following cartographic guidelines, the low part of the clause should be enriched with an area of discourse-related positions of focus and topic, sometimes labeled a vP-periphery. One of the main aims of the cartographic projects is the design of a detailed and fine-grained map of the clause where not only (head) positions hosting morphosyntactic features are represented in the clausal architecture, but also positions related to discourse. The fundamental insight is that to the extent that a given discourse interpretation strictly correlates with a particular word order, then there must be a dedicated position in the clausal map for that interpretation. As I have also discussed in Belletti (2004b, introduction), this is the way in which one of the core minimalist questions is addressed in cartographic terms: The computational system directly connects to the interfaces through an explicit readability of syntactic structures. Thus, a crucial part of the interpretation related to new versus given information in discourse comes as a consequence of word order variability, since the different positions where a given constituent can appear correlate with different contents in information. The syntax of postverbal subjects in a null-subject language like Italian qualifies as a particularly clear domain where the tight relation between structural position and informational content manifests itself. It is advocated, in Chapters 7—‘Inversion as Focalization and Related Matters’—and 8—‘Extended Doubling and the vP-Periphery’—that the same low portion of the clause is also involved in other clause-internal word order phenomena that have a direct impact on discourse, such as the reordering of verbal complements (building on the approach first developed in Belletti and Shlonsky 1995) and in structures where a lexical subject is ‘doubled’ by a strong pronoun. It is claimed that the reordered complements in the former case and the strong doubling pronoun in the latter illustrate different ways in which the discourse-related vP-periphery can be exploited in different computations. It is proposed in Chapter 10—‘Answering Strategies: New Information Subjects and the Nature of Clefts’—that the same vP-periphery is exploited in the presence of the copula, in instances of subject cleft sentences in those cases where the clefted subject expresses new information. One representative instance of subject clefts of this kind is claimed to be illustrated by French—and other languages manifesting analogous

behaviors—in the context of answering strategies, a domain thoroughly discussed across languages in Chapter 10, and also touched upon in Chapter 9—‘Kinds of Evidence for Linguistic Theory’—see the discussion in section 5. Subsequent work has shown further domains where the low vP-periphery of the clause is activated, such as, for example, *wh-in situ* structures (Kato 2003, on BP). This area of the clause has also been shown to be active both in related languages (Poletto 2006; see also German in Grewendorf 2005) and in languages that are very far apart from Italian or other Romance/Germanic languages, such as Chinese (Tsai 2007; Badan 2007), in a way that is remarkably analogous to the one discussed here for Italian (especially in doubling-type structures of the kind discussed in Chapter 8).

5 Kinds of Data

The content of this book mainly reflects work on syntactic theory and language description that adopts a fairly standard research practice whereby the fundamental empirical source of data comes from grammaticality judgments given by native speakers. However, this is by no means the only possible source of empirical data on which analyses and the explicative value of theoretical hypotheses can be tested and supported. Data from acquisition and pathology can be a very rich source of evidence for linguistic theory. This has been clearly shown by the theoretically oriented work on acquisition and pathology over the last twenty years or so (Hyams 1986; Rizzi 2005; Wexler 1994; Friedmann and Grodzinsky 2000), to cite just some representative works of a by now vast research domain. Over the last ten years or so, I have personally conducted some experimental work, in particular on L2 acquisition, and have analyzed data from acquisition in different modalities (L1, L2, bilingual, SLI), and have also directed much research in these domains conducted by graduate students. This has been one of the most exciting intellectual experiences over the last years that gave me the real sense of a discovery of an immense domain, which is by now an essential source of inspiration. This kind of work is not directly reflected in this volume, but it appears in a more or less indirect way in various places throughout, especially in Chapter 10 on answering strategies. Indeed, as is discussed in the chapter, the research track pursued there has been directly suggested in origin by some experimental work on adult L2 acquisition of the appropriate use of new information postverbal subjects in Italian, at a non-advanced level of attainment (then reconsidered in a wider perspective in Belletti, Bennati, and Sorace 2007 with near-native speakers of Italian). As it is also discussed in Chapter 10, the experimental setting of elicited production is directly usable in language description as well since it provides a controlled source of data, especially important in domains where discourse conditions are directly relevant. Reliable grammaticality judgments are particularly hard to obtain from native speakers in these domains as they require an often heavy imaginative effort on the part of the interviewed

speaker who must figure out the relevant context, which in turn must match the one assumed by the linguist. Indeed, the existence of different answering strategies across languages emerges in a very neat way in the experimental conditions of elicited production adopted, as the results from both Italian and BP discussed in Chapter 10 illustrate (from Guesser's 2007 adaptation of the experiment originally conceived of for Italian). Whereas the elicited answer on the identification of the subject provided by Italian speakers has the subject in the postverbal position (as is also the case in other null-subject languages, e.g., European Portuguese; see also Costa 2004), in BP it has the subject in either the preverbal position, associated with a special prosody (as is also the case in other non-null-subject languages, e.g., English), or in the post-copular position in a variety of subject clefts (as is also the case in other non-null-subject languages, e.g., French), or in a pseudocleft structure. The examples in (1) and (2) illustrate the different strategies revealed by the elicitation procedure in Italian and BP (VS, the variety of clefts/pseudocleft, SV).

- (1) Q: Who spoke/has spoken?
 IT: A. Ha parlato un ragazzzo
 —has spoken a boy
 BP: A.
 a. Foi um rapaz que falou
 it was a boy who spoke
 b. Foi um rapaz
 it was a boy
 c. Um rapaz que falou
 a boy who/that spoke
 d. Quem falou foi um rapaz
 who spoke was a boy
- (2) Q Who has screamed/coughed?
 IT: A Ha urlato la ragazza
 Has screamed the girl
 BP: A Uma senhora tossiu
 A lady coughed

The answers provided in the L2 Italian of L1 English or French speakers in the very same experimental conditions characteristically had the subject in the preverbal position associated with a special prosody in the former case, and the subject in the post-copular position of a cleft structure in the latter. Thus, the elicited production reflected the transferring of the L1 prevalent strategy into the L2. The reader is referred to Chapter 10 for detailed analyses and the full development of these ideas. The point I want to stress here is the general conclusion that data from acquisition deserve close attention

in developing linguistic analyses and that often more reliable results can be obtained by incorporating this kind of data into the picture. Moreover, the advantage that can be gained by non-neglecting experimental results in language description should also be kept in mind as a particularly fruitful research guideline, as Chapter 10 discusses in connection with examples such as those in (1) and (2).

Chapter 9 of this volume—‘Kinds of Evidence for Linguistic Theory’—briefly presents three case studies that show the peculiar contribution that data from acquisition (in different modes, as discussed in Hamann and Belletti 2006 and references cited there) can provide to guide and shape linguistic hypotheses. The proposal put forth there is that properties that have been tightly related to the positive or negative setting of the null-subject parameter are actually related in ways partly different from what is currently assumed and to different extents. The possibility of so-called ‘free inversion’—which is, in fact, discourse-related inversion as discussed in Chapters 6 and 10—should be regarded as a weak-type of correlation as the null-subject nature of the language is a necessary but not sufficient condition to allow for it (see also Nicolis 2005), while the *quelqu’un* alternation of French is interpreted as a strong-type correlation in that the shape of the complementizer appears to be directly dependent on the negative setting of the parameter. Data from different modes of acquisition reveal the different status of the two standardly assumed correlations. Finally, on a different domain, it is claimed that the special computations involved in cliticization, also discussed in Chapter 5, combined with the tripartite classification of personal pronouns in the terms proposed in Cardinaletti and Starke (1999) may also be the source of subtle differences in the acquisition of clitic pronouns in two closely related grammatical systems such as French and Italian, which different modes of acquisition appear to manifest.

6 Doubling and the CP Edge. The Status of CPs: Full and Small Clauses

Doubling-type phenomena are a prominent topic throughout this book, both in Part I and in Part II, with emphasis on different aspects. The analysis presented in Chapter 5 for clitic doubling is reconsidered and refined in the more recent Chapter 8—‘Extended Doubling and the vP-Periphery’—in the context of a wider discussion of doubling phenomena, also taking into account quantifiers as in Sportiche’s (1988) influential analysis of quantifier floating, and in the phenomena of subject doubling with a strong pronoun of Italian, already mentioned in section 4. In Chapter 11—‘Pronouns and the Edge of the Clause’—it is assumed that the doubling computation is also at play to yield the phenomenon of Clitic Left Dislocation (CLLD; see the proposal in Cecchetto 2000), and also, in different terms, structures containing a Hanging Topic (HT). The reader is referred to this chapter for an overview of the two phenomena and for the implementation of partly

distinct analyses for them. Here I want to just concentrate on three aspects addressed in this chapter: the proposal that CLLD and HT are more closely related structures than often assumed (Cinque 1977, 1990b), both targeting the left periphery of the clause in partly similar ways crucially involving a doubling computation; the proposal that doubling can be implemented through an iterated DP to the effect that a pronominal portion of the DP comes to fill the *edge* of the CP, and in this position it remains silent (Kayne 2005a; Rizzi 2005); and the idea that the HT constitutes a phase (Chomsky 2005) on its own. These ideas are current research topics, so they are certainly bound to be in need of further refinements and adjustments in the future, possibly even major ones. The hope, however, is that some real interpretive mechanism has been uncovered by the proposed analyses, which may be ultimately at play when a personal pronoun is present in the clause. It is essentially suggested that CLLD, HT, and doubling computations may be more widespread than meets the eye and that they are possibly at work whenever a sentence contains a personal pronoun, since a silent doubled pronoun is present at the CP *edge* in these cases. It is submitted that the fundamental requirements of classical principle B could be a direct consequence of this approach. A systematic investigation of this consequence is left open to future detailed research.

The analysis of the CP left periphery of the clause is directly inspired by cartographic studies throughout this book (Rizzi 1997; Benincà and Poletto 2004; Haegeman 2006; and references cited in Chapters 10 and 11 in particular). Beside the domains mentioned where this portion of the clause is directly implicated, it is proposed in Chapter 10 that the CP can also have a special nature in some cases, and qualifies as a small clause in an updated version of Stowell's (1983) original proposal in terms of 'subjects across categories.' The proposal is that a CP small clause is a CP with an EPP feature. One instance of a CP with this property is the CP complement of the copula in cleft structures (and the complement of perception verbs in the same sense of Guasti 1993). Although small clauses and their possible analysis is a fairly constant research theme of this book throughout both parts (Chapter 2 and Chapter 10, in particular), its discussion in the context of the analysis of cleft sentences conducted in Chapter 10 opens up a new research front that remains prominent in the agenda of future further work.

Part I

Clause Structure and Verb Related Syntax

1 Generalized Verb Movement

1 INTRODUCTION

Recent work in syntactic theory has developed two far-reaching ideas: the extension of the X' -schema to the projection of functional heads (Chomsky 1986a) and a more articulated and abstract conception of sentence structure (Pollock 1989; Chomsky 1989). These two ideas have been shown to interact in a very productive way once they are combined with the general principles of UG. The proposals that head movement processes are Structure Preserving in Emonds' (1976) sense and that they are constrained by the general ECP (Baker 1988) play a crucial role in this connection. Pollock's (1989) article has convincingly shown that, once this set of assumptions is adopted and put into work, previously mysterious phenomena related to word order variations and adverb placement can be given a rational account.

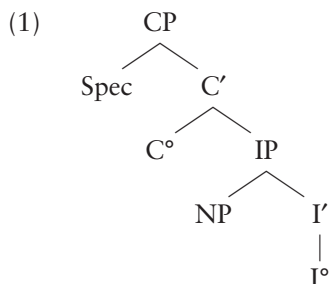
The present chapter is a contribution in the same direction. The syntax of verbs in Italian will be analyzed both in tensed and infinitival clauses. As in Pollock's article, the relative position of the inflected verb and adverbs of different sorts, negation, and floated quantifiers will be interpreted as explicit evidence illustrating the occurrence or nonoccurrence of a verb movement operation, under the fundamental assumption that no special process of adverb movement is at work in the syntax. In order to do that, special attention will be devoted to the empirical issue concerning the determination of the base position of different classes of adverbs. This is indeed a fairly central issue once instances of word order variation involving adverbs and verbs provide arguments revealing the various different scopes of application of V-movement. This investigation will lead us to a fairly articulated typology of different classes of adverbs.

It will be shown that the verbal head systematically moves, in Italian, to the highest inflectional head position assumed, with no difference between tensed and infinitival environments. This generalized application of verb movement gives rise to significant differences with a closely related language like French, which will be discussed throughout the chapter. The proposed analysis also has a direct bearing on different independent issues such as the

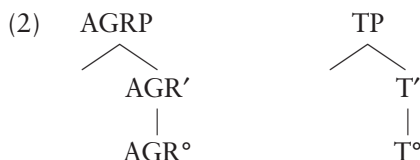
proper analysis of certain kinds of small clauses as complements of perception verbs and related structures and the existence in Italian of absolute past participial clauses with peculiar properties. We will address these topics toward the end. Finally, in the last section, we will present a possible formalization of the V-movement operation in a language like Italian.

2 ON SENTENCE STRUCTURE

In Chomsky (1986a) it has been proposed that the clausal system is not exceptional with respect to the X'-schema but conforms to it. Heads can be attributed to the traditional S' and S , the functional categories $C(OMP)$ and $I(NFL)$ respectively. S' and S are analyzed as the CP projection of C° taking the IP projection of I° as complement, in the sense of X'-theory, as illustrated in (1):



with the Spec of CP position to be filled only through movement and the Spec of IP position identified with the NP subject position. Since this proposal has been put forth, various authors¹ have pointed out that, despite its being an important step toward a constrained conception of sentence structure, it still suffers from some conceptual deficiencies. The major conceptual problem has been recognized in the fact that if I° is a head in the sense of X'-theory, it should not simultaneously contain all the material commonly associated to it, that is to say both agreement features (AGR) and tense features (T), two independent sets of features often distinguished in the verbal morphology of different languages. AGR and T should rather be seen as two independent functional heads. If this is the case, they should give rise to their own projections in terms of the X'-theory:



The most important contribution of Pollock's work has consisted in showing that this conceptual argument has a very explicit empirical correlate. The idea of the existence of two functional head positions containing verbal morphology provides two possible landing sites for the verbal root. This is so under the assumption advocated in Baker (1988) and Chomsky (1986a) that the association of the verbal root with its morphology is obtained through movement of the verbal head into the inflectional head position(s) with a head-to-head type of movement, submitted to the general ECP. A further possibility remains: The verb can be associated with its morphology through Affix Hopping (Chomsky 1957). This gives a fairly articulated range of combinations that turn out to be all attested either within a given language depending on the different structures in which a verb is inserted or across different languages: (a) the association can be done through Affix Hopping, with the affixes lowering to the verbal root; (b) the association can be done in part through Affix Hopping and in part through V-movement, with the verb moving to the first functional head and the remaining affix lowering to the same position; (c) the association can be entirely done through V-movement, with the verb moving to the first functional head position and subsequently to the second. Following the argument originally attributed to Emonds (1978), Pollock has argued that the different scope of V-movement can account for the interlinguistic difference between French and English manifested by contrasts like those in (3) arising in negative sentences:

- (3) a. Jean n'aime pas Marie
 b. *Jean ne pas aime Marie
 c. *John likes not Mary

If the negative adverbs *pas* and *not* occur between an inflectional head and the VP at D-structure, the contrast in (3) overtly shows that the lexical verb moves to the inflectional head in French, while it does not do so in English, where the association is obtained through Affix Hopping.² Verb movement in French seems to follow the same pattern if other adverbs and Floated Quantifiers (FQ) are taken into account:

- (4) a. Jean embrasse *souvent* Marie
 b. Les enfants pleuraient *tous* en même temps
 c. *Jean *souvent* embrasse Marie
 d. *Les enfants *tous* pleuraient en même temps

Adverbs like *souvent* and FQs arguably fill a VP-initial position. A difference relative to the respective position of the verb and the adverbial element or FQ shows up if infinitivals are taken into account. Pollock has pointed out that although the lexical verb does not seem to move across the

negative adverb *pas* it seems to be able to move across adverbs like *souvent* and FQs:

- (5) a. Ne *pas* sembler heureux est une condition pour écrire des romans
 b. *Ne sembler *pas* heureux est une condition . . .
 c. *Souvent* paraître triste pendant son voyage de noce c'est rare
 d. Paraître *souvent* triste pendant son voyage de noce . . .
 (Pollock (1989): (16)a,b; (24)b, (27)b)

These otherwise fairly mysterious facts find a simple and rational account if the assumption is made that the inflectional features to be associated with the verb do not constitute a single functional head but two, AGR and T, respectively. Suppose that the negative adverb *pas*, on the one hand, and adverbs of the *souvent* type and FQs on the other, hang from different levels in the sentence structure, with the former in a position immediately lower than the highest functional head and the latter in an immediately pre-VP position. The contrast internal to French between paradigms (3) and (4), on the one hand, and (5) on the other is accounted for in the following terms: In tensed clauses the verb always moves to the highest functional head position, while in infinitivals it is only allowed to move to the lowest functional head position, the first head that it meets.³ Long movement to the highest functional head gives the order V *pas*, while in order to obtain the order V *Adv/FQ* the shorter movement to the lower functional head is sufficient. These contrasts provide direct empirical support in favor of the idea that the clause should contain (at least) two functional head positions.⁴

2.1 The Respective Position of AGR and T

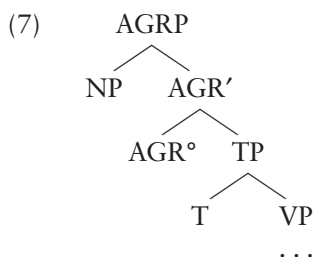
The idea that the combination of the verbal root with its inflectional morphology can occur through the syntactic process of V-movement has the non-trivial theoretical consequence of situating (part of the) morphology within the syntactic component of the grammar. This is in fact one significant result of Baker's (1988) work and his study of incorporation processes, of which V-movement can be seen as a particular instance. This is also the idea advocated in Chomsky (1989). Of course, morphology has a concrete manifestation in the real words of the language. Consequently, it must be the case that the words that result from a syntactic movement process are morphologically well-formed words. V-movement can be no exception to this general requirement.

A central constraint that guides the interplay of syntax and morphology is the principle that Baker (1985) called the 'Mirror Principle,' according

to which in a given word the respective order of affixes that may be present reflects the syntactic derivation of the word, i.e., the order in which the affixation has taken place through syntactic head movement.⁵ Hence, the affix that is closer to the root must be the one that has attached first and so on. Furthermore, given that the affixation is done through head movement that is in turn constrained by the ECP like any other movement process, it must be the case that the first affix in the word is also the one that is closer to the root in the hierarchical tree structure. These considerations immediately open the question of the respective order of the AGRP and TP projection in the clause structure. They also indicate how to interpret the answer coming from the observation of the relevant data: The order of affixes in the resulting inflected verb will reveal their respective order of attachment in the tree. Let us then take an inflected verb in Italian and observe its form. For the clarity of the argument, let us take two forms where the respective order of the affixes is overtly visible through simple observation; this is the case in the imperfect and the future tenses:

- (6) a. Legg-eva-no
 they read (order of affixes: T, imperfect; AGR, 3 person plural)
 b. Parl-er-ò
 I will speak (order of affixes: T, future; AGR, 1 person singular)

As is clear from (6), the respective order of tense and agreement features in the verbal morphology of Italian is the order $T \dots AGR$. We now have a simple but straightforward answer to the question concerning the respective order of T and AGR in the hierarchical tree structure of the clause: T must be lower than AGR.⁶ We then come to the conclusion that, putting aside the possible existence of other (intervening) functional heads, the structure of the sentence in Italian as well as in related languages is as in (7):



According to (7) the traditional S/IP is viewed as an AGRP with AGR taking a TP complement, in the sense of the X'-theory, and where the subject NP fills the position of Specifier of AGR.

3 NEGATION, ADVERBS, FLOATED QUANTIFIERS AND V-MOVEMENT IN TENSED CLAUSES

Let's now check what the shape of Italian tensed clauses is with respect to the occurrence of V-movement. We will examine it by taking into consideration different sorts of items. In particular: negation, 'sentence' adverbs, 'lower' (VP) adverbs, and floated quantifiers.

3.1 Negation

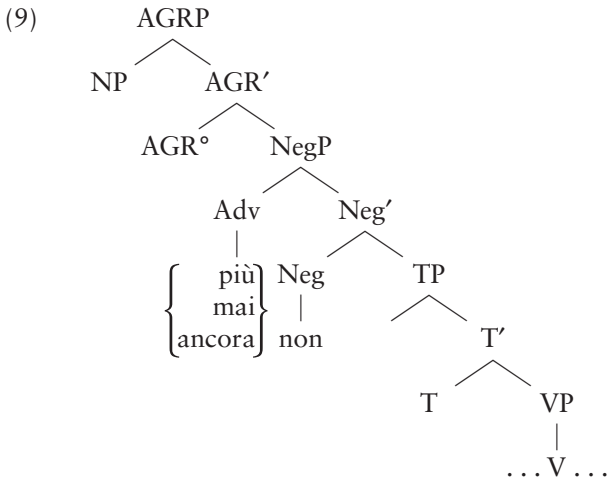
Consider the sentences in (8):

- (8) a. Gianni *non* parla *più*
Gianni does not speak anymore
b. Maria *non* rideva *ancora*
Maria did not laugh yet
c. Lui *non* diceva *mai* la verità
he never told the truth

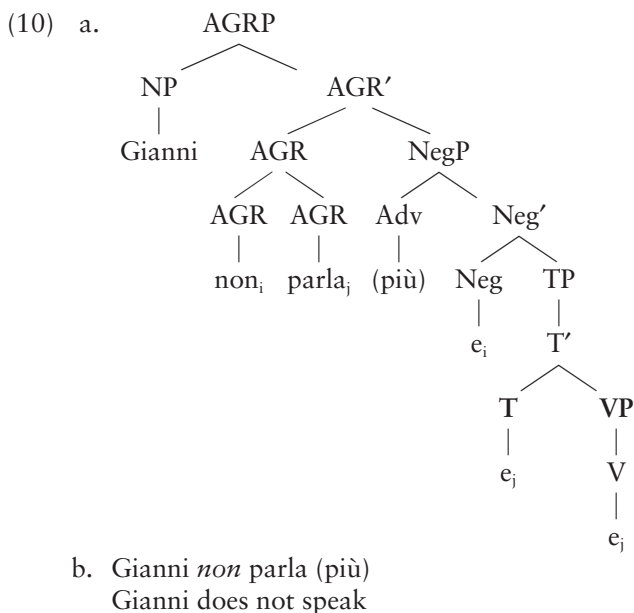
In (8) two negative elements are present: the negation proper *non* and various negative (polarity) adverbs like *più*, *ancora*, and *mai*. Notice that the negative adverbs need not be present to express simple sentential negation in Italian. From this point of view, they are not the exact correspondent of French *pas*, whose presence is obligatory in French negative clauses if no other negative adverb is present, as is well known. We can, nevertheless, maintain that their distribution corresponds to the distribution of *pas*.⁷ If we compare (8) with the French sentences in (3), we remark a complete parallelism: the linear order of constituents is: '... *non/(ne)* V *più*, *ancora*, *mai* (*pas*) ...'. In commenting on (3), we interpreted those sentences as overt evidence of the occurrence of V to I° movement, following the Emonds-Pollock argument. More precisely, adopting Pollock's analysis, negative sentences of this sort can be taken as evidence of the occurrence of movement of V to the structurally highest inflectional position, i.e., AGR, in our system. According to (our reinterpretation of) this analysis, the negative adverbs fill a position to the right of the highest inflectional head AGR at D-Structure. Hence, once the crucial assumption is also made that there is no specific process of adverb movement, the order 'inflected Verb ... negative adverb' can only be arrived at through V to AGR movement.⁸

The following questions arise: Where exactly are the negative adverbs located in the tree structure? What position does the negation *non* fill? Pollock (1989) and other subsequent works have proposed that between the two inflectional heads AGR and T a Negative Phrase may be present in

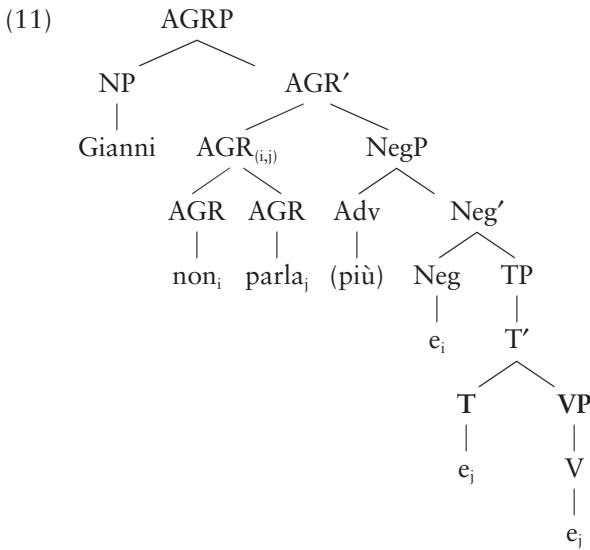
negative clauses. Parallel to French *ne*, Italian *non* can be viewed as the head of this phrase. The negative adverbs in turn can be dealt with as possible specifiers of it. The proposal is synthesized by the tree in (9):



This proposal includes the further hypothesis that the negation *non* is a clitic.⁹ Suppose that, due to its clitic nature, it must move to the AGR position, with a head-to-head type of movement. Assume, for concreteness that this instance of head-movement is left-adjunction to AGR.¹⁰ The derivation of the sentences in (8) then includes the following processes: Neg to AGR; V to T to AGR. Suppose that the movements of V are cases of substitution, in the sense discussed by Rizzi and Roberts (1989). According to this proposal, incorporation of the inflectional morphology within the verb is obtained by substituting the verbal root for a particular slot for which the morphology subcategorizes. Thus, the Tense morphology subcategorizes for the verbal root (V___/T), and the AGR morphology subcategorizes for a V + T (V + T___/AGR).¹¹ Given the combination of the processes just described, the order '*non* inflected V *negative adverb*' is thus obtained. Notice that the same analysis holds for French negative sentences like those in (3). According to this proposal, the difference between Italian and French consists in the fact that the Specifier position of the NegP is *obligatorily* filled (by *pas*) in French and *optionally* filled by negative adverbs like *più* ... in Italian. Thus, when the Spec position of NegP is empty in Italian the result is a clause involving simple sentential negation. The diagram in (10) a. illustrates the proposed derivation for a sentence like (8) a. When the adverb *più* is not present, a possibility indicated by the parenthesis, the result is sentence (10) b.:



Before turning to the study of more complex structures, a potentially serious objection to the proposal just presented should be discussed. The representation (10) a., although empirically adequate, seems to involve a violation of the head movement constraint, that is to say of the ECP: On its way to the AGR position the verb passes over the intervening Neg head, a seemingly unavailable option. Can the derivation be maintained and reconciled with the general principles of syntactic theory or should it be dismissed? The solution to this problem that I am going to adopt is the one presented in Moritz (1989) for French.¹² Moritz's hypothesis consists in claiming that, although *derivationally* incompatible with the head movement constraint, the described derivation still gives a well-formed *representation*. The head movement constraint/ECP being an LF principle, it is the representation resulting from the application of 'Move *a*' that needs to conform to it. Let me propose the following implementation of Moritz's suggestion. As is clear from (10) a., the negation-chain and the verb-chain share the same head: AGR. Let us represent this by attributing to the resulting AGR the pair of indices (i, j), i.e., both the index of the negation and of the verb, as indicated in (11). This sharing of the same head by the two chains is the key to the well-formedness of the representation (11). The proposal can be made explicit through the assumption that the antecedent-government relation that is required to hold between any two members of a chain is defined in terms of non-distinctness from the indexation of the head of the chain. So, the relation of antecedent-government holds between e_i and e_j in (11) because both empty categories have an index non-distinct from the index of the AGR head:



3.1.1 Negation and Complex Tenses

Let us now consider the distribution of negation in tensed clauses containing complex tenses formed by an aspectual auxiliary and a past participle. When simple negation is involved, the distribution completely parallels that of tensed clauses containing simple tenses, which we just discussed. Here as well the negation proper *non* immediately precedes the inflected verb carrying the tense and agreement feature, in this case the aspectual auxiliary:

- (12) a. Gianni *non* ha parlato
 Gianni has not talked (lit: Gianni not has talked)
 b. Maria *non* è uscita
 Maria has not left (lit: Maria not is left)
 c. I ragazzi *non* hanno incontrato i loro amici
 the children have not met their friends (lit: the children not have met their friends)

When negative adverbs are involved as well, two possibilities are available. The negative adverb can intervene between the auxiliary and the past participle:

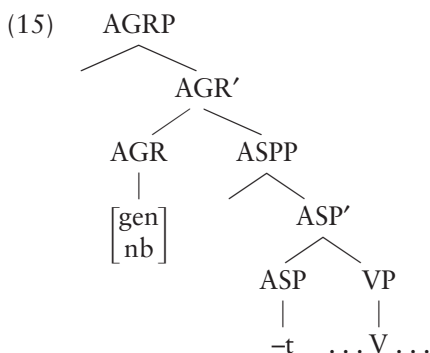
- (13) a. Gianni *non* ha *più* parlato
 Gianni has not talked anymore (lit: Gianni not has anymore talked)
 b. Maria *non* è *mai* uscita
 Maria has never left (lit: Maria not is ever left)

- c. I ragazzi *non* hanno *ancora* incontrato i loro amici
the children have not yet met their friends (lit: the children
not have yet met their friends)

Alternatively, the negative adverb can occupy a position immediately following the past participle:¹³

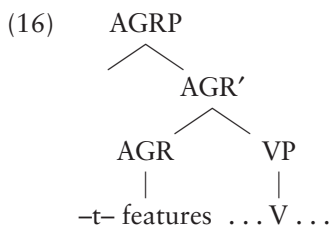
- (14) a. Gianni *non* ha parlato *più*
(lit: Gianni not has anymore talked)
b. Maria *non* è uscita *mai*
(lit: Maria not is left ever)
c. I ragazzi *non* hanno incontrato *ancora* i loro amici
(lit: the children not have met yet their friends)

Before examining (12), (13), and (14) in turn, let us first address the question of what category the past participle is. As discussed also in Chapter 2 (and Chapter 4), and as is independently proposed by Pollock (1989) and Chomsky (1989), a past participle can be viewed as an AGRP, the ‘Object Agreement projection’ of Chomsky (1989). In order to be accurate from a morphological point of view, I will assume that the past participial AGR takes a further functional projection as complement, call it ASPP (‘Aspectual Phrase’). The ASP head contains the past participial inflection proper, *-t* in Italian, and the AGR head contains the typical agreement features of gender and number, which can be either overtly expressed (e.g., *parti-t-il* masc, pl, ‘left’) or realized with the unmarked masculine singular ending (*parla-t-o* ‘spoken’), depending on different syntactic structures. The ASP head takes the VP as complement. According to this analysis the structure of a past participle corresponds to (15):

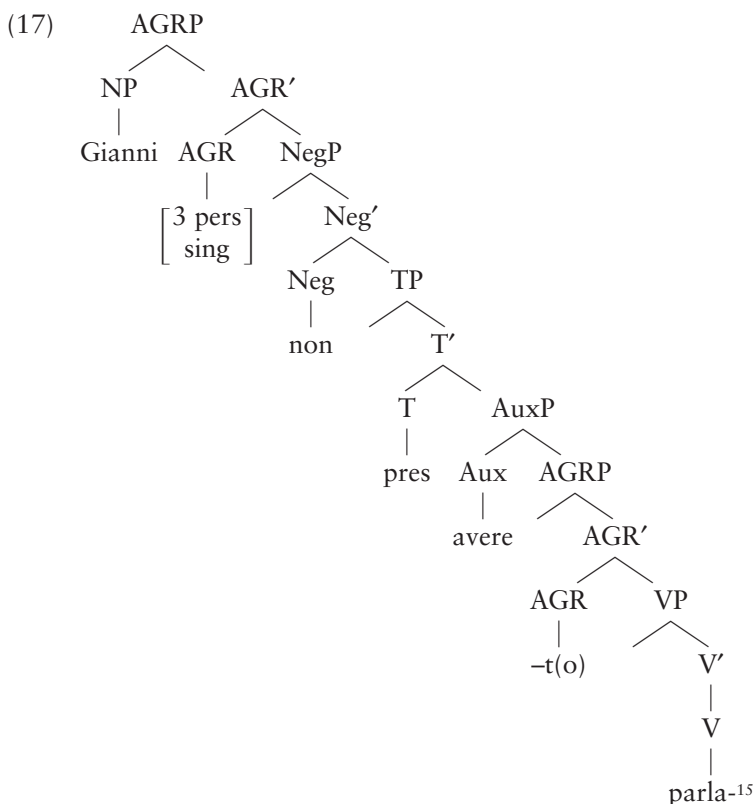


where V moves to ASP and then to AGR to form the past participle.¹⁴

Besides the (few) cases where the presence of both the AGR and the ASP projections could be empirically relevant, in order to simplify the representations I will make use of the simplified structure in (16), keeping in mind that the full representation rather corresponds to (15):

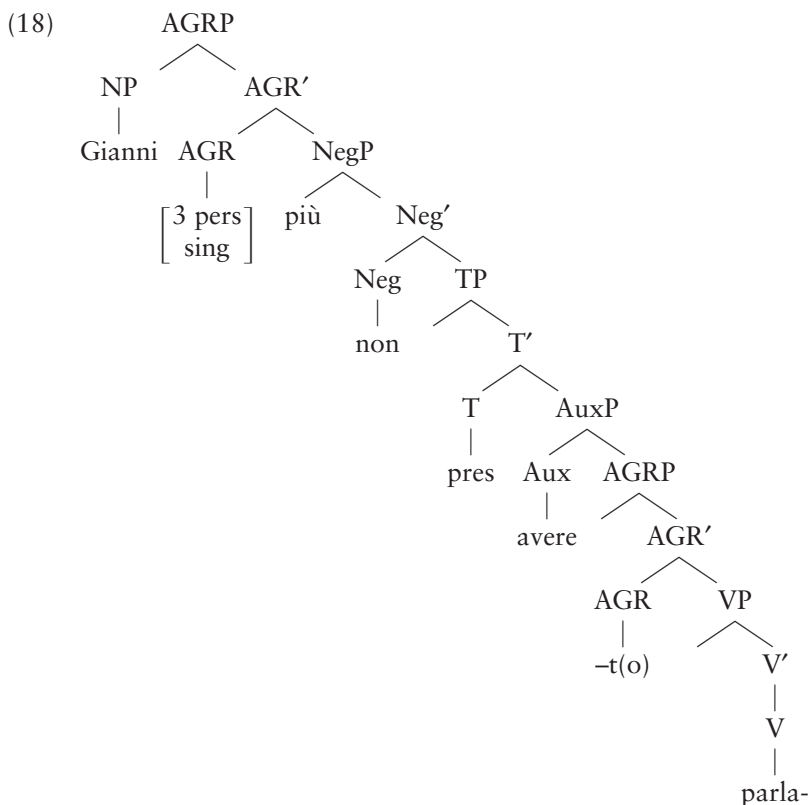


Consider now (12). These sentences can be attributed the same structure as those in (8) and (10) b., modulo the absence of an overt specifier in the Spec position of the NegP and the presence of a past participial AGRP as complement of Aux, as illustrated by (17) for (12) a.:



In (17) *non* must cliticize to AGR through left adjunction, Aux must move to T and then to AGR, V must move to the AGR past participle head.

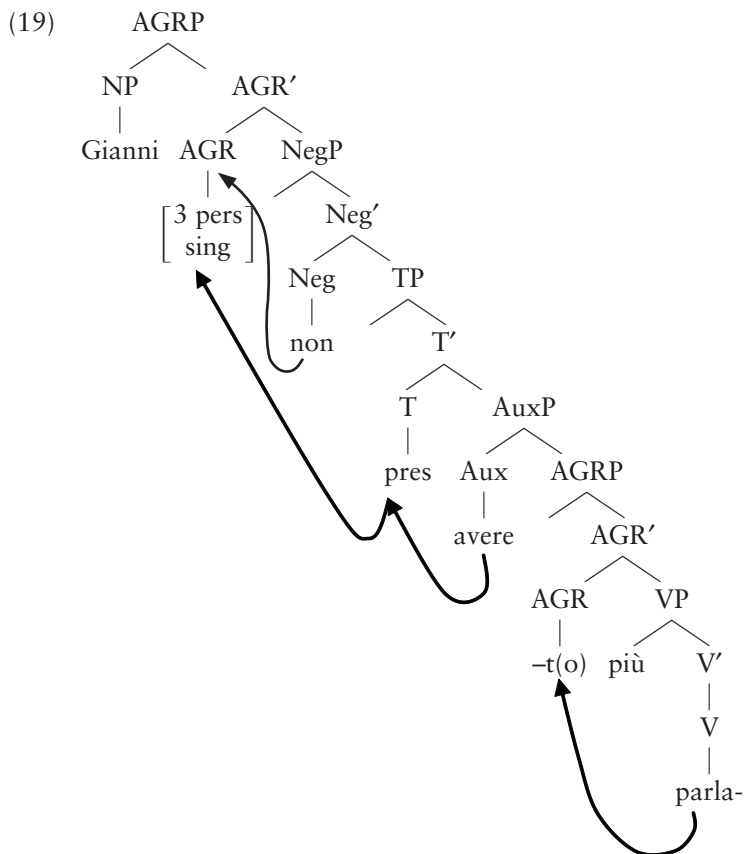
As for (13), its D-structure corresponds to (17) with the Spec of NegP realized as one of the negative adverbs *più*, *mai*, *ancora*, as indicated by (18) for (13) a.:



The same movement processes discussed in connection with (12) a. and (17) take place by giving an S-structure displaying the order 'NP *non* Aux *pìù, mai, ancora* Pst Prt.'

Consider now (14), whose constituents display the S-structure word order 'NP *non* Aux Pst Prt *pìù, mai, ancora*.' The question is how to derive the immediate adjacency of Aux and Pst Prt. It seems that if the negative adverbs can only fill the Spec of NegP position, we are left with only one possible analysis: The past participle must incorporate within the Aux. If this is the case, it would then be the complex word 'Aux + Pst Prt' that would move to the highest AGR position generating the desired word order. Of course, this analysis requires non-trivial qualifications in order to ensure that the inflectional endings of Tense and Agreement end up on the auxiliary in the final structure. Alternatively, we could suggest that negative adverbs are also allowed to fill a different position in the clause structure. A possible candidate would be the VP-initial position, which is a possible adverb position, filled by adverbs like *spesso* (often). If this is the case there is no need to assume the occurrence of the incorporation process in order to obtain the desired word order. We could assume that the NegP has no overt realized Spec and that the negation regularly moves to the AGR position and the

Aux as well, and the V moves to the past participial AGR position past the VP-initial negative adverb. The preposed structure is given in (19) for (14) a. and the associated derivation is indicated by the arrows:¹⁶



The question whether the analysis in (19) is more adequate than the analysis assuming the Aux + Pst Prt incorporation is an empirical question that cannot be answered unless further data are considered. Notice that the two analyses make two very different general predictions: Given a sequence 'NP Aux Adv Pst Prt,' with Adv equal to an adverb of different kinds, the incorporation hypothesis predicts that the order 'NP Aux Pst Prt Adv' will always be available as well, no matter which base position the adverb fills, provided that it is a position lower than the AGR head. On the other hand, if no process of 'Aux + Pst Prt' incorporation is assumed to be available, the prediction is that the order 'NP Aux Pst Prt Adv' can only be obtained in case the adverb in question fills the VP-initial position (as we assumed for *pìù* . . . etc.). If it fills any position higher than VP, the final order of constituents will always be 'NP Aux Adv Pst Prt.' We will verify these two predictions shortly.

Notice that, should we end up concluding that no process of Aux + Pst Prt incorporation is available in general, an analysis along the lines of (19) will have to be adopted in order to account for the sentences in (14) displaying the word order 'NP *non* AUX Pst Prt *più, mai, ancora*.' Hence, the choice between the two possible analyses of (14) depends upon the study of the syntax of different sorts of adverbs.

Before closing this discussion, we might notice that independent crosslinguistic evidence that negative adverbs of the type discussed may also fill a VP-initial lower position is provided by French data like (20), presented by Pollock (1989):

- (20) (?) Pierre dit ne manger *plus/point* (= (125b))
 Pierre says not to eat anymore/ at all

which, French internally, contrast with infinitival sentences involving simple negation where *pas* can never follow the infinitive, as in (21) b.:

- (21) a. Pierre dit *ne pas* manger
 Pierre says not to eat (lit: Pierre says *ne pas* to eat)
 b. *Pierre dit *ne manger pas*
 lit: Pierre says *ne* to eat *pas*

Of course, next to (20), (22) is also possible (and in fact more natural):

- (22) Pierre dit *ne plus/point* manger
 lit: Pierre says not anymore/at all to eat

What is directly relevant to our discussion is the contrast between the relative well-formedness of (20) and the complete impossibility of (21) b. This contrast seems to indicate rather neatly that negative adverbs like *plus* . . . have the possibility of filling a relatively low position in the clause structure, a position lower than the one occupied by the (obligatory) negative adverb *pas* and that could be identified with the VP-initial position.¹⁷

3.1.2 *Positive Adverbs in Assertive Clauses*

A distribution significantly parallel to the one identified for the negative adverbs is manifested by a number of adverbs that have the semantic function of reinforcing the assertive value of the sentence, which have been recently discussed by Lonzi (1989).¹⁸ These are adverbs like *già, sempre, ben*:

- (23) a. Maria parlava *pur/ben/già/sempre* di lui¹⁹
 Maria spoke indeed/already/always . . . of him
 b. Maria ha *pur/ben/già/sempre* parlato di lui
 Maria has indeed/already/always . . . spoken of him