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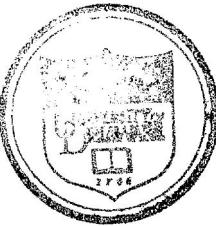
Restructuring and Functional Heads

The Cartography of Syntactic Structures,
Volume 4

Guglielmo Cinque

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INTRODUCTION

This volume brings together articles that discuss certain refinements and additions to the universal hierarchy of clausal functional projections proposed in Cinque (1999). The first four chapters offer some reasons for concluding that, in addition to affixes, particles, auxiliaries, and adverbs, there is another important source of evidence for the hierarchy of functional projections, namely the syntax of "restructuring" verbs. Analyzing such verbs as functional not only affords, I think, a deeper understanding of the "restructuring" phenomenon but also allows one to check (subparts of) the overall order of heads filling in certain aspects of it that were left underdetermined by the other sources of evidence or had simply gone unnoticed.

The remaining chapters discuss some general issues concerning the hierarchy and address certain objections that have been leveled against it. Chapter 6 reconsiders the analysis of circumstantial PPs adopted in Cinque (1999: § 1.5), arguing that even these elements enter a universal hierarchy whose rigid order is in many cases obscured by subsequent movements.¹

The picture of the clause that emerges, I think, is one in which not only advPs but also complements and adjunct PPs are merged in the specifier positions of rigidly ordered, dedicated, functional projections above the "lexical" core of the clause, V(P), and in which any cross-linguistic word order difference is, in the spirit of Kayne (1994), a consequence of different types of leftward movements of V(P).²

The work reported here is part of a larger enterprise, which has come to be known as the "cartography project": the attempt to draw a map, as detailed as possible, of the functional (or grammatical) structure of the clause and of its major phrases.³ The underlying assumption is that all languages share the same functional categories and

the same principles of phrase and clause composition, although they may differ in the movements they admit and in the projections they overtly realize.⁴ Such an assumption has been implicit from the very beginning of generative grammar and is explicit in Chomsky's (2001) Uniformity Principle.⁵ Needless to say, it is far from being widely accepted outside of the generative tradition,⁶ and even within this tradition it is occasionally denied, implicitly or explicitly (see the widespread belief that cross-linguistic variation lies in the functional component of grammars).

If we follow that assumption consistently, overt evidence for a certain functional category in one language would seem to commit us to the existence of that functional category in all languages, even in those that do not give any sign of its presence. As Kayne's work cited in note 4 shows, a language that seems to lack a certain functional category may reveal, on a deeper examination, subtler clues of its presence.

The evaluation of this assumption also implies the existence of clear criteria for distinguishing functional from lexical categories. The distinction is often less obvious than one might wish. Although we may more confidently assign nouns and verbs to the class of lexical categories and, for example, determiners, complementizers, and inflectional affixes to the class of functional (or grammatical) ones, it is much less clear where other elements (for example, adjectives, adverbs, and prepositions) belong. In the wake of Lyons (1968: § 9.5.2) and much earlier tradition, I will take "lexical" categories to be distinguished from "functional," or "grammatical," ones in being open classes (classes with open membership) in opposition to the latter, which are *closed*.⁷ If we abstract away from numeral modifiers of N (which should probably qualify as "functional" despite their being members of an open, in fact, infinite, set),⁸ this criterion appears to correctly characterize as functional such elements as complementizers, subordinating conjunctions and prepositions (see Kayne 1999b, 2002a), mood, tense, aspect, voice affixes and particles, auxiliaries, quantifiers, determiners, classifiers, pronominals, clitics, and many other elements that belong to closed sets (see Kayne 2005: § 2.1). However, this same criterion would also seem to classify as functional both adjectives and adverbs, because in many languages either or both appear to belong to a closed, sometimes quite small, set of elements (see Dixon 1982, 1994, 2004 on adjectives and Dixon 1982, 40, and Schachter 1985, 21ff on adverbs), a circumstance that is never encountered, it seems, with nouns and verbs.⁹

The case of adjectives is particularly puzzling at first glance because they appear to constitute an open class in certain languages (English and the other Germanic languages, Romance, Slavic, Fijian and Dyrbal,¹⁰ Japanese,¹¹ Cherokee,¹² etc.) and a closed class in others (many Niger-Congo, Papuan, and sundry languages in India, America, and the Pacific—see Hagbge 1974 and Dixon 1982: 3ff, 1994: 34). As Dixon (1994: 33) points out (also see Baker 2003: chap. 4), one should distinguish the case where there is an open class of adjectives that show properties similar to either nouns or verbs, yet distinguishable from both of them by clear language-internal morphosyntactic properties, from the case where there is a closed class of adjectives, with genuine nouns and verbs taking over the task of expressing "adjectival meanings" that are not expressed by adjectives.¹³ Whether there are languages that lack the category of adjectives altogether is much less clear. In spite of a number of claims to that effect,¹⁴ it may well be the case that the morphosyntactic properties necessary to distinguish in a certain language the class of adjectives from the classes of verbs and

nouns have not yet been properly identified (as noted, Dixon 1994, 2004, reports a number of cases where subsequent in-depth studies have found evidence for a separate class of adjectives in languages where they had not been previously recognized).¹⁵

I would like to submit that the apparent inconsistency of the category of adjectives (an open class in some languages and a closed class in others) is due to the two different functions adjectives typically serve: as predicates and as adnominal modifiers. If, on the one hand, in a language adjectives qualify as predicates, they will usually appear to be an open class (as predicates typically are).¹⁶ If, on the other hand, they only qualify as adnominal modifiers (with verbs or nouns taking over the task of expressing "adjectival predication"), they will appear to be a closed class. Suggestive evidence for this conclusion comes from Yoruba (Niger-Congo) and other languages. Adjectives in Yoruba form a closed class and can appear only in adnominal (attributive) position ([1]a),¹⁷ not in predicate position ([1]b) (Ajiboyè 2001: 6 and references cited there):¹⁸

- (1) a. Mo ri [ajá ñlá] (= [30b] of Ajiboyè 2001)
I see dog big 'I saw a big dog'
b.*Ajá ñlá (= [29b] of Ajiboyè 2001)
dog big 'The dog is big'

In predicate position, what one finds instead of the impossible (1b) is (2a), with an intransitive stative verb, *tóbi* 'to (be.)big' (compare 'to tower'), which, conversely, cannot be used adnominally ([2]b). As Ajiboyè (2001: 7) observes: "[I]n order to use *tóbi* as a modifier, one must nominalize it, or form a relative clause, [(3)]".¹⁹

- (2) a. Aji tébi (= [29a] of Ajiboyè 2001)
dog be.big 'The dog is big'
b.*Mo rí [ajá tébi] (= [30a] of Ajiboyè 2001)
I see dog be.big 'I saw a big dog'
(3) a. Mo ri [ajá tí-tóbi] (= [31a] of Ajiboyè 2001)
I see dog Nom-be.big 'I saw a big dog'
b. Mo rí [ajá [ti 6 tébi]] (= [31b] of Ajiboyè 2001)
I see dog Rel 3sg be.big 'I saw a dog which is big'

I take the closed class character of the exclusively adnominal (attributive) adjectives of Yoruba to be an indication that adnominal-only adjectives are functional.²⁰ This in turn suggests proposing the following as a criterion for distinguishing functional (grammatical) categories from lexical ones:

- (4) All and only categories that make up the extended projection of some other category are closed (i.e., functional) classes.²¹

This has the consequence that everything except V(P), N(P) (and A(P), when used as the main predicate of a clause), will be closed (functional). In particular, (4) implies

that A(P) will be functional when it is a simple modifier within the extended projection of an N(P); that Adv(P) will always be functional, as it cannot but be a modifier within the extended projection of some other category;²² that P(P) will be functional if, as argued in Kayne (2000, 2002a, 2005), it is merged within the extended projection of V(P), N(P), or A(P);²³ and that everything else will be functional.

Chomsky's Uniformity Principle, coupled with the high number of closed class (functional) categories found in the languages of the world, would seem to imply a very large number of functional projections for the clause and for each major phrase.²⁴ I take the phrase "with variety restricted to easily detectable properties of utterance," in Chomsky's formulation, to refer to the way in which a certain functional projection may find expression (either through a particle, a bound affix, a functional verb, some other phrase, or nothing at all).²⁵ Were we to take the ("easily detectable") presence or absence of overt expression of a certain functional element in a language to imply the actual presence or absence of the corresponding functional projection in that language, the Uniformity Principle would be emptied. Just as we would not expect a language to differ from another in terms of the presence versus absence of Case chains, or in terms of a top-down versus bottom-up construction of its constituents (Chomsky 1995: 160, Kayne 2005: § 1.1), I think we should not expect languages to differ in their inventory of functional projections (*pace* Baker 2003: 211 and much other work). Even though cross-linguistic data may at first sight support such a conclusion, we should not draw it too hastily. As noted earlier, in-depth studies of languages that appeared to lack a certain functional category have subsequently revealed evidence of its presence.

The task of the cartography project is to specify this large number of functional categories and to map out the (plausibly) universal hierarchy in which they enter. From this point of view, it is tempting to think that language acquisition does not involve discovering what notions a language has chosen to grammaticalize in the form of functional projections and what their number and ordering is. This idea should appear less unnatural if one thinks of the unlimited number of concepts that one could expect to find grammaticalized in the languages of the world. Comparative work certainly does not warrant the conclusion that anything can be functional. On the contrary, in language after language we find functional categories that belong to one and the same (circumscribed) inventory.²⁶ The task of discovering what is functional would already be formidable for someone having at his/her disposal all the cross-linguistic evidence that bears on the issue (which the child does not have). Perhaps more plausibly the child's task, in addition to that of acquiring the lexical items of the language, should be taken to consist in recognizing which elements, if any, correspond to each of the different functional projections that UG makes available as the rigidly ordered extended projections of the various lexical categories. Presumably, only by holding one of the parts of the puzzle fixed (the lexical and functional structure of merge) can one hope to be able to reconstruct what the structure of the sentence and of its phrases is in a certain language (with the aid of severely constrained movement options). If nothing were fixed, the task would presumably be overwhelming. Any such considerations, however, at this stage of our knowledge, can only be very tentative.

Chapter 1 can be read as a general introduction to chapters 2, 3, and 4, each of which focuses on a specific aspect of the restructuring phenomenon. Chapter 2 argues that the apparently puzzling restriction of Long Passivization to a subset of restructuring verbs in Romance should be seen as a consequence of the independently established hierarchy of clausal functional heads. Only those restructuring verbs that correspond to heads lower than the (lowest) Voice head will be able to be passivized. Chapter 3 considers the relative order of various modal and aspectual restructuring verbs and utilizes this evidence to check and further specify the hierarchy of functional projections arrived at independently in Cinque (1999). Chapter 4 considers the question whether Quantifier and Adverb climbing should be taken as manifestations of restructuring in French. The conclusion is that while En and y climbing, Long Movement in *easy-to-please* constructions, and Long Passivization are bona fide restructuring effects in that language, Quantifier and Adverb climbing are not.

The original versions of chapters 2 and 3 (which have been harmonized here with chapter 1) reflect a stage in my analysis of the restructuring phenomenon in which I assumed, after much earlier work, that absence of transparency effects (Citic Climbing, Long Object Preposing, etc.) clearly indicates absence of a monoclausal configuration, whereas the existence of transparency effects indicates the presence of a monoclausal configuration. Related to this conclusion was my suggestion that restructuring verbs could be seen as having two usages: one as normal lexical verbs (projecting a VP and functional structure above it) and another as functional verbs (directly merged as one or another functional head of the extended functional projection of the infinitival lexical verb following them).

There is, however, evidence, which I discuss in chapter 1, that restructuring verbs always are "functional," even in the absence of transparency effects.²⁷

Chapter 5 addresses certain objections that have been raised to the analysis of adverbs as maximal projections (AdvPs) merged in specifiers of the functional heads of the clause and discusses additional evidence in favor of their functional nature.

Chapter 6 considers the merge and derived structure of complement and circumstantial PPs in VO and OV languages and argues that their syntax can only be captured if the complements of the different prepositions are merged in a specific hierarchy above V, move to higher licensing positions related to the appropriate preposition (as in Kayne 2001, 2002a), and are further pied-piped by the VP (in VO languages, though not in OV languages).

Chapter 7 discusses the apparent problem for a rigidly ordered hierarchy of functional projections represented by so-called "mobile" affixes, that is, affixes that seem to have no fixed position relative to other affixes. It is suggested that the problem may only be apparent in that the affix can actually be argued to occupy two (or more) head positions depending on the partially distinct grammatical value it has.

This conclusion is supported by the more detailed analysis in chapter 8 of the mood, modality, tense, and aspect suffixes of Turkish, almost all of which give the illusion of being "mobile," but can be shown not to be.

The chapters have been only minimally altered by introducing a few corrections and changes and by adding some notes and bibliographical references. The sites where

they originally appeared are indicated in the sources of original publication on pages vii and viii.

Notes

I thank Paola Benincà, Richard Kayne, Iliyana Krapova, and Victor Manfredi for their comments.

1. For a fuller discussion I refer to Schweikert (2004).

2. Cinque (2004a) also proposes that the word order variation of heads and modifiers within DP across languages arises from different types of movement of the "lexical" core (NP) of the DP. A crucial difference between this approach and Larsonian approaches is the idea that complements or adjuncts are not merged to the right of V (or of any other lexical head, for that matter) but may come to occupy such a position as a consequence of leftward movements of the VP (or of some larger phrase that contains it) past the complements and adjuncts, in a way compatible with antisymmetry. Another difference is in the hierarchy of complements and adjuncts found to the right of V (see chapter 6 for discussion).

3. See, for example, the contributions to the previous volumes of the Cartography series (Cinque 2002c, Rizzi 2004c, Belletti 2004b), as well as those of many of the volumes in the Oxford Studies in Comparative Syntax series that hosts it.

4. On the crucial role of pronunciation vs. nonpronunciation as a source of cross-linguistic variation, see Kayne (2002b, 2003, 2005).

5. "In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances" (p. 2). Also see Kayne (2005). Despite appearances, the cartography project is fully compatible with the minimalist program. For relevant discussion, see Cinque (1999: § 6.2), Rizzi (2004c: § 2), and Belletti (2004b: § 2.1 of the introduction).

6. See, for example, LaPolla and Poa (2002: 2): "Each language is a unique set of language-specific conventions, and so each language should be described in its own terms." This conception continues the tradition prevalent in the '40s and '50s, according to which, as Samarin has recently put it, "[e]ach and every language . . . had to be understood and described in its own terms" (1998: 205).

7. "A closed set of items is one of fixed and usually small membership; e.g., the set of personal pronouns, tenses, genders, etc. An open set is one of unrestricted, indeterminately large, membership; e.g., the class of nouns and verbs in a language. In terms of this distinction we can say that grammatical items belong to closed sets and lexical items to open sets" (Lyons 1968: 436).

8. Monomorphemic numerals, however, appear to be a closed set, as Richard Kayne has observed (personal communication).

9. The categories of Noun and Verb appear to be universal and open (Dixon 1982: 2, 1994, 2004: 9; Schachter 1985: 6f; Croft 2002: § 3.2), despite occasional claims to the contrary (whose lack of foundation is discussed in Dixon 1982: 2 n. 1, Schachter 1985: 11ff; and Baker 2003).

10. Dixon (2004: 36ff).

11. Backhouse (1984).

12. Lindsey and Scancarelli (1985).

13. Even in languages with an apparent open class of adjectives, like Italian, many "adjectival meanings" can be rendered (in predication contexts) by nouns preceded by avere 'have'—ha *freddo/fame/coraggio/etc.* 'he has coldness, hunger, courage'—alongside 2 *infreddolito/affamato/coraggioso/etc.* 'he is cold/hungry/courageous/etc.'), or by (stative) verbs—*obbedisce/annoia/costa/etc.* 'he obeys, bores, costs'—alongside è *obbediente/*

noioso/costoso/etc. 'he is obedient/boring/expensive/etc.'), or by nouns preceded by a preposition—2 di *prestigio/di praticità/di attualità/etc.* '(lit.) it is of prestige/of practicality/of up-to-dateness/etc.' – alongside è *prestigioso*, 2 *pratico*, 2 *attuale/etc.* 'it is prestigious, practical, current/etc.'

14. See, for example, Ladusaw (1985), Rijkhoff (2002: § 4.3.3), and Helmbrecht (2004).

15. Dixon (2004) explicitly claims that "all languages have a distinguishable adjective class" (p. 9).

16. This is not necessary, though. They will still be a closed class if in the language in question most "adjectival predication" is expressed by verbs or nouns. Dixon (2004: 29) reports two north Carib languages (Hixkaryana and Tiryó) as having a closed class of *predicate-only* adjectives (on the order of thirty/forty).

17. They "fall into four distinct semantic classes, and show ordering restrictions [Color > Dimension > Quality > Quantity]." Ajibóyé notes that the order is the mirror image of the English order, which is consistent with the fact that the head N is initial and the demonstrative is final (Quantity modifiers include 'few,' 'many,' and numerals): N > A_{Dimension} > A_{Quality} > Num/Quant > Dem.

18. Madugu (1976: 93) gives similar pairs:

- | | |
|---|--------------|
| (i) a. 016 jé omo rere | b. *Olú rere |
| Olu is child good 'Olu is a good child' | Olu is good |

19. In other cases, one can have 'Olu has wisdom' instead of 'Olu is wise'. Compare Madugu (1976: 89ff) (and note 13 earlier).

20. Welmers and Welmers (1969) (also see Welmers 1973: 258–262) mention Igbo, and Wetzer (1996: 77f) Kassena and Babungo, as having a closed class of "adnominal-only" adjectives. To express adjectival predication Kassena and Babungo, however, utilize a different strategy from Yoruba. As Wetzer points out, a sentence like this man is tall is rendered as this man is a tall man, where "[t]he head of the predicative noun phrase is usually some kind of dummy noun, such as 'man,' 'child,' or 'thing'" (p. 77). The same appears to be true of the Dravidian language Tamil, in which "a sentence like English 'this is good' is not possible [...] must have the form 'this thing is a good thing' [...]" (Schiffman 1999: 141), and the Papuan language Hua (Schachter 1985: 16), which also has a closed class of adnominal-only adjectives. See (ia–b), from Haiman (1978: 567) (see also Haiman 1980: 268):

- | | |
|---|---------------------------------------|
| (i) a. Bura fu nupa fu baie | b. *Bura fu nupa baie |
| that pig black pig is 'That pig is a black pig' | that pig black is 'That pig is black' |

21. We can say that "YP is an extended projection of X iff Y is merged with a projection of X or with an extended projection of X and Y then projects." I am assuming here that arguments of V (or any other head) are merged as specifiers of the extended projection of V (or of that other head). I thank Richard Kayne for pointing out that if most verbs are derived from incorporation of a noun into a light verb, then the only genuinely open class is that of nouns. Dixon (1982: 225) indeed reports the existence of languages with a closed class of verbs (1982: 225).

22. Differently from adjectives, adverbs cannot in general be predicates. A possible indication of their closed class (functional) character is the fact that in some languages they are expressed as verbal affixes (see Sapir 1921: chap. 5, fn. 39; Cinque 1999: 213, fn. 79, and, for fuller discussion, Cinque 2004b [reprinted here as chapter 5]). Adverbs are occasionally taken to constitute an open class in certain languages (see Schachter 1985: 20f). Indeed, if, in trying to determine "open" vs. "closed" classes, only those elements are presumably to be counted that are single morphemes (Paola Benincà, Richard Kayne, personal communication), then carefully, rudely, inadvertently, etc., should not count as distinct adverbs but as one (= "-ly"), or

possibly as a few classes (the low manner adverb class, the high speaker-oriented classes, the intermediate subject-oriented class, and the habitual, frequentative, iterative, etc., classes), each of which should be on a par with such other (virtually) singleton classes as . . . perhaps, soon, often, already, no longer, always, early. . . As such they count not in hundreds but at most in tens.

23. The apparently problematic case of PPs in predicate position (*il libro è di Gianni* '(lit.) the book is of John'; *il libro è sul tavolo* 'the book is on the table'; etc.) ceases to be one if in this case, too, the preposition is merged in the extended projection of the (nominal) predicate. Even if both argument DPs and AdvPs/A(P)s, are in specifier positions of the extended projection of V(P)/N(P), only AdvPs and APs must qualify as functional. This may be due to the fact that AdvPs and APs, though not DPs, are a manifestation of the content of functional projections.

24. In their cross-linguistic survey of grammaticalization, Heine and Kuteva (2002), for example, recognize over four hundred grammatical categories as targets of grammaticalization. Also see the discussion in Kayne (2005: § 2.1).

25. See, for example, Kayne (2005: § 3.1) and Plank (2003, 2004a, b) for the many ways in which the adnominal functional category of (numerical) approximation can be expressed in the languages of the world.

26. In the extended projection of an NP, for example, we find evidence for different types of quantifiers, demonstratives, numerals (ordinal and cardinal), for functional categories of diminutivization, numerical approximation, etc., but we never find expressed, it seems, distinctions relating to the magical or nonmagical character of a number (as opposed to its approximation), or specialized forms that mean dear-to-me (dear-to you), not-dear-to-me-and-you, parallel to the universal demonstrative distinctions close-to-me (close-to you), not-close-to-me-and-you. One could easily multiply such theoretically possible, yet nonexistent, functional distinctions (see also Cinque 1999: 224 fn. 10 and related text and here Chap. 5: § 2).

27. Concerning some recent claims to the contrary, see the postscript to chapter 1. Interesting evidence from acquisition and agrammatism for the functional character of restructuring verbs is discussed in Gavarró (2003).

"Restructuring" and Functional Structure

1. The "restructuring" phenomenon

In what follows I would like to show how the articulated functional structure of the clause suggested in Cinque (1999) may shed new light on the "restructuring" phenomenon (Rizzi 1976a, b, 1978) and perhaps afford a deeper understanding of it.

In the past twenty-five years, numerous analyses have been proposed to explain why certain phenomena that are otherwise clause-bound (such as Clitic Placement—see [1]) appear to be able to span over two clauses when the matrix verb is either a *modal*, an *aspectual*, or a *motion* verb and the complement is nonfinite (see the "climbing" of the clitic in [2]):¹

- (1) a. ***Lo** detesto [vedere t in quello stato] (I) him detest seeing in that state'
- b. ***Lo** ammetto [di conoscere t appena] '(I) him admit to barely know'
- c. ***Lo** rinuncio [ad avere t per me] '(I) it give up having for me'

- (2) a. Lo volevo [vedere t subito]'(I) him wanted to see immediately (modal)
- b. Lo finisco [di vedere t domani]'(I) it finish to see tomorrow (aspectual)
- c. Lo vengo [a prendere t domani]'(I) it come to fetch tomorrow (motion)

Even if each of the proposed analyses captures one or another aspect of restructuring, it is fair to say that none of them manages to answer the two most basic

questions that the phenomenon raises: namely, why it should exist at all and why it should exist with those particular verb classes (modal, aspectual, and motion). The fact that one finds transparency phenomena comparable to Clitic Climbing language after language, and with the same set of verbs (or subsets thereof), suggests that the phenomenon is universal and should thus follow from some general property of UG.² Here I would like to propose an analysis that derives its universality and answers at the same time the two basic questions just mentioned. The analysis is a natural extension of proposals made in Cinque (1999), where, on the basis of the relative order of functional morphemes in head position and of the corresponding classes of AdvPs, I suggested that the functional portion of the clause, in all languages, is constituted by the same, richly articulated and rigidly ordered, hierarchy of functional projections, a subset of which is shown in (3):³

- (3) MoodP_{speech act} > MoodP_{evidential} > MoodP_{epistemic} > TP(Past) >
 TP(Future) > MoodP_{irrealis} > ModP_{aesthetic} > AspP_{habitual} > AspP_{repetitive(I)} >
 AspP_{frequentative(I)} > ModP_{volitional} AspP_{elerative(I)} > TP(Anterior) > AspP_{terminative} >
 AspP_{continuative} > AspP_{retrospective} AspP_{proximative} > AspP_{durative} > AspP_{generic/progressive} >
 AspP_{prospective} > ModP_{obligation} ModP_{permission/ability} > AspP_{completive} > VoiceP >
 AspP_{elerative(II)} > AspP_{repetitive(II)} > AspP_{frequentative(II)}

The verbs that enter the restructuring construction appear to correspond to distinct heads of (3), in the sense that each seems to lexicalize the content of one or another functional head. This is obvious for the various modal and aspectual verbs, but it is true for motion verbs as well.⁴

In previous work (Cinque 2001, 2003, originally written and circulated in 1997, and Cinque 1998c), I had suggested that this striking correspondence rendered the following hypothesis appealing: only those verbs that happen to match semantically the content of a certain functional head admit of two distinct possibilities. They are either regular verbs, heading a VP (in which case they take a full-fledged sentential complement [CP]—see [4a]), or functional verbs, directly inserted in the head position of the corresponding functional projection (see [4b]):

- (4) a. [CP . . . [FP . . . [FP . . . [VP V_{rest} [CP . . . [FP . . . [VP V]]]]]]]
 b. [CP . . . [FP . . . [FP V_{rest} [FP . . . [VP V]]]]]

Following the received opinion, I had also assumed that the presence or absence of transparency effects reduced to two mutually exclusive options: the obligatory presence of transparency effects in the monoclausal structure (4b) and the obligatory absence of transparency effects in the biclausal structure (4a).

Here, after arguing that when transparency *effects* obtain, "restructuring" verbs are functional verbs in a monoclausal configuration (sect. 2–5), I will explore the stronger and at first sight more difficult claim that they are always functional verbs in a monoclausal configuration (even in *the* variant that shows no transparency *effects*—sect. 6). This implies that restructuring verbs have no other option but to enter structure (4b) (ultimately, a consequence of their corresponding to the seman-

tic content of a distinct functional head). This also requires interpreting the differences between the variant with and the variant without transparency effects in a different manner (sect. 7).⁵

2. The constituency issue

The analysis whereby, when transparency effects obtain, restructuring verbs are functional verbs (directly inserted under the corresponding functional heads) leads one to expect a constituent structure quite different from that of Rizzi (1976b, 1978). According to Rizzi's analysis, modal, aspectual, and motion verbs can trigger a process of structural simplification (restructuring), which turns an original biclausal configuration into a monoclausal one, forming a complex verb out of the complement and matrix verbs, as shown in (5):

- (5) a. [CP io [verb [CP a parlarti di questi problemi]]] RESTRUCTION →
 (I will come to talk-to-you about these problems.)
 b. (CP io [v ti verb a parlare] di questi problemi]]

As a result of this complex verb formation, the embedded verb is taken to no longer form a constituent with its own complements (cf. [5b]).

In my analysis, instead, the expected constituent structure is (6), with the embedded verb still forming a constituent with its complements:

- (6) [CP io [Andative_P ti verb [VP a parlare [di questi problemi]]]]

This requires reassessing the arguments brought forth by Rizzi (1976b, 1978) in support of the constituency in (5b). He shows, for example, that when transparency effects obtain, a number of operations apparently cease to apply to the sequence formed by the embedded verb and its complements, taking this to support the derived structure (5b). Let us consider these cases in turn.

2.1. Cleft sentence formation

As shown by the contrast between (7a) and (b), when the clitic has climbed to the matrix verb the embedded verb cannot be clefted together with its complement:

- (7) a. E' proprio a parlarti di questi problemi che verrà
 It's just to talk to-you about these problems that he'll come.
 b. *E' proprio a parlare di questi problemi che ti verrà

This would seem to follow from the constituency in (5b). Notice, however, that with other fronting rules (such as Focus Movement and Topicalization) no such restriction obtains:

- (8) a. A PARLARE DEI SUOI PROBLEMI, **ti** verrà! Vedrai.⁶
 To speak about his problems (focus), he'll to-you come! You'll see'
- b. PORTARE A CASA, **lo** voleva! 'Take home (focus), he it wanted'
- c. Leggere a tutti, non **lo** potevo 'Read to everybody, I it couldn't'

As the latter constructions are no less valid constituency diagnostics than Cleft Sentence Formation, we must conclude that the embedded verb does form a constituent with its complement, just as (6) implies, and that the ungrammaticality of (7b) is due to some other reason (not dependent on constituency). Note that there are quite severe restrictions on what can be clefted (cf. [9] and [10]) that do not hold with Focus Movement or Topicalization of the same sequences, (cf. [11] and [12]). These same restrictions, then, might be at the basis of the ungrammaticality of (7b) versus (8) (see sect. 7 for discussion of a possible reason).

- (9) a.*Era bella che sembrava
 It was beautiful that she seemed
- b.*E' completamente che l'ha rovinato
 It is completely that he ruined it
- c.*E' tutti che li ha visti
 It is all that he saw them
- (10) a.*E' parlato di questo che (gli) avrh 'It's spoken about this that he (to-him) will have'⁷
- b.*Era parlando di questo che (gli) stavo 'It's speaking about this that I (to-him) was'
- c.*E' stato portato a casa che è 'It's been taken home that he has'
- (11) a. BELLA, sembrava 'Beautiful (focus), she seemed'
- b. COMPLETAMENTE, l'ha rovinato 'Completely (focus), he ruined it'
- c. Tutti, non li ha visti 'All, he hasn't seen them'
- (12) a. PARLATO DI QUESTO, (gli) avrk! 'Spoken about this (focus), he (to-him) will have'
- b. PARLANDO DI QUESTO, (gli) stavo! 'Speaking about this (focus), (to-him) I was'
- c. Portato a casa, non era stato, ancora 'Taken home, he hadn't been, yet'
- d. ?Stato portato a casa, non era, ancora 'Been taken home, he hadn't, yet'

All in all, we have no reason to interpret (7b) as showing that the embedded verb and its complement do not form a constituent. If anything, (8) shows just the opposite.⁸

2.2. Right Node Raising

As Rizzi (1976b, 1978) also notes, the embedded verb and its complement can be Right Node Raised only in the absence of transparency effects. See the contrast between (13a) and (b):

- (13) a. Piero voleva—ma francamente adesso non so se vorrà ancora—parlarne con Gianni
 'P. wanted to--but frankly now I don't know if he still will—speak about it with G.'
- b.*Piero **ne** voleva—ma francamente adesso non so se **ne** vorrà ancora—parlarne con Gianni
 'P. about it wanted to--but frankly now I don't know if he still will—speak about it with G.'

Once again this would seem to follow from the assumption that in the presence of Clitic Climbing the embedded verb and its complement do not form a constituent. But this conclusion is not necessary. Another possibility exists, which is compatible with the idea that the embedded verb continues to form a constituent with its complement.⁹

In the framework in which Rizzi (1976b, 1978) was working, Right Node Raising was considered a rightward movement rule (see Postal 1974: 125–128). More recently, Kayne (1994: 67f.), following Wexler and Culicover (1980: 298ff.), has proposed to reinterpret it as a deletion rule deleting under identity the left-hand copy of the "raised" phrase: Piero voleva *parlarne con Gianni*—ma francamente adesso non so se *vorrà ancora*—parlarne con Gianni. The following contrasts between Italian and English indeed appear to support Kayne's reinterpretation of Right Node Raising. As noted in Napoli (1981: 846), Right Node Raising of the complement of an auxiliary is impossible in Italian. See (14):

- (14) a.*Mario ha—ma dirh di non avere—capito la lezione 'M. has—but he will say he hasn't—understood the lesson'
- b.*Gianni allora era—ma non so se ancora oggi sarebbe—apprezzato per il suo autoritarismo 'G. then was—but I don't know whether today still he would be—appreciated for his authoritarianism'

Right Node Raising of the complement of an auxiliary is instead possible in English:

- (15) Tony should have—and Pete probably would have—called Grace (Postal 1974: 126)

Now, the two languages also differ with respect to the deletion of the complement of an auxiliary, as shown in (16):

- (16) a. Have you called John? Yes. I have ____
- b. Hai chiamato John? *Sì. Ho ____

If Right Node Raising involves deletion, the first contrast reduces to the second. No such reduction is possible under the Movement analysis of Right Node Raising. In the more restrictive deletion analysis, which crucially relates (14) to (16b), the ungrammaticality of (13b) can, then, be attributed not to the fact that *parlare con Gianni* fails to be a constituent but to the impossibility of deleting an infinitival complement in the presence of transparency effects. See (17), noted in Radford (1977a: 113) (whatever the right analysis of this phenomenon is; see Depiante 1998 and section 7):

- (17) a. Gianni voleva parlare di questo, ma Piero non (*ne) voleva____
 G. wanted to talk about this, but P. not (about-it) wanted
- b.*Certe cose si possono fare, ma queste non si possono____
 Certain things one can do, but these not one can
- c. Gianni poteva andare a casa, ma non ha/*è voluto____
 G. could go home, but not has/is wanted

2.3. Heavy NP-shift

Another rule considered in this context by Rizzi is Heavy (or Complex) NP-Shift, which at the time was taken to move a heavy or complex constituent rightward, deriving for example (18b) from (18a) by moving the constituent *ad esporti la mia idea* to the right of the PP a *Firenze*.

- (18) a. Fra qualche giorno, verrb ad esporti lamia idea a Firenze 'In a few days, I'll come to explain to-you my idea in Florence.'
- b. Fra qualche giorno, verrò a Firenze ad esporti lamia idea 'In a few days, I'll come to Florence to explain to-you my idea.'

Rizzi (1976b, 1978) notes that this movement is no longer possible if Clitic Climbing has applied (cf. [19]), taking this to suggest that *ad esporre la mia idea* in (19b) cannot be moved because after restructuring it is no longer a constituent:

- (19) a. Fra qualche giorno, **ti** verbb ad esporre la mia idea a Firenze
 b.*Fra qualche giorno, **ti** verbb a Firenze ad esporre la mia idea

More recently, the existence of rightward movement rules has been called into question (Kayne 1994). Kayne reanalyzes Heavy NP-Shift as involving the leftward movement of what in the previous analysis was crossed over by the rightward moved phrase. Within such an analysis, there is a natural account for the ungrammaticality of (19b) that does not depend on the nonconstituency of *ad esporre la mia idea*. It is bad for the same reason that (20) is; namely, a locative PP has been moved (scrambled) to an illicit position in the lower functional field between a functional head and its complement:¹⁰

- (20) *Lo ho a Firenze messo al corrente della nostra decisione
 'I him have in Florence notified of our decision'

Thus it seems that there is no reason to abandon the idea that the embedded infinitival and its complements form a constituent when transparency effects obtain and hence no particular reason to assume that the "restructuring" and the infinitival verb come to form a complex predicate (see Hinterholzl 1999 for a similar conclusion concerning the "restructuring" construction of Germanic).¹¹

2.4. Aux-to-COMP

I mention here a possible additional piece of evidence in favor of the structure $\{_{FP} V_{\text{restruct}} \dots [VP V' ZP]\}$ and against the idea that the restructuring verb and the embedded infinitive come to form a constituent that leaves out the infinitive's complements. Consider the behavior of a restructuring verb and its embedded infinitive in the Aux-to-COMP construction studied in Rizzi (1981, 1982b). Even in the presence of Clitic Climbing, only the restructuring verb can raise to C, never both, which is unexpected if the two verbs form a complex V (unless *obligatory* exorporation of the matrix verb is posited):

- (21) a. Non potendolo [egli restituire a nessuno] 'Not being able it he to give back to anybody'
 b.*Non potendolo restituire [egli a nessuno] 'Not being able it to give back he to anybody'
- (22) a. Ritenevamo non doverne [egli parlare neanche con voi] 'We thought not to have he to talk not even with you'
 b.*Ritenevamo non doverne parlare [egli neanche con voi] 'We thought not to have to talk he not even with you'

3. Monoclausality versus biclausality

In this section I examine some potential evidence (in addition to that recently discussed in Wurmbrand 1998, 2001) for the monoclausal nature of the construction when transparency effects obtain (sect. 3.1–3.2) and consider in section 3.3 some of the apparent evidence for its biclausality, concluding that it is unconvincing.

3.1. Prohibition against using the same adverb twice

Adverbs that in a simple clause can occur only once (like *già* 'already' and *sempre* 'always')¹² in contexts with *volere* appear to be able to occur twice if no transparency effects obtain (and there is a pause after the first adverb). They no longer can when transparency effects obtain:

- (23) a. Maria vorrebbe già averlo già lasciato
 Mary would already want to have already left him.
 b.*Maria **lo** vorrebbe già aver già lasciato (Clitic Climbing)
- (24) a. Si vorrebbe sempre aver sempre esperienze come queste
 One would always want to always have experiences like these.
 b.*Esperienze come queste si vorrebbero sempre aver sempre (Long NP-Movement)

- (25) a. Maria vorrà **già** esser **loro già** stata presentata
 M. will already want to have to-them already been introduced.
- b.*Maria vorrh **loro già** esser **già** stata presentata (Loro Climbing)

- (26) a. Gianni **avrebbe sempre** voluto arrivare **sempre** tra i primi
 G. would always have liked to always arrive amoqg the first.
- b.*Gianni **sarebbe sempre** voluto arrivare **sempre** tra i **primi** (Auxiliary Selection)

The contrast becomes understandable if the (a) variants contain two clauses and the (b) variants are strictly monoclausal.¹³

3.2. The relative order of "restructuring" verbs

If more "restructuring" verbs occur, their relative order appears to be quite rigid when transparency effects obtain (cf. [27]—[30]). Although this is unexpected under biclausal analyses, it is to be expected in a monoclausal one in which "restructuring" verbs are "functional" verbs directly inserted into the corresponding functional heads. This occurs because functional heads are themselves rigidly ordered.

So, for example, when the "restructuring" verb *solere* 'use' (cf. *Lo soleva dire anche miopadre* 'it my father too used to say'), related to the Habitual aspect head, co-occurs with the "restructuring" verb *tendere* 'tend' (cf. *Lo tendo a credere anch'io* 'it I tend to believe myself'),¹⁴ the only possible order for most speakers is *solere > tendere* (suggesting the order of heads **Asp_{habitual} > Asp_{predispositional}**):¹⁵

- (27) a. ?Certe cose, le si suole **tendere** ad evitare 'Certain things, them one usually tends to avoid.'
- b.*Certe cose, le si tende a soler evitare 'Certain things, them one tends to usually avoid.'

When *tendere* and *volere* 'want' co-occur, the order is rigidly *tendere > volere*, in turn suggesting the order **Asp_{predispositional} > Mod_{volitional}**:

- (28) a. Lo tenderebbe a voler fare sempre lui 'He would tend to want to always do it he himself.'
- b.*Lo vorrebbe tendere a fare sempre lui 'He would want to tend to always do it he himself.'

When *volere* and *smettere* 'stop' (related to what in other languages is a Terminative aspect suffix or particle) co-occur, the order is *volere > smettere*, suggesting the order of heads **Mod_{volitional} > Asp_{terminative}**:

- (29) a. Non vi vuole smettere di importunare 'He you doesn't want to stop bothering'
- b.*Non vi smette di voler importunare 'He you doesn't stop wanting to bother'

A final example here (see Cinque 2001 for a more systematic investigation of these orderings) is the relative order of *smettere* and *continuare* 'continue', the latter corresponding to the Continuative aspect head morphology found in many languages. When they co-occur the order is *smettere > continuare*, once again suggestive of the order of heads **Asp_{terminative} > Asp_{continuative}**.¹⁶

- (30) a. ?La smise di continuare a importunare '(He) her stopped continuing to bother'
- b. *La continuò a smettere di importunare '(He) her continued to stop bothering'

Putting together the various relative orders, one arrives at the order of verbs in (31), corresponding to the order of functional heads shown in (32):¹⁷

- (31) *solere > tendere > volere > smettere > continuare*

- (32) **ASP_{habitual} > ASP_{predispositional} > Mod_{volitional} > Asp_{terminative} > Asp_{continuative}**¹⁸

3.3. Apparent cases of transparency effects across CP

A strong case for the biclausal character of restructuring would seem to come from two instances of Clitic Climbing across what looks like a CP-boundary.

The first is already discussed in Rizzi (1978: 151f.), where such cases as (33) are noted:

- (33) a. [...] non **ti** saprei che dire 'I you wouldn't know what to tell'
- b. ?Mario, non **lo** saprei a chi affidare [...] 'M., I him wouldn't know to whom to entrust'
- c. ??[...] proprio, non **lo** saprei come risolvere 'Really, I it wouldn't know how to solve'

As Rizzi himself (n. 38) observes (see also Napoli 1981: 855, Moore 1994: n. 3, Rooryck 1994: 420ff., etc.), the productivity of the construction is, however, severely limited. Among the predicates that take embedded interrogatives, only *sapere (come)* 'know (how)' allows it (compare [33] with [34]), and even it has various limitations (cf. [35]):

- (34) a.*Me lo chiedevo come fare 'I myself it wondered how to do'
- b.*Gli si domanda che cosa dare 'He himself to-him asks what to give'
- c.*Me lo ha detto a chi dare 'He to-me it told to whom to give'

- (35) a.*Non ne saprei quando parlare
 'Of-it I wouldn't know when to speak' (cf. Rizzi 1978: n. 38)
- b.*[...] non lo saprei se consigliare o no
 'I him wouldn't know whether to advise or not' (Rizzi 1978: n. 38)
- c.*Non lo saprei perché fare 'I it wouldn't know why to do'

The generalization appears to be that Clitic Climbing is allowed across a wh-phrase with *sapere* either if *sapere* means "know how" (33c) or if the sentence allows for a rhetorical reading without the wh-phrase; with *sapere* meaning "be able," (33a) is equivalent to *Non ti saprei dire niente* 'I to-you wouldn't be able to say anything', and (33b) to *Non lo saprei affidare a nessuno* 'I him wouldn't be able to entrust to anybody').¹⁹

In either case, the verb embedding a wh-phrase is interpreted as a modal of mental ability (a notion often distinguished from physical ability in the languages of the world). This makes the verb a natural candidate for direct insertion under the root modal head of ability, like other restructuring verbs, an option not open to the verbs in (34) and (35), whose interpretation is not one of mental ability. The only auxiliary assumption that needs to be made is that the root modal head of *mental* ability can take a single wh-CP-layer above its ordinary functional XP-complement (without full recursion of the extended functional projection).²⁰

In sum, the very selective nature of Clitic Climbing across a wh-CP in mental ability contexts and the interpretation of it just sketched render the argument based on (33) for the biclausal character of restructuring very dubious. If anything, the properties of (33) point, once again, to the functional nature of the verb, a modal (and to the monoclausal character of the construction).

More problematic would seem to be the apparent case of Clitic Climbing out of finite complements of restructuring verbs in certain Salentino dialects, discussed in Calabrese (1993) and Terzi (1992: 151ff., 1994, 1996) and in the varieties of Serbo-Croatian discussed in Progovac (1991, 1993), Terzi (1996: 289ff.) and Stjepanović (1998, 2001, 2002).

In the Salentino of Brindisi, for example, when the mood particle *ku* is missing, a clitic can climb out of the apparently finite complement and cliticize to the restructuring verb (cf. [36b], from Terzi 1992: 159):²¹

- (36) a. Voggwu (ku) lu kkattu
(I) want (particle) uy 'I want to buy it'

b. Lu voggyu (*ku) kkattu
(I) it want (particle) (I) buy

A similar situation (modulo the obligatory presence of the mood particle *da*) is found in Serbo-Croatian (Progovac 1993: 119):

- (37) a. Milan želi da **ga** vidi
M. want-3sg particle him see-3sg

b. ?Milan **ga** želi da vidi
M. him want-3sg particle see-3sg
'M. wishes to see him.'

Despite appearances, there is some reason to doubt that (36) and (37) involve the extraction of a clitic from a finite clausal complement.

First, in both Salentino and Serbo-Croatian, the apparently finite embedded verb of (36) and (37) displays severe restrictions on its form: it can only appear in the present tense, which is equal to the verb stem plus person and number agreement. In particular, no past (or periphrastic) tense forms are possible:²²

- (38) a. *Lu vulia kattavu (Salentino — Andrea Calabrese, personal communication)
It wanted-lsg bought-lsg 'I wished I bought it.'

b. *Ja bih **ga** voleo da sam posetio (Serbo-Croatian — Ljiljana Progovac, personal communication)
I would him like PART be-lsg visited 'I would like to have visited him.'
(Cf. Ja bih voleo da sam **ga** posetio 'I would like to have visited him.')

This is unexpected in a biclausal analysis of such structures. But it makes sense in an analysis in which particle + stem-agreement is treated as a surrogate form of infinitive (itself absent or highly restricted in these varieties). In fact, it is tempting to view agreement here as nothing other than a way to render the stem a well-formed morphological word. If so, the possibility arises again of viewing the sequence (particle +) stem-agreement as part of one and the same clause with the restructuring verb (in which case the observed unavailability of past tense on the embedded verb would follow from the fact that this is already marked on the restructuring verb or higher up).

The monoclausal nature of such structures (when they display Clitic Climbing) may be glimpsed from the following property of Serbo-Croatian. As (39a) shows, when no Clitic Climbing is present, the subject of the embedded verb can be expressed by an overt (focused) pronominal even when it is coreferential with the matrix subject. This possibility is, however, lost in the presence of Clitic Climbing (Ljiljana Progovac, personal communication). See (39b):

- (39) a. Milan želi da ga ON vidi 'M. wishes HE HIMSELF to see him'
b. *Milan ga želi da ON vidi 'M. him wishes HE HIMSELF to see'

While unexpected under a biclausal analysis of "restructuring"/Clitic Climbing, the contrast follows from the monoclausal alone proposed in the next section, where evidence is provided that even apparently "control" verbs such as *want* inherit, in "restructuring" contexts, their subject from the embedded lexical verb (as happens with auxiliaries). Under such a monoclausal analysis, (39b) is bad because either *Milan* or *ON*, but not both, can be generated in the subject position of the embedded verb *vidi* (Stjepanović 2001, 2002 also argues for the monoclausal character of both [37a] and [b]).²³

4. The functional status of restructuring verbs in the presence of transparency effects

One consequence of the idea that (when transparency effects obtain) "restructuring" verbs are "functional" verbs directly inserted under the corresponding functional heads

is that, like auxiliaries (see Pollock 1989), they should have no thematic roles to assign, and hence no arguments of their own.²⁴ Despite certain appearances, this will prove a welcome (and correct) consequence.

4.1. The unavailability of internal arguments

Kayne (1989b: 248) observes: "Virtually all the standard cases of clitic climbing are cases of subject control or raising. What is conspicuously absent is object control."²⁵ He takes his analysis of "restructuring" in terms of INFL raising from the embedded to the matrix clause (via COMP) to provide the required explanation. As INFL is coindexed with its Spec (containing the subject DP), the embedded INFL raising to the higher INFL will force coindexation of the lower with the higher subject. In object control structures, however, there would be "two AGR whose respective subjects are themselves not essentially coindexed."²⁶

The analysis developed here instead takes the absence of object control restructuring verbs to be a special case of a more general phenomenon, namely, the fact that no verb with an object complement (i.e., assigning a thematic role) can be used as a functional verb. This more stringent condition indeed appears to predict the nonexistence of cases that the I-to- (C-to-) I hypothesis does not exclude.

Consider the case of a raising verb that can optionally take a complement. *Sembrare* 'seem' in Italian is such a verb:

- (40) a. Gianni non sembra apprezzarlo 'G. does not seem to appreciate it.'
- b. Gianni non ci sembra apprezzarlo 'G. does not seem **to-us** to appreciate it'

For many speakers, myself included, *sembrare* allows Clitic Climbing (cf. [41a])²⁷ but, crucially, not if it takes a (dative) complement (cf. [41b]):²⁸

- (41) a. Gianni non lo sembra apprezzare abbastanza 'G. does not it seem to appreciate enough'
- b.*Gianni non **ce** lo sembra apprezzare abbastanza 'G. doesn't **to-us** it seem to appreciate enough'

A comparable contrast concerning "long" L-tous in French (also found only with "restructuring" verbs) is noted in Pollock (1978: 97f.) (I thank Richard Kayne for pointing this out to me):²⁹

- (42) a. ?Elle a tous semblé/paru les avoir lus
She seemed/ appeared to have read them all
- b.*Pierre m'a tous semblé/paru les avoir lus
P. seemed/ appeared **to-me** to have read them all

These contrasts, which are very sharp, seem to indicate that it is the presence of the dative complements of 'seem,' *ce* 'to us', *me* 'to me', that inhibits Clitic Climbing and

"long" L-tous, respectively. For such contrasts, the I-to- (C-to-) I account has nothing to say, as in neither case would there be contraindexing as a result of I raising.³⁰

In conclusion, there are no object control "restructuring" verbs because, being functional (directly inserted under a functional head), such verbs can have no complements. Nor can there be any unaccusative subject control "restructuring" verb (with the subject originating in object position), natural candidates being motion verbs. As the ill-formedness of (43b) shows, this expectation is also confirmed. Whenever the subject of *venire* remains in the inverted subject (i.e., structural object) position, which in this analysis excludes its restructuring usage, the downstairs clitic cannot climb to *venire*.³¹

- (43) a. Ne sono venuti molti a portarti un regalo?
Of-them are come many to bring to-you a present
'Did many come to bring you a present?'
- b.***Te** ne sono venuti molti a portare un regalo?
To-you of-them are come many to bring a present
'Did many come to bring you a present?'

Again, in the I-to- (C-to-) I analysis it is not clear why Clitic Climbing should be blocked in this case, as the matrix and the embedded subjects are coindexed.³² The intervention of material between the "restructuring" and the embedded verb in (43b) should not matter. Various cases of intervening material, documented in the literature, do not block Clitic Climbing (see Napoli 1981: 865f., Aissen and Perlmutter 1983: 395f., and LaPolla 1988: 220), one being floating quantifiers: *Ti sono* venuti tutti a *portare un* regalo 'All have come to bring you a present.' It thus seems plausible to take the unavailability of Clitic Climbing in (43b) to depend on the fact that *venire* has an internal argument.³³

4.2. Some apparent cases of object control "restructuring" verbs

If the general unavailability of object control "restructuring" verbs is derived from the fact that functional verbs cannot take internal arguments, something needs to be said about the few cases claimed in the literature to be object control "restructuring" verbs. Luján (1978: 123) and Suiier (1980: 318), for example, analyze cases like the following, containing Clitic Climbing, as cases of "restructuring":³⁴

- (44) a. Me permitió tocarla
- b. Me **la** permitió tocar 'She allowed me to play it' (Luján 1978: 123).
- (45) a. **Nos** ordenaron verla
- b. **Nos** **la** ordenaron ver 'They ordered us to see it' (Suiier 1980: 318).

Although sentences corresponding to (44b) and (45b) are impossible in Italian (*Me la *permise di suonare*; *Ce la *ordinarono di vedere*) and Portuguese (see Martins

1995: 228), a comparable case of an apparently object control verb that allows Clitic Climbing in Italian is *insegnare* 'teach'.³⁵ See (46):

- (46) a. Gli ho insegnato a farlo io
- b. Gliel'ho insegnato a fare io
I taught him @AT) to do it.'

Kayne (1989b: 248), observing the general nonexistence of object control restructuring verbs, conjectures that the few existing cases (like [44]—[46] earlier) are actually hidden instances of the causative construction (which also has Clitic Climbing).³⁶

Indeed there is evidence supporting his intuition. These putative "restructuring" verbs appear to be subject to restrictions that typically hold for the combination of a causative verb and its infinitival complement and are not found with ordinary "restructuring" verbs. For example, as noted in Suñer (1980: 316), where the observation is attributed to Bordelois (1974) and Luján (1978), in Spanish "causative verbs permit Clitic Promotion provided that the object of the infinitive is [-animate]."³⁷ See the contrast between (47) and (48):

- (47) a. Juan **le** dejó/hizo/vio/oyó armara 'J. let/made/saw/heard him assemble it'
- b. Juan **se** la dejó/hizo/vio/oyó armara 'J. let/made/saw/heard him assemble it'
- (48) a. Juan le dejó/hizo/vio/oyó llamarla 'J. let/made/saw/heard him call her'
- b.*Juan se la dejó/hizo/vio/oyó llamar 'J. let/made/saw/heard him call her'

Now, exactly the same restriction has been observed by Luján (1978: 180f.), Contreras (1979: 181, n. 11), Pizzini (1982), and Moore (1990: 321ff.) to hold with *permitir* 'allow' and the other hidden causatives. Compare (44) with (49) and (45) with (50):

- (49) a. Me permitieron saludarla '(they) me permitted to greet her'
- b.***Me** la permitieron saludar '(they) me her permitted to greet'
- (50) a. Nos ordenaron saludarla '(they) us ordered to greet her'
- b.***Nos** la ordenaron saludar '(they) us her ordered to greet'

Crucially, no such restriction holds for the ordinary (subject control and raising) cases of "restructuring." Similarly, in Italian, a restriction found with overt causatives is also found with *insegnare* 'teach'. The subject of a transitive verb embedded under causative *fare* (syntactically a dative) cannot cliticize to the causative if it is a reflexive or a reciprocal pronoun coreferent with the causative subject:

- (51) a. Gianni e Mario fecero imparare la procedura a Carloll'uno all'altro
G. and M. had C./each other learn the procedure

- b. Gianni e Mario gli/*si fecero imparare la procedura
G. and M. had him/each other learn the procedure

Analogously, the dative of (the hidden causative) *insegnare* (52), as opposed to the dative of an ordinary verb (53), cannot cliticize to the verb if it is a reflexive or reciprocal pronoun coreferent with the subject:

- (52) a. Gianni e Mario insegnarono la procedura a Carloll'uno all'altro
G. and M. taught C./each other the procedure
- b. Gianni e Mario gli/*?si insegnarono la procedura
- (53) a. Gianni e Mario regalarono un disco a Carloll'uno all' altro
G. and M. gave a disk to C./to each other
- b. Gianni e Mario si regalarono un disco

If so, the conclusion that there are object control "restructuring" verbs finds no justification.

4.3. The unavailability of external arguments

The idea that "restructuring" verbs in "restructuring" contexts do not assign thematic roles has the even stronger consequence that they cannot have an external argument, either. To put it differently, there cannot be subject control but only raising "restructuring" verbs, as auxiliaries (in this respect).³⁷

This appears at first glance to be an unwelcome result. Even though most of the "restructuring" verbs, like ordinary (non-"restructuring") raising verbs (as *rivelarsi* 'to manifest oneself'), fail to impose selectional requirements on the subject of their clause (cf. [54]), some do, for example, *volere* 'want', *osare* 'dare', *sapere* 'know how', and *provare* 'try' (cf. [55]):

- (54) a. La casa gli doveva piacere 'The house had to appeal to him.'
- b. La casa non gli poteva piacere 'The house could not appeal to him.'
- c. La casa gli tendeva ad apparire piccola 'The house tended to appear little to him.'
- d. La casa gli smise di piacere, da allora 'The house stopped appealing to him, since then.'
- e. La casa non gli riusciva ad apparire bella 'The house did not manage to appear nice to **him**.'
- f. La casa gli stava per piacere 'The house was about to appeal to him.'
- g. La casa gli stava dando molti dispiaceri 'The house was giving him a lot of troubles.'
- h. La casa gli seguitò ad apparire piccola 'The house continued to appear small to him.'

- i. La casa gli cominciò a piacere 'The house started to appeal to him.'
 - j. La casa gli finì per piacere 'The house ended up being appealing to him.'
 - k. La casa gli finì di apparire piccola 'The house finished to appear small to him.'
- (55) a.*La casa gli voleva appartenere 'The house wanted to belong to him.'
- b.*La casa non gli osava piacere 'The house did not dare to appeal to him.'
- c.*La casa non gli sapeva piacere 'The house didn't know how to appeal to him.'
- d.*La casa gli provò a piacere 'The house tried to appeal to him.'

If we abstract momentarily from the problem raised by (55), to which I return, the bulk of the evidence indeed appears to support the conclusion that restructuring verbs take no external arguments.

The first piece of evidence comes from an observation of Burzio (1986: 390), who notes that extraction of *ne* 'of-the-mlit' from the inverted subject of an apparently transitive/unergative "restructuring" verb is possible just in case the embedded infinitival verb is unaccusative. See (56), containing the "restructuring" verb *volere* 'want', and (57), showing the same with the "restructuring" verbs *osare* 'dare', *sapere* 'know how', and *provare* 'try':

- (56) Ne vorrebbero intervenire molti (Burzio 1986: 390)
 Of them would like to intervene many
 'Many would like to intervene.'

- (57) a. Ne osarono *rimanere* solo due
 Of them dared to stay only two
 'Only two dared to stay.'
- b. Ne seppero risalire ben pochi
 Of them knew how to climb up really few
 'Really few knew how to climb up.'
- c. Ne provarono a intervenire solo un paio
 Of them tried to intervene only a couple
 'Only a couple tried to intervene.'

Similar facts are noted for Catalan in Picallo (1985: 210). See also Rosen (1990b, 483):

- (58) N'hi volien entrar alguns
 Of them there wanted to enter some
 'Some wanted to enter there.'

The fact that *ne*-extraction in Italian (and Catalan) is only possible from an object position, or the "inverted" subject position of an unaccusative, passive, or *si*-passive verb (namely, from a structural object position—Burzio 1986: 20–42), suggests that

molti, solo due, ben pochi, alguns, **and** so on, are indeed in the structural object position of the embedded unaccusatives *intewenire* 'intervene', *rimanere* 'remain', *risalire* 'climb up', and *entrar* 'enter' in (56), (57), and (58).

This is confirmed by the fact that *ne* can also appear on the infinitive (cf. [59]) and by the fact that replacing the embedded unaccusative with an unergative verb leads to ungrammaticality (cf. [60]):

- (59) a. Vorrebbero intervenirne molti
 Would like to intervene of them many
 'Many would like to intervene.'
- b. Osarono rimanerne solo due
 Dared to stay of them only two
 'Only two dared to stay.'
- c. Seppero risalirne ben pochi
 Knew how to climb up of them really few
 'Really few knew how to climb up.'
- d. ?Provarono a intervenirne solo un paio
 Tried to intervene of them only a couple
 'Only a couple tried to intervene.'
- (60) a.*Ce ne vorranno mangiare ben pochi
 There of them will want to eat really few
- b.*Non ne osb piangere nessuno
 Not of them dared to cry no-one
- c.*Non ne seppe rifiutare nessuno
 Not of them knew how to refuse no-one
- d.*Gliene provarono a parlare due
 To him of them tried to talk two

This means that what looks like the (inverted) subject of the matrix "restructuring" verb is actually generated (and remains) in the object (inverted subject) position of the embedded infinitival verb (with nothing, as a consequence, being generated in the external argument position of the "restructuring" verb).³⁸

Another piece of evidence that transitive/unergative "restructuring" verbs take no external argument (when used as functional verbs) comes from a property of the impersonal(-passive) *si* construction of Italian.

In nonfinite contexts under a raising verb, *si* is found with verbs that assign an external theta role (transitive and unergative) but not with those that fail to assign one (unaccusative, passive, psych-, copular, and raising verbs). See (61) and (62) and the discussion in Cinque (1988):

- (61) a. Sembra **essersi** finalmente trovato il colpevole
 seems to be si finally found the culprit 'The culprit seems to have been found.'

- b. Non sembra essersi lavorato a sufficienza
 Not seems to be *si* worked sufficiently 'One does not seem to have worked sufficiently.'
- (62) a.***Sembra** essersi arrivati troppo tardi
 Seems to be *si* arrived too late
 'One seems to have arrived too late.'
- b.***Sembra** non essersi stati apprezzati
 Seems not to have been appreciated
 'One seems not to have been appreciated.'
- c.***Sembra** essersi preoccupato solo un genitore (irrelevantly good in the intransitive use of *preoccuparsi*)
 Seems to be *si* worried only one parent
 'One seems to have worried only one parent.'
- d.***Sembra** non essersi benvenuti qui
 Seems not to be *si* welcome here
 'One seems not to be welcome here.'
- e.***Sembra risultarsi** ignorare il problema
 Seems to appear *si* to ignore the problem
 'One seems to appear to ignore the problem.'

Whatever the account is for this contrast (see Cinque 1988 and Dobrovie-Sorin 1998), it constitutes a diagnostic for external-theta-role-assigning verbs.

Now, if there were subject control (hence transitive or unergative) "restructuring" verbs, one would expect them to allow *si* in nonfinite contexts (like those of [61]). Yet whether they allow it or not depends entirely on the nature of the verb in their infinitival complement. They do if the latter is transitive or unergative; otherwise they don't. In other words, they appear to inherit their status from that of the embedded verb, which again suggests that they do not have an external argument of their own but are transparent to the arguments of the embedded verb, much like auxiliaries. See (63) and (64), with the "restructuring" verb *volere* 'want':³⁹

- (63) a. (?)Non sembra essergli voluto dare sufficiente credito
 Not seems to be to-him *si* wanted to give sufficient credit
- b. (?)Non sembra essersene voluto parlare molto, di questi problemi
 Not seems to be of-it *si* wanted to talk much, of these problems
- (64) a.*Non sembra essergli voluto/i venire in aiuto⁴⁰
 Not seems to be him *si* wanted to come in support
- b.*Non sembra essergli voluto/i essere presentati
 Not seems to be to-him *si* wanted to be introduced
- c.*Non sembra essergli volute/i essere fedeli
 Not seems to be to-him *si* wanted to be faithful

- d.*Non sembra essergli voluto/i risultare simpatici
 Not seems to be to-him *si* wanted to appear nice

From the evidence just reviewed, the conclusion that (when transparency effects obtain) "restructuring" verbs do not take external arguments seems inescapable, though it is in conflict with the evidence based on (55), where some such verbs appear to impose selectional restrictions on the subject (giving the appearance that they take a subject of their own). A possible solution to the paradox (in the spirit of Zubizarreta's 1982: chap. 3 proposal that such predicates assign not primary but adjunct theta roles) would consist in taking their selectional requirements to be a consequence of their semantics. If verbs like want, just like volitional adverbs such as willingly, voluntarily, and so on (cf. *The house willingly belonged to Bill), or, for that matter, manner adverbs (cf. *The house hid the horizon carefully), must be predicated on a sentient being, the ungrammaticality of (55) versus (54) follows without having to assume that they take an external argument of their own.

5. The optional character of transparency effects in (standard) Italian

5.1. The optionality of Clitic Climbing

It is widely assumed that Clitic Climbing obtains obligatorily in the "restructuring" configuration (see Rizzi 1976b, 1978, but see his notes 18 and 26, respectively, for a different view, Burzio 1986: 393, n. 44, Rochette 1988: 96, and Rosen 1990a: 144; among others). Evidence for that assumption primarily comes from the interaction of Long Object Preposing and Clitic Climbing. When Long Object Preposing obtains (indicating the presence of the "restructuring" configuration), Clitic Climbing must apparently also obtain. See the ungrammaticality of (65b), adapted from Rizzi (1978: 132), where the clitic has failed to climb, versus the grammaticality of (65c), where it has climbed:

- (65) a. Si vorrebbe vendergli queste case a caro prezzo
 Si (one) would like to sell him these houses at a high price
- b.*Queste case si vorrebbero vendergli a caro prezzo
 These houses si would like to sell him at a high price
- c. Queste case **gli** si vorrebbero vendere a caro prezzo

The evidence, however, is less solid than it appears. First, as already noted in Rizzi (1976b: n. 18, 1978: n. 26; see also Longobardi 1978: n. 5), clitics may fail to climb in the presence of Auxiliary Change. See (66a), from Rizzi (1978), and (66b) from Boysen (1977: 289):

- (66) a. Maria è dovuta **venirci** molte volte
 M. is had to come-there many times
 'M. had to come there many times.'

- b. Un'ora più tardi sarebbe dovuto esservi arrivato, ma nessuno lo vide (Silone)
 One hour later he should be had to be there arrived, but nobody saw him
 'One hour later he should have had to be there, but nobody saw him.'

This would seem to indicate that Clitic Climbing is optional, in contrast with what (65b) appeared to show. The paradox, however, is only apparent, as (65b) turns out to be ill formed for a different reason.

In Italian, when an unergative or transitive verb (which takes auxiliary *avere* 'have' in the perfect) is in the impersonal(-passive) *si* form, the perfect auxiliary shifts to *essere* 'be' (Rizzi 1978: n. 22). See (67) and (68).⁴¹

- (67) a. Gianni **ha/*è** lavorato molto 'G. has/is worked a lot'
 b. Si **è/*ha** lavorato molto 'One is/has worked a lot.'
- (68) a. Gianni **ha/*è** perso molti soldi 'G. has/is lost a lot of money'
 b. Si **son/*hanno** persi molti soldi 'A lot of money was/has been lost.'

This also holds in infinitival contexts (see Cinque 1988: 524ff.):

- (69) I colpevoli non risultano **essersi/*aversi** ancora trovati 'The culprits do not seem yet to si be found'

When the higher verb is a "restructuring" verb, Object Preposing, as noted, can apparently span over two clauses:

- (70) I colpevoli si vorrebbero trovare subito 'the culprits si would want to find immediately'

In such cases, a surprising instance of auxiliary shift is found on the embedded infinitival verb when this is in the perfect. In spite of the fact that the impersonal(-passive) *si* is on the "restructuring" verb, the perfect auxiliary of the embedded infinitival must be *essere* 'be', Consider (71):

- (71) a. Questi libri gli si vorrebbero esser già dati
 These books to-him si (one) would like to be already given
 b. *Questi libri gli si vorrebbero aver già dato
 These books to-him si (one) would like to have already given

As there is no other reason that the auxiliary should be *essere* in (71a) except for *si*, we can infer that *si* must have originated with the embedded verb. In turn this means that its appearing in front of the "restructuring" verb in (71a) must be due to Clitic Climbing.⁴²

If so, the reason for the ungrammaticality of (65b), which is an instance of impersonal(-passive) *si* (see the agreement with the object), is different. It is the same reason that rules out (72) and (73), where only one of the two clitics has climbed (vs. [74] and [75], in which the clitics have not split).⁴³

- (72) a. ***Mi** sta dicendolo
 (He) to-me is saying it

- b. ***Lo** sta dicendomi
 (He) it is saying to-me
 'He is saying it to me.'

- (73) a. ***Mi** sta per dirlo
 (He) to-me is about to say it

- b. ***Lo** sta per dirmi
 (He) it is about to say to-me
 'He is about to say it to me.'

- (74) a. Sta dicendomelo
 (He) is saying to-me it

- b. Me lo sta dicendo
 (He) to-me it is saying
 'He is saying it to me.'

- (75) a. Sta per dirmelo
 (He) is about to say to-me it

- b. Me lo sta per dire
 (He) to-me it is about to say
 'He is about to say it to me.'

If the ill-formedness of (65b) indeed reduces to that of (72) and (73) (*si* has climbed while *gli* has not), it becomes possible to maintain Clitic Climbing in restructuring contexts as optional (with the two options possibly depending on factors distinct from the restructuring configuration). The optionality of Clitic Climbing is already indicated by (66), as noted, and by such cases as (74) and (75), for which no (literally) biclausal source appears plausible. It is also indicated by the fact that clitics may fail to climb in the presence of the climbing of the weak pronominal *loro* 'to-them' (for which see Rizzi 1978: 138ff. and Cardinaletti 1991):⁴⁴

- (76) Ho loro cominciato ad insegnarlo più di un anno fa
 'I began to teach it to them more than a year ago.'

All of this suggests that clitics may appear in the same clause either on the finite verb or on the nonfinite one (infinitive or gerund). From this point of view, it is past participles (the other nonfinite form of Italian) that are surprising in not allowing clitics to attach to them in the presence of a finite verb. See the impossible **Ho mangiatolo* 'I have eaten it' (vs. *L'ho mangiato*).⁴⁵ In contrast to Italian, which in "restructuring" configurations allows clitics to appear in either position, one finds Romance languages where the clitic can only appear in the *higher* one, that is, languages in which Clitic Climbing (hence "restructuring") looks obligatory, like some Old Romance languages

(Benincà 1986: 132, Martineau 1991, Fischer 2000), Central and Southern Italian dialects (Benincà 1986: 131f., Monachesi 1995: 200ff., Ledgeway 1998, 2000) and Sardinian (Jones 1993), as well as languages where the clitic can appear only in the *lower* position. This is the case of (modern) French, which displays no regular Clitic Climbing nor Long Object Preposing nor Auxiliary Change but has other restructuring effects—the marginal climbing of *y* 'there' and *en* 'of it/them' in more careful styles⁴⁶ (see Kayne 1977: chap. 2, n. 7, Pollock 1978: n. 18, Taraldsen 1983: 308, and Cinque 2002a), Long Tough movement, and Long Passive (see Kayne 1989b: 250ff., Rochette 1988: 245, n. 23, Cinque 2002b, and the examples given in note 47). Still other languages display a clitic in both positions, that is, a copy in the lower one (Benincà 1986: 130, Kayne 1989b: n. 37). See, for example, Chilean Spanish *Los vamos a verlos* 'Them (we) are going to see them' (from Uriagereka 1995: 86, n. 21) and Neapolitan *L'amu pruvatu a ru* vida 'Him (we) tried to him see' (from Ledgeway 1996: chap. 3, n. 6).⁴⁷

5.2. The optionality of Long Object Preposing and *Loro* Climbing

The optionality of Clitic Climbing in "restructuring" contexts in Italian is not unique. Long Object Preposing (as already noted in Rizzi 1978: 132), and *Loro* Climbing, are likewise optional. See (77), where the presence of Clitic Climbing does not force Long Object Preposing, and (78)–(80), where the presence of Clitic Climbing, Auxiliary Change, and Long Object Preposing, respectively, does not force *Loro* Climbing:

- (77) Gli si vuole vendere queste case a caro prezzo
To-him *si* wants to sell these houses at a high price
'One wants to sell him these houses at a high price.'
(Cf. Queste case gli si vogliono vendere a caro prezzo)
- (78) a. Le ho dovute consegnar loro in ritardo
Them (I) have had to give to-them late
'I had to give them to them late.'
- b. Le ho loro dovute consegnare in ritardo
- (79) a. Mi chiedo come sia potuta andar loro incontro
I wonder how she could go to-them toward
'I wonder how she could go toward them.'
- b. Mi chiedo come sia loro potuta andare incontro
- (80) a. Si sarebbero dovute consegnar loro subito
They *si* would have to give to-them immediately
'One would have had to give them back to them immediately.'
- b. Si sarebbero loro dovute consegnare subito

5.3. Auxiliary Change

The case of Auxiliary Change⁴⁸ appears to be more complex. On one side, the ungrammaticality of (81a) versus (81b), (from Rizzi 1978: 136) would seem to suggest that it is obligatory:

- (81) a.*?Maria *ci ha* dovuto venire molte volte
'M. has had to come there many times.'
- b. Maria *c'* è dovuta venire molte volte

On the other side, the acceptability of (82a) alongside (82b) would seem to point to its optionality (in that Auxiliary Change fails to apply even in the presence of *Loro* Climbing):⁴⁹

- (82) a. Avremmo loro potuto rimanere pih vicini 'We could have to-them remained closer'
- b. Saremmo loro potuti rimanere pih vicini 'We could have to-them remained closer'

I tentatively interpret this paradox as showing that Auxiliary Change is per se optional (like all the other transparency effect) in Standard Italian but is favored by Clitic Climbing in more careful styles of Italian. This could be made sense of if in these styles clitics climb via adjunction to the head, which, raising, effects the change *avere* → *essere* on the "restructuring" verb (whence the implication Clitic Climbing → Auxiliary Change in a language that has both, though not vice versa (cf. [66]).⁵⁰

6. The functional status of "restructuring" verbs in the absence of transparency effects

So far, following the traditional opinion, I have been assuming that the presence of one or more transparency effects is an unequivocal indication of the presence of a monoclausal configuration, while the variant without transparency effects indicates a biclausal one. Given their optionality, however, the variant without transparency effects tells us nothing about sentence structure. A restructuring verb could well be functional (directly inserted under a functional head in a monoclausal configuration) even when the clitic is on the embedded verb, *loro* has not climbed, or Long Object Preposing has not applied.

This opens up the theoretical possibility that restructuring verbs are always functional, even in the absence of transparency effects.

The existence of languages where transparency effects are obligatory (such as most Southern Italian dialects) would already seem to suggest that restructuring verbs indeed are only functional. In this section, I consider some evidence that supports this first indication. We shall see that except for *sembrare* 'seem' and motion verbs (which also have genuine lexical usages, with a different meaning), restructuring verbs are always functional and hence necessarily enter a monoclausal configuration. This has the conceptual advantage that such verbs do not need to be marked in the lexicon as either lexical or functional, with the ensuing problem of having to account for the

complete synonymy of the two uses and for what looks like a single subcategorization option (the uniform selection of either **di** 'of', a 'to', or **Ø** (see Rizzi 1978: 150). They need only be marked as functional.

In addition to this conceptual argument, there is some empirical evidence for their exclusively functional nature (see sections 6.1–3).

6.1. More on the relative order of restructuring verbs

In section 3.2 earlier, I observed that restructuring verbs come in a rigid order when transparency effects obtain. The same rigidity is, however, found even in the absence of transparency effects. See (83) and (84) (and Hernanz and Rigau 1984: n. 6 for the similar rigid ordering of restructuring verbs in the absence of transparency effects in Catalan):

- (83) a. Suole **provare** a **farle/provarle** a fare da solo 'He uses to try to do them by himself'
- b. ***Prova** a soler **farle/solerla** fare da solo 'He tries to use to do them by himself'

- (84) a. **Soleva** smettere di **vederla/ ?smetterla di** vedere ogni sei mesi 'He used to stop seeing her every six months.'
- b. ***Smetteva di** soler **vederla/solerla** vedere ogni sei mesi 'He stopped using to see her every six months'

This suggests that such verbs are only functional. If they were (also) lexical, taking a full-fledged CP complement, it would not be clear how they could determine the choice of the verb of their sentential complement. Note that the reason for the ill-formedness of (84b) can hardly be semantic. It would make perfect sense to "stop having the habit of doing something." Yet the sentence is unacceptable.

6.2. "Imperfect" (partial) versus "strict" (exhaustive) control

Further evidence for the exclusively functional character of restructuring verbs appears to come from a property of (obligatory) Control recently discussed by Wurmbrand (1998: chap. 4) and Landau (1999, 2000: chap. 2). Wurmbrand (1998: 163ff.) observes that the class of Control infinitives splits into two distinct subclasses: one in which the infinitive subject is referentially strictly identical to the controller and one in which it only needs to include the reference of the controller (what she terms "imperfect" Control). This can be seen in the contrast between (85) and (86):

- (85) a. (They said that) *John tried to meet in front of the Post Office.
- b. (They said that) *John managed to gather at **6**.

- (86) a. (They said that) John had planned to meet in the castle.
- b. (They said that) John had regretted meeting in the castle.

The latter, but not the former, are grammatical because only the latter allow the infinitive subject (which is plural, given the semantics of the verb) to partially overlap with (include) the controller (which is singular). The former, instead, require strict referential identity between controller and controllee, a condition violated in (85).⁵¹

Wurmbrand (1998) further argues that the class that requires strict identity coincides with the class of restructuring infinitives, whereas the class that allows imperfect Control coincides with that of nonrestricting infinitives, and she suggests that the difference follows from a difference between restructured and nonrestructured configurations. The latter have a subject PRO (which can be imperfectly controlled). The former have no syntactic subject, their understood subject being semantically controlled. I think Wurmbrand's generalization is correct, but I would like to suggest that the strict referential identity between controller and controllee in the restructuring case requires no additional semantic mechanism. It is simply a consequence of the fact, already discussed, that restructuring configurations involve raising even in the few apparent Control cases of 'want', 'try', 'dare', know (how'). In this view, the traditional notion of (obligatory) Control comes to coincide with imperfect Control and what looks like strict Control is nothing but raising.⁵²

Now, if the strict referential identity of the two subjects in restructuring contexts necessarily follows from their raising character, the fact that the two subjects are also strictly identical in the variant without transparency effects is a direct argument for the raising (and monoclausal) character of the configuration that lacks transparency effects, and hence for the exclusively functional character of the restructuring verbs involved. If the variant without transparency effects involved a biclausal structure with PRO, imperfect Control would be expected to be possible, contrary to fact (*Ha provato a incontrarsi alle 5 'He tried to meet at 5').

6.3. Apparent lexical usages of *volere* and aspectual verbs

The idea that restructuring verbs are always functional would seem to be contradicted by certain *prima facie* lexical usages of *volere* 'want' and of some of the aspectual verbs. See (87) and (88):

- (87) Gianni vuole una bicicletta 'G. wants a bicycle.'

- (88) a. Maria ha cominciato il romanzo 'M. began the novel.'
- b. Mario ha finito il vino 'M. finished the wine.'
- c. Il concerto sta **cominciando/sta finendo/continua**
 'The concert is beginning/finishing/continuing'

In all such cases, the verb, unlike what happens with functional verbs, does not take a nonfinite verbal complement but rather a DP, object or subject, thus apparently qualifying as a simple transitive, or unaccusative, lexical verb. The appearances, however, are misleading, as there is evidence that (87) and (88) are structurally more complex than they look. Dikken, Larson, and Ludlow (1996, 1997), following earlier

proposals by McCawley and Ross, provide syntactic arguments that in (87) 'want' does not directly take the DP as its object but takes an abstract verbal complement, whose head, roughly paraphrasable with HAVE, takes the DP as its object:⁵³

- (89) Gianni vuole [XP HAVE [DP una bicicletta]]

If this is so, *vuole* in (87) continues to be the functional verb seen so far, with *Gianni la vuole* 'G. wants it' a case of Clitic Climbing.⁵⁴

Similarly, Pustejovsky (1995) and Jackendoff (1997: 60ff.) (see also Rochette 1999: 159ff.), in order to account for the variable, and highly restrictive, interpretations that aspectual predicates show, depending on the nature of the object,⁵⁵ have argued that they actually select an abstract verbal complement of activity, whose head is interpreted on the basis of the *qualia structure* of the object (differently from them, I assume here that they syntactically take an abstract verbal complement).⁵⁶

Although such special usages of 'want' and of phasal aspectuals deserve more careful investigation, it seems that they can be rendered compatible with the idea that such verbs are exclusively functional, part of the extended projection of another, overt or abstract, lexical verb.

6.4. Restructuring and lexical usages of motion verbs and *sembrare*

The case of motion verbs and *sembrare* 'seem', which appear to have genuine usages as lexical verbs in addition to their functional usage, is different. We have seen that when these verbs take an internal argument (either a directional PP or a subject for the former and a dative PP for the latter) they cease to behave as restructuring verbs (e.g., they do not allow Clitic Climbing). See, in particular, (43), notes 10 and 30, and (41) and (42), respectively.

These data are still compatible with the idea that restructuring verbs are *always* functional if, when they take a complement, motion verbs and *sembrare* are actually different verbs, in fact, genuine *lexical* verbs. This appears to be confirmed by the fact that the case with and the case without a complement display subtle differences in meaning.

Motion verbs, when they take a complement of their own and an optional adjunct clause (cf. note 10), are interpreted literally as verbs of locomotion, part of whose meaning is the means of transportation (cf. [90a] below). When they are used as restructuring verbs, instead, they are not verbs of locomotion for which one can ask the means of transportation—whence the ungrammaticality of the answer to (90b), where *come* 'how' can only ask 'the way he will (come to) paint the door.' They merely indicate that some distance is traversed before the action depicted by the lexical verb is carried out (much as with the so-called distative suffix of Fula/Fulfulde, seen in note 4 earlier):⁵⁷

- (90) a. A: Come verrà da te a dipingere la porta? 'How will he come by you to paint the door'
B: In bicicletta 'With his bicycle'

- b. A: Come ti verrà a dipingere la porta? 'How will he come to paint your door?'
B: *In bicicletta 'With his bicycle.'

Similar considerations hold for *sembrare* when it takes a dative argument versus restructuring *sembrare* without one. The former literally means that a certain state of affairs seems true to someone (hence the perfectly noncontradictory status of [91a]). The latter is instead an evidential functional verb, which (mildly) commits the speaker to the truth of a certain state of affairs (whence the contradictory status of [91b]):⁵⁸

- (91) a. Gianni sembra a tutti apprezzarlo molto, ma io non credo che lo apprezzi
'G. seems to everybody to appreciate it much, but I don't believe he appreciates it.'
b. #Gianni lo sembra apprezzare molto, ma io non credo che lo apprezzi
'G. seems to appreciate it much, but I don't believe he appreciates it.'

This, of course, does not exclude the possibility that the functional (restructuring) usage of motion verbs, and *sembrare*, has its ultimate basis in the lexical usages of these verbs (because of their semantics). But it shows that their functional and lexical usages should be kept distinct.

7. Presence versus absence of transparency effects: Syntactic contrasts

I have argued so far that restructuring verbs are always functional, appearing in a monoclausal configuration with their infinitival complement whether or not they show transparency effects. This requires reassessing the syntactic contrasts noted in the literature between the variant with and the variant without transparency effects, and in particular, it requires explaining them in ways that have nothing to do with constituency differences (such as the monoclausal vs. biclausal distinction).

Before attempting that (sections 7.2 and 7.3), we should put to the side the few genuine (and irrelevant) cases of actual alternation between a monoclausal and a biclausal configuration, when a restructuring verb also has lexical usages.

7.1. The special status of *volere*, *sembrare*, and motion verbs

As seen earlier (note 54), such cases as *Gianni vuole restare* 'G. wants to stay' are structurally ambiguous even if *volere* is exclusively functional. That depends, as seen, on the additional possibility for *volere* to be followed by an abstract verb (*OBTAIN*), which itself takes the infinitival phrase as a complement:

- (92) a. Gianni, vuole . . . [VP t_i restare]
b. Gianni, vuole . . . [VP t_i OBTAIN [CP PRO, restare]]

This, we take it, is at the basis of the contrasts in (23)–(26) earlier. These are found with *volere* but in fact with no other modal or aspectual verb.⁵⁹

The case of *sembrare* and motion verbs is different because they actually enter either a monoclausal or a biclausal structure, depending on whether they are used as functional or lexical verbs (section 6.4). We have already seen (section 2.3 and note 10) that such Heavy NP-Shift contrasts as (18b) and (19b), repeated here as (93a and b), are not imputable to a constituency difference but derive, for (93b), either from an illicit application of scrambling of the PP *a Firenze* or from an illicit extraction of the clitic out of the adjunct *ad esporre la mia idea*:

- (93) a. ... verrò a Firenze ad esporti la mia idea '... I'll come to F. to explain-to you my idea'
 b.*... **ti** verb a Firenze ad esporre la mia idea '... to-you I'll come to F. to explain my idea'

7.2. Right node raising contrasts and ellipsis with restructuring

We have also already seen that under a deletion analysis of Right Node Raising (Kayne 1994), such contrasts as (13a and b), repeated here as (94a and b), and in particular the ungrammaticality of (94b), reduce to the independent ungrammaticality of such cases as (17), repeated here as (95):

- (94) a. Piero voleva—ma francamente adesso non so se vorrà ancora—parlarne con Gianni
 'P. wanted to—but frankly now I don't know if he still will—speak about it with G.'
 b.*Piero **ne** voleva—ma francamente adesso non so se **ne** vorrà ancora—parlare con Gianni
 'P. about it wanted to—but frankly now I don't know if he still will—speak about it with G.'
- (95) a.*Gianni voleva parlare di questo, ma Piero non **ne** voleva
 G wanted to talk about this, but P. not about-it wanted
 b.*Certe cose si possono fare, ma queste non si possono
 Certain things one can do, but these not one can
 c.*Gianni poteva andare a casa, ma non **è** voluto
 G. could go home, but not is wanted

It is worthwhile examining more closely the ungrammaticality of (95) as it appears to play a role in such Cleft Sentence contrasts as (7a and b) earlier. Depiante (1998), following Zubizarreta (1982), suggests that it is due to a kind of null anaphora licensed by restructuring verbs, which is a form of "deep anaphora," in Hankamer and Sag's sense: namely, an empty category with no internal syntactic structure. Deep anaphors (pronominals, the pro-form *do it*, and null complement anaphora [NCA]), as opposed to surface anaphors (like VP deletion, Gapping, Sluicing, etc.), (1) do not need an identical syntactic antecedent, (2) can be pragmatically controlled, (3) cannot host missing antecedents, and (4) eliminate scope ambiguities (see Hankamer and Sag 1976 and Depiante 1998). Bošković (1994: 266f.) and Depiante show that

the null complement that follows restructuring verbs indeed behaves like a deep anaphor with respect to these properties. If so, the contrasts in (96) follow from the fact that the clitic cannot be paired with a trace within the (unstructured) elliptical constituent:⁶⁰

- (96) a. A: La pub tenere per sé? B: No. Non può/*Non la può
 A: Can he keep it for himself? B: No. He can't.
 b. A: Lo riuscirai a tradurre? B: No. Non riuscirò/*Non lo riuscirò
 A: Will you manage to translate it? B: No. I will not manage.
 c. A: Gianni la vede? B: Si. Ha ricominciato/*L'ha ricominciata
 A: Does G. see her? B: Yes. He started again.
 d. A: Gianni la vede ancora? B: Sì. Continua/*La continua
 A: Is G. still seeing her? Yes. He continues.
 e. A: L'hai provato a riparare? B: Si. Ho provato/*L'ho provato
 A: Have you tried to repair it? B: Yes. I have tried.

Bošković (1994: 266f.) takes the deep anaphor status of the null complement of restructuring verbs to show that they must be able to assign an external theta role (because their subject cannot enter any antecedent-trace relation with a category inside the null complement).⁶¹ But this is not necessarily so. It depends on the precise analysis of the deep anaphor involved in NCA, which since Hankamer and Sag (1976) has been left rather vague. Deep anaphors are (beside pronominals) the *do it* pro-form, as well as our NCA. I take this to be no accident, and I suggest that the NCA following restructuring verbs is literally the null counterpart of *do it* (with agentive predicates and perhaps *be it* with stative predicates). Thus . . . *ma io non posso O* '... but I can't O' will have the structure . . . *ma [io_k non posso . . . [vp t_k [[v far] [DP te]]]]* '... but I can't do it', with the subject *io* outside of the pro-form *farlo* 'do it', an analysis also compatible with my previous conclusion that restructuring verbs all involve raising.⁶²

7.3. Cleft sentence contrasts

Recall the different behavior of the variant with transparency effects and the variant without under Cleft Sentence Formation ([7], repeated here as [97]):

- (97) a. E' proprio a parlarti di questi problemi che verrà.
 It's just to talk to-you about these problems that he'll come.
 b.*E' proprio a parlare di questi problemi che **ti** verrà

On the basis of the well-formedness of the Focus Movement and Topicalization cases that correspond to (97b) (cf. [8] earlier), we concluded that the contrast in (97) cannot be due to constituency reasons but probably to the selective character of Cleft Sentence Formation (which is less free than Focus Movement and Topicalization). We explore here what property of the construction may be responsible for such contrasts.

If restructuring verbs are always functional (whether transparency effects are present or not), the acceptability (or near acceptability) of the sentences on the left-hand side of (98a–e) suggests that the unacceptability of the sentences on the right-hand side of (98a–e) and (97b), cannot be attributed to the fact that some illicit constituent (say, a functional XP, rather than DP, PP, or CP) has been clefted:

- (98) a. E' tenerla per sé che **non può**/*E' tenere per sé che **non la pub**
It's to keep it for himself that he cannot
 b. ?E' a tradurlo che **non riuscirò**/*E' a tradurre che **non lo riuscir**
It's to translate it that I will not manage
 c. ?E' a vederla che **ha ricominciato**/*E' a vedere che **l'ha ricominciata**
It's to see her that he started again
 d. ?E' a vederla che **continuerò**/*E' a vedere che **la continuerb**
It's to see her that I will continue
 e. E' a ripararla che **ho provato**/*E' a riparare che **l'ho provata**
It's to repair it that I have tried

The generalization that underlies all such contrasts appears to be that Cleft Sentence Formation is possible just in case the stranded predicate supports NCA. Compare (97b) and (98a–e) with (99) and (100a–e), respectively:

- (99) A: Non credo che mi verrà a parlare di questo. B: Vedrai che verrà/*Vedrai che ti verrà
A: I don't think he will come to talk to me about this. B: You'll see that he will come.'
 (100) a. A: La pub tenere per sé B: **No. Non può**/***Non la pub**
A: Can he keep it for himself? B: No. He can't
 b. A: Lo riuscirai a tradurre? B: **No. Non riuscirò**/***Non lo riuscir**
A: Will you manage to translate it? B: No. I will not manage.
 c. A: Gianni la vede? B: **Sì. Ha ricominciato**/***L'ha ricominciata**
A: Does G. see her? B: Yes. He started again.
 d. A: Gianni la vede ancora? B: **Si. Continua**/***La continua**
A: Is G. still seeing her? Yes. He continues.
 e. A: L'hai provato a riparare? B: **Si. Ho provato**/***L'ho provato**
A: Have you tried to repair it? B: Yes. I have tried.

The generalization appears to be supported by the existence of a number of predicates that can neither be stranded under Cleft Sentence Formation (cf. [101]) nor support NCA (cf. [102]):

- (101) a.*E' essere ubriaco che sembrava (sembrare)
It is to be drunk that he seemed'

- b.*E' essergli caro che deve (epistemic *dovere*)
It's be dear to-her that he must
 c.*E' comprandolo che stava (progressive stare)
It's buying it that he was
 d.*E' per comprarla che sta (prospective stare per)
It's to buy it that he is about
 e.*E' per aiutarlo che finirà ('delayed aspect' *finire* per)
It's helping him that he will end up
- (102) a. A: Era ubriaco? B: ***Sembrava**.
A: Was he drunk? B: He seemed
 b. A: Pensi che gli sia caro? B: ***Sì, deve**
A: Do you think he is dear to him? B: Yes, he must
 c. A: Sta comprandolo? ***Sì, sta**
A: Is he buying it? B: Yes, he is.
 d. A: Sta forse per comprarlo? B: ***Sì, sta**
A: Is he about to buy it? B: Yes, he is.
 e. A: Finirà per accettarlo? B: ***Non finirà**
A: Will he end up accepting it? B: He won't end up

Note that the contrast between (98) and (100), on the one side, and (101) and (102), on the other, is not one between Control and Raising predicates. This is shown by the fact that certain unmistakably Raising predicates can be stranded under Cleft Sentence Formation (cf. [103]) and can be followed by NCA (cf. [104]):

- (103) a. (Forse è un imbroglio.) E' trattarsi di **un errore che non pub**
(Maybe it's a fraud.) It's be a mistake that it cannot
 b. E' piovere in abbondanza che **deve** (se si vuole che le piante sopravvivano)
It's rain abundantly that it must (if one wants the plants to survive)
- (104) a. A: Forse si tratta di un **errore**. B: No. **Non pub**
A: Maybe it's a mistake. B: No, it cannot
 b. A: Pioverà? B: **Deve!**, se si vuole che le piante sopravvivano
A: Will it rain? B: It must, if one wants the plants to survive.

Furthermore, even *sembrare*, when negated, appears to become strandable under Cleft Sentence Formation and capable of supporting NCA (thus strengthening the generalization about Clefts and NCA). Compare (101a) and (102a) with (105):

- (105) a. (Sembrava assonnato) ?E' essere ubriaco che **non sembrava**
(He seemed sleepy.) It's to be drunk that he didn't seem

- b. A: Era ubriaco? B: **Non sembrava**

A: Was he drunk? B: He didn't seem

If the generalization that connects the strandability of certain predicates under Cleft Sentence Formation and their ability to support NCA is correct, it becomes tempting to say that it derives from the fact that the empty category that follows the stranded predicate in Clefts is nothing other than an instance of NCA, whether the empty counterpart of do it or of an empty DP or PP (see note 62). More accurately, the empty counterpart of (do) it, as well as the empty DP or PP, is perhaps what allows the correct operator-variable structure accompanying the base-generated phrase in focus (in Chomsky's 1977: 44E analysis of Cleft Sentence Formation). Such cases as (106a–c) under this analysis would receive the derivation indicated in (107a–c):

- (106) a. E' tenerla per sé che non pub
It's to keep it for himself that he can't
- b. E' di ripararla che non ha ancora finito
It's to mend **it** that he has not yet finished
- c. E' a ripararla che ho provatolnon **sono** riuscito
It's to mend it that I tried/did not manage
- (107) a. DP è [_{CP} PRO tenerla per sé] 0_i che non pub FARE ('DO') t_i
(cf. E' tenerla per sé cib che non pub fare 'It's to keep it for himself what he can't do')
- b. DP è [_{CP} PRO di ripararla] 0_i che non ha ancora finito t_i
(cf. E' di ripararla cib che non ha ancora finito 'It's to mend it what he has not yet finished')
- c. DP è [_{CP} PRO a ripararla] 0_i che ho provatolnon **sono** riuscito [_{PP} P t_i]
(cf. A ripararla, non ci ho provatolnon ci sono riuscito 'to mend it, there I did not try/I did not manage to')

If something along these lines is correct, then, the contrast between (97a and b) and the like follows from the impossibility of construing the clitic with an appropriate trace in (97b). See (108b):

- (108) a. E' [_{CP} proprio a parlarti di questi problemi] 0_i che verrh [_{PP} P t_i]
(cf. A parlarti, non **ci** verrh 'To talk to you, he won't come to it/there')
- b. E' [_{CP} proprio a parlare di questi problemi] 0_i che **ti_K** verrh [_{PP} P t_i]

8. Some residual questions

8.1. Restructuring and null subjects

Chomsky's (1989b) analysis, in making both restructuring and null subjects depend on the strength of INFL, formally related Clitic Climbing to the null subject char-

acter of the language (a relation originally conjectured in Kayne 1980).⁶³ This analysis of restructuring instead establishes no necessary link between the two. It is thus important that subsequent work has shown the relation between Clitic Climbing and null subjects not to hold systematically. Haverkort (1993: 76f.) and Martins (1995: 229) both point out that in seventeenth-century French, Clitic Climbing was still a robust phenomenon, whereas null subjects had already been lost one century before. Haverkort (1993: 77) also discusses the case of Kru languages, which have Clitic Climbing but no null subjects, referring to Koopman (1984: 56) (See also Sportiche 1983 and Tellier 1987).

8.2. Restructuring and negation

It is generally assumed (see the references cited in Kayne 1989b: n. 14) that negation blocks Clitic Climbing (and other transparency effects). This in turn is often taken to depend on the minimality violation caused by the crossing of the head of NegP by another head—arguably the clitic itself, in the case of Clitic Climbing, and a covert INFL or T, in the case of Long Object Preposing (an instance of XP-movement). See, for example, Bok-Bennema and Kampers-Manhe (1994: 209).⁶⁴ Although in principle compatible with this approach (modulo the occurrence of head-movement within a single extended projection) such conclusion appears in need of further scrutiny. Alongside often-cited examples like (109), there are others in which Clitic Climbing appears to cross over negation. See (110) and Napoli (1981: 853):⁶⁵

- (109) a. *Gianni lo smise di non mangiare (pih)
'G. it stopped not eating it (any longer)'
- b. ??Lo sta per non amare (pib)
'(She) is about not to love him (any longer)'
- c. *?Lo tornò a non apprezzare (affatto)
'(He) once again did not appreciate him (at all)'
- d. *Gianni li vuole non vedere (Kayne 1989b: 243) (for me "?" if vorrebbe replaces *vuole*)
'G. them wants not to see'
- (110) a. Lo sembra non apprezzare affatto
'(He) it seems not to appreciate at all'
- b. Per stare meglio, la dovresti non rivedere pih
To feel better, her (you) should not see any longer
- c. La potrebbe anche non rivedere mai più
(He) her could even not see ever again
- d. Non ci si può non pensare⁶⁶
One cannot not think about it

The contrast between (110) and the much more marginal (109) could have to do (in a monoclausal analysis of restructuring, where restructuring verbs are always

functional) with the (canonical, or unmarked) locus of sentential negation, which in Italian is lower than the head hosting *sembrare* 'seem', plausibly *Mood_{evidential}* (hence [110a]), but higher than most aspectual heads (hence [109]), with scope elements like modals activating different positions of negation, (hence [11ob-dl]). See Cinque (1999: sect. 5.4) for evidence that sentential negation can occupy more than one position in the presence of scope-bearing elements.

8.3. Variation in the membership of restructuring verbs

The often-made observation that the membership in the class of restructuring verbs varies across languages—and, within one language, even among speakers—would seem to go against the UG approach taken here and argue for an essentially lexical approach. This impression, however, is quite misleading. Consider, first, variation across languages. The idea that restructuring verbs correspond to distinct functional heads of a universal functional hierarchy does not *per se* entail that all languages should have a verb (a free morpheme) that corresponds to each such head. It could well be that a language expresses a certain functional head via a bound morpheme (say, a suffix) or via no head category at all (but rather via an AdvP, arguably in the specifier of that head). Italian, for example, appears to instantiate the latter case when compared to Spanish (or French). Spanish has a restructuring usage of *acabar de* '(lit.) finish', which seems to correspond to the so-called Retrospective aspect (see Cinque 1999: 96–98 and references cited there):

- (111) *Lo acabo de ver*
 (Lit.) Him (I) finish to see 'I have just seen him.'

The same aspect is rendered in French by the verb *venir de* ([lit.] 'come from' [*Je viens de le voir* 'I have just seen him']). In Italian, however (and English, for that matter), the only way to render such an aspect is by using the AdvP *appena* 'just' (in one of its uses) combined with the verb in the perfect form: *L'ho appena visto* 'I have just seen him.' Such lexical variation among Spanish *acabar de*, French *venir de*, and Italian *O* (or rather *appena*) is of little significance from a UG point of view. It only obscures the fact that the three languages express one and the same functional head through different morphological means. Another case in point is the restructuring verb *faillir* in French ('to almost'), which renders the grammatical notion of "action narrowly averted," variously expressed in the languages of the world (see Kuteva 1998), and to which in Italian and English no restructuring verb corresponds but, instead, an AdvP (*quasi/almost*).

One could easily multiply such examples. The fact that Spanish *seguir* '(lit.: follow' (Zagona 1986: 236) and Catalan *procurar* '(lit.) procure' (Hernanz and Rigau 1984: 45) behave as restructuring verbs, whereas the corresponding verb: of Italian do not, is only of historical interest—of how a certain functional notion (*Aspect_{continuative}*, *Aspect_{conative}*) has come to be "grammaticalized." The same is true of the restructuring verb *cuider* '(lit.) believe' in Middle French, also used with the (prospective) aspectual meaning of 'be about to' (Martineau 1991: 242f.), or *o prendere* '(Lit.) catch' in colloquial Italian, which is also a restructuring verb with

the meaning of 'start (suddenly)': *lo prese ad insultare* 'him (he) started (lit: "caught") to insult.' Again, such cases obscure the fact that the same set of functional notions across languages comes to be expressed via different lexical means.

Apparently more serious for a UG approach is the fact that the same verb, with essentially the same meaning, is a restructuring verb in one language but not in another or, within one and the same language, for some speakers but not others.

One such case would appear to be 'seem', which is taken not to be a restructuring verb in Spanish (Zagona 1986: 232) or in Portuguese (Quicoli 1976: 215, Pizzini 1981: 427, n. 24) but is a restructuring verb, at least for many speakers, in Italian (see note 27 earlier). Even if true, this fact is not necessarily troublesome. It could mean that in Spanish and Portuguese *parecer* has only the lexical usage seen in section 6.4 earlier (alternatively, it could be that the speakers Zagona and Pizzini based their conclusions on, as opposed to other speakers, are like the Italian speakers who do not have *sembrare* as a restructuring verb).

Much of the cross-linguistic and interspeaker variation involves verbs that belong to certain classes (typical is the class of "desideratives"), which are related to particular functional heads without being the prototypical, or basic, exponent of the class (*volere* 'want'). Thus, many accept *desiderare* 'desire', *amare* 'love', *intendere* 'intend', and *preferire* 'prefer' as restructuring verbs, whereas others find them marginal or outright impossible.⁶⁷ These verbs appear to add specific nuances of meaning to the basic sense of 'volition', hence complying to a lesser degree with the semantics of the corresponding functional head (*ModP_{volition}*): a probable cause of their oscillating status. If so, such variation is not incompatible with the general UG approach taken here.

8.4. The prepositional complementizers

The prepositions (di 'of' and a 'to'; less commonly *per* 'for' and *da* 'from': *lo sto per fare* 'it [I] am about to do'; *lo finì per accettare* 'it [he] ended up accepting'; *lo avrà da riconsegnare entro domani* 'it [he] will have to give back by tomorrow') that introduce the nonfinite complement of many restructuring verbs are generally taken to be complementizers (one of the lowest, in the split CP field of Rizzi 1997). In this analysis, in which restructuring verbs are always functional, they must be reinterpreted as introducers of smaller portions of the extended projection of the lexical VP, namely, as introducers of the complement of one of the functional heads that make up that extended projection: . . . F . . . [PP P [INFP Inf [FP F . . . [VP]]]]. Much as Kayne's (1993) participial projection (a nominal type of projection) is not directly the complement of (auxiliary) BE but is contained in a PP/DP-projection, so the infinitival complement of many restructuring verbs (also a nominal type of projection) is contained in a PP lexicalized by a or di (or *per* and *da*).⁶⁸

Postscript

Cardualetti and Shlonsky (2004) have recently argued that restructuring verbs should be assumed to be either functional or lexical, as in my earlier analysis. The main

motivation for assuming that restructuring verbs also have a lexical usage is their conjecture that clitics can occupy only two positions in the clause. For them, this implies that whenever a clitic appears on the second of two restructuring verbs (rather than on the first, or on the lexical verb) it must be the case that the first restructuring verb is used as a lexical verb, in a separate (higher) CP. Though attractive, the conjecture does not seem to me to be supported by the facts. So, for example, their **Sarei voluto poter ci andare con Maria* '(I) would have wanted (to) be able (to) go there with Maria' (with the clitic in an intermediate position) sounds more acceptable than their *?Sarei voluto poter andarci con Maria*. Moreover, there are perfectly fine examples in which the first restructuring verb is clearly not lexical (as diagnosed by the presence of another transparency effect—*Loro* Climbing), and yet the clitic does not appear attached to it but rather to the second restructuring verb. See: *Avrebbe loro voluto poterlo consegnare prima* 'He would have wanted to be able to give it to them earlier'.

Wurmbrand (2001, 2003, 2004) also claims that treating restructuring predicates as functional heads, as in Cinque (2000, 2004c [chapter 1]) (what she calls functional restructuring), is in German appropriate only for a subset of restructuring predicates, not for all, and that a notion of 'lexical restructuring' is needed in addition. According to this proposal, a restructuring verb, depending on the class to which it belongs, may be merged either as a functional head (of the extended projection of the infinitival VP) or as a lexical V taking a bare (infinitival) VP as its complement. The arguments advanced to show the need for such a distinction, however, do not seem to me entirely convincing, as they fail to properly distinguish purely functional (restructuring) verbs, semifunctional verbs,⁶⁹ hidden causative verbs, in the sense of Kayne (1989b) (see chapter 1, sect. 4.2), and verbs that have a true lexical usage in addition to a functional one (like those discussed in chapter 1, §6.4). Also see the reservations about such a distinction in German contained in Reis and Sternefeld (2004).

Notes

I thank Paola Benincà, Marcel den Dikken, Richard Kayne, Idan Landau, and Elisabeth Pearce for their comments on an earlier draft of this chapter.

1. Besides structure simplification approaches like Rizzi's (1976a, b, 1978) and, in a different framework, Aissen and Perlmutter's (1976, 1983) (see also Rivas 1977 and Luján 1978), one may mention two other major families of analyses: the "double (Sentence/VP) subcategorization" analyses of Strozer (1976, 1981), Fresina (1981, 1982, 1997), Picallo (1985 1990), Rochette (1988, 1990), Moore (1989, 1990, 1996), Pearce (1990), Rosen (1990a, b) Bošković (1994), Wurmbrand (1998, 2001) and so on, as well as the (embedded)-I-to-(matrix-)I biclausal analysis of Kayne (1989b), adopted in different forms by Martineau (1991) Rivero (1991), Terzi (1992, 1994, 1996), Roberts (1993, 1997), Bok-Bennema and Kampers-Manhe (1994), Bonneau and Zushi (1994), and Rooryck (1994). Other analyses that have been proposed for the restructuring phenomenon are the biclausal analyses of Burzio (1981 1986), Baker (1988), Haverkort (1990, 1993), Sabel (1995a, b, 1996, 1999) and Lightfoot and Rodrigues (2003) in terms of VP raising to the left of the embedded subject; and the parallel structure analyses of Zubizarreta (1982), Manzini (1983), Haegeman and Riemsdijk (1984) Goodall (1987), and Di Sciullo and Williams (1987: 97ff.). Restructuring has also received treat

ments in more recent minimalist terms (Watanabe 1993, Martins 1995), as well as in LFG (Andersen 1987), in Tree-adjoining Grammar (Bleam 1994, Kulick 1997), in HPSG (Miller 1992, Monachesi 1993, 1995, 1998, Kupić 1999), and in Categorial Grammar (Nishida 1991).

2. Besides Romance, transparency effects have been reported to exist (with roughly the same verbs) in Germanic (see Evers 1975, Haider 1986, 1987, 1992, Grewendorf 1987, Fanselow 1989, Bayer and Kornfilt 1990, Koopman and Szabolcsi 2000, etc.); in Slavic (George and Toman 1976: 241ff., Dyła 1983, Spencer 1991: 357f., Progovac 1993, Sabel 1995a, b, 1996, 1999, Veselovská 1995: 377; Przeźiórkowski and Kupić 1997, Stjepanović 1998, 2001, Medová 2000; etc.); in the African languages Abe (Tellier 1987), Bete (Sportiche 1983, Haverkort 1990, 1993), and Édó (Stewart 1999); in Eskimo (Baker 1988: 204ff.); in Basque (Ortiz de Urbina 1989: 26ff.); in Turkish (Kornfilt 1996); in Japanese (Miyagawa 1986, Nishiguchi 1993, Zushi 1995, Wurmbrand 1998); in Malayalam (Baker 1988: 204ff.); in Chamorro (Chung 1988); in Tagalog (Kroeger 1993: 167–207); in Hungarian (Choe 1988, 1989, Farkas and Sadock 1989, Koopman and Szabolcsi 2000, Csirmaz 2003); in Choctaw (Broadwell and Martin 1993: 5ff.); in Ancash Quechua (Cole 1984); in Chukchee (Spencer 1991: 361, Baker 1999: 369); in Hindi (Mahajan 1989: 233ff., Zushi 1995); in Kashmiri (Wali and Koul 1994: 988), among many other languages. The long-distance agreement of Godoberi (Caucasian: Haspelmath 1999) has all the characteristics of restructuring, too. For the claim that French also displays restructuring effects, see Taraldsen (1983: 299f.), Kayne (1989b), Bok-Bennema and Kampers-Manhe (1994), and Cinque (2002b). Haïk (1985: 76, n. 49), Goodall (1991), Hornstein (1995: 77f., 85f.), Roberts (1997), and Kayne (1998: n. 36) claim that restructuring effects are even detectable in English.

3. "XP>YP" should be interpreted as "YP is the complement of the head of XP."

4. In many languages, "andative" ("itative/ventive") or "distantive" morphemes are attested that can be glossed in English as 'go/come and'. For example the derivational suffix -oy-, of Fula/Fulfulde (West Africa) has exactly this function (see Fagerli 1994: 53):

- (i) Min mabb-it-ir-an-ilaw-oy-i mo ngal sembe
we close-REVERS-INSTN-BENEF-CELER-DISTANTIVE-PAST him it strength
'We went and opened it for him with strength quickly.'

Mishmi (Tibeto-Burman) verbs can likewise be "inflected for movement" (Devi Prasada Sastry 1984: 156). Analogous "coming and going aspectual affixes" are attested in a number of Australian languages (see Evans 1995: 311 and references cited there). Myhill (1988: 357) reports Georgian, Maricopa, Tarascan, Kiowa, and Nahuatl as having grammatical morphemes that express the meaning of "go" and "come." On the special syntactic properties of "come" and "go" verbs in English and in Sicilian, see Jaeggli and Hyams (1993) and Cardinaletti and Giusti (2001). In Cinque (1999: sect. 4.28), the existence of other aspectual heads is mentioned for which no order is provided (see, now, Cinque 2001, chapter 3 of this volume). Among these, particularly relevant here are *conative* aspect ('try'), *frustrative* or *'success'* aspect ('[not] manage'), *inceptive* aspect ('begin'), and *predispositional* aspect ('tend').

5. The approach taken here differs from most analyses of restructuring, which assume the phenomenon to be lexically governed and optional, but also from such analyses as Wurmbrand's (1998), which share with ours the idea that it is universally based but take it to depend on a cluster of different semantic and syntactic properties of the restructuring verbs (for her, the semantic properties [-tense] and [-subject] and the syntactic property [-structural case] of their complement).

6. Small capital letters indicate focused constituents. Incidentally, the grammaticality of (8) shows that the ungrammaticality of (7b) cannot be due to the fact that the clitic fails to c-command its trace (contra Zubizarreta 1980: 148ff.). For the same conclusion, see Burzio (1981: chap. 6, n. 2) and Fresina (1981: chap. 2, n. 2).

7. Similar cases are noted in Napoli (1981: 864), who concludes from that (incorrectly, given [12]) that the past participle forms a constituent with the auxiliary rather than with its complement. That the ungrammaticality of (7b) should be seen as related to that of sentences like (10) is also suggested in Fresina (1981: 119, n. 62; 1982: 289) and Moore (1996: 48f).

8. Rizzi (1976b: n. 8, 1978, 1982b: n. 14) notes that, under special conditions, a bare infinitive can sometimes be clefted in the presence of Clitic Climbing. Such conditions appear to crucially involve a contrastive phrase (*E' ringraziare che lo dovremmo, *[non rimproverare]* 'It's thank that we him should, not scold'), a context that also improves the clefting of an infinitive plus its complement [*?E' ringraziare per cib che ha fatto che lo dovremmo, *[non per cib che non ha fatto*] 'It's thank for what he did that we him should, not for what he didn't do'). The cases mentioned in Napoli (1981: n. 7) also involve either an explicit or an implicit, contrastive phrase. These exceptions remain to be understood. The contrast in (i), noted in Rizzi (1982a) and attributed by him to the Empty Category Principle (ECP), may also have to do with the selective character of Cleft Sentence Formation:

- (i) a. *E' avere più fortuna che vorrei* 'It is to have more luck that I would like'
- b. **E' avere più fortuna che sembra* 'It is to have more luck that he seems'

The fact that no such contrast is found under Focus Movement or Topicalization would be hard to understand in terms of ECP:

- (ii) a. *AVERE PIÙ FORTUNA, sembra!* 'To have more luck (focus), he seems'
- b. *Avere pih fortuna di noi, non sembra* 'To have more luck than us, he doesn't seem'

I thank Richard Kayne for pointing out this implication.

9. On the basis of examples such as (i), it has sometimes been claimed that nonconstituents can also be Right Node Raised and hence that the phenomenon is not a reliable diagnostic for constituency (Abbot 1976):

- (i) Mary baked and George frosted twenty cakes in less than one hour.

Note, however, that in Larson's (1988) and Kayne's (1994) analyses, even such Right Node Raised sequences qualify as constituents. In Kayne's (1994) reinterpretation of Right Node Raising as leftward deletion (see later in the text), this question loses relevance.

10. The ungrammaticality of (20) is noted by Rizzi himself (1978: 126, no. 16), who analyzes it as derived by leftward movement of the adverbial PP into the auxiliary structure.

Another potential derivation of (19b) does not derive it from (18a) via Heavy NP Shift (or its leftward analogue). In (18a) the PP *a Firenze* either modifies just the embedded infinitive (and is interpreted as a locative) or both *venire* and the embedded infinitive (in which case it is interpreted as directional). In (18b), instead, the PP *a Firenze* can only be interpreted as a directional complement of *venire*, used as a lexical verb (see section 6.4), with *ad esporti la mia idea* an adjunct purpose clause rather than a CP complement. The adjunct status of *ad esporti la mia idea* in (18b) is shown by the fact that no complement or adjunct can be extracted from it (which would be unexpected if it were a complement CP). Compare (i) with (ii), which nothing prevents from containing restructuring *venire* (and a complement CP following it):

- (i) a. **A chi è venuto a Firenze ad esporre la sua idea?* 'Whom did he come to F. to explain his idea?'
- b. **Come_k è venuto a Firenze ad esporti la sua idea t_k?* (Molto chiaramente)
'How has he come to Florence to explain his idea to you? (Very clearly)'

- (ii) a. *A chi è venuto ad esporre la sua idea?* 'Whom did he come to explain his idea?'
- b. *Come ti è venuto ad esporre la sua idea?* (Molto chiaramente) 'How has he come to explain his idea to you? (Very clearly)'

If so, Clitic Climbing out of the adjunct is (a fortiori) impossible. Contrasts such as those between (iiiia and b), noted in Fresina (1981: 285) also cast doubt on the presence of a systematic relation between (18a) and (b):

- (iii) a. *Vengo da te a riportarti i libri* 'I come by you to bring back to you the books'
- b. *?*Vengo a riportarti i libri da te* 'I come to bring back the books to you by you'

Benucci (1990: 19) notes the ungrammaticality in older stages of French of the equivalent of (19b): *Un de ces jours on me viendra chez moi couper la gorge* (Molière, *L'avare* 151). 'One of these days, they will come to my place to cut my throat.' We conjecture that scrambling between auxiliary and past participle was also possible in the French of that period.

11. Rizzi (1976b, 1978) also claims that the infinitive and its complement do not pied-pipe under wh-movement when transparency effects obtain, giving contrasts such as (i):

- (i) a. *Questi argomenti, a parlarti dei quali verrà al più presto . . .*
'These topics, to talk to-you about which I will come soon . . .'
- b. *?*Questi argomenti, a parlare dei quali ti verrà al più presto . . .*
'These topics, to talk about which I will to-you come soon . . .'

First, although there is some contrast between (ia) and (b), there are cases just like (ib) that sound quite acceptable. See (ii):

- (ii) *Maria, presentare alla quale non lo vorrei . . .*
'M., to introduce to whom I him wouldn't like . . .'

Second, there are auxiliary + past participle cases where a clitic cannot be easily left behind under pied-piping:

- (iii) *?Il conto, trasferita nel quale la somma non ti verrà . . .*
'The account, transferred to which the sum to-you will not be . . .'
- (vs. *Il conto, trasferita nel quale la somma non verrà . . .*)

So it seems that the phenomenon needs to be better understood before any conclusions can be drawn from it.

12. Many adverbs can occur more than once in the same simple clause (e.g., *Gianni spesso vede le stesse persone spesso* 'G. often sees the same persons often'; *Gianni rapidamente alzò il braccio rapidamente* 'G. quickly lifted his arm quickly'; etc.—see Cinque 1999: chap. 1). These, of course, would not discriminate between the two variants, with and without transparency effects.

13. See section 6.3 for (apparent) lexical usages of *volere*. Another potential argument for monoclausality that involves adverbial modification is suggested in Napoli (1981: 873ff.). In the absence of transparency effects, certain adverbs appear capable of modifying either the matrix or the embedded verb. *Voglio di nuovo imprigionarli* 'I want again to imprison them' is compatible with a context where I never imprisoned them before though I had the intention (here *di nuovo* 'again' modifies just *voglio* 'I want'), but it is also compatible with a context where I imprisoned them before (though I may not have wanted to) and now I want to send them back to prison (*di nuovo* in this case modifies the embedded verb). Napoli claims that when Clitic Climbing obtains (*Li voglio di nuovo imprigionare* 'them I want again to imprison') *di nuovo*

'again' can only modify the two verbs together (as in a simple sentence with an auxiliary and a nonfinite form). Although I tend to share this intuition, the judgment is not very sharp, and speakers disagree. For critical discussion of this argument, see Wurmbrand (1998: 214ff.).

14. This restructuring verb appears to correspond to the so-called Predispositional aspect (head) found in American Sign Language (Klima and Bellugi 1979: 253ff) and to the "Tendency" aspect suffix found in Southeastern Tepehuan (Willet 1991).

15. For the apparent case of speakers also accepting (27b), see the discussion in Cinque (2001: n. 4).

16. The adverbs that correspond to **ASP_{teminative}** and **ASP_{continuative}** are nonpih 'no longer' and ancora 'still'. As expected, their relative order is also fixed and matches that found with the corresponding functional verbs (cf. Cinque 1999: 95):

- (i) a. ?Spero che tu non sia **piii ancora** arrabbiato con me!
I hope that you are no longer still angry at me.'

- b.*Spero che tu non sia **ancora più** arrabbiato con me!
I hope that you are still no longer angry at me.'

([ib] is grammatical in the irrelevant reading in which ancora 'even' directly modifies *più* 'more' 'even more angry at me').

17. The order in (31) implies by transitivity a number of other relative orders among restructuring verbs; for example, *solere* should precede *volere*, smettere, and continuare; *tendere* should precede smettere and continuare; and so on. These expectations appear to be confirmed quite generally. Here I give only two relevant examples:

- (i) a. Certe cose si sogliono voler fare subito 'Certain things si use to want to do immediately
b.*Certe cose si vogliono soler fare subito 'Certain things si want to use to do immediately'
- (ii) a. La tenderebbe a continuare a vedere tutti i giorni '(He) her would tend to continue to see every day'
b.*La continuerebbe a tendere a vedere tutti i giorni '(He) her would continue to tend to see every day'

18. Another potential argument for monoclausality would seem to come from Rizzi' (1976b: 39, 1978: 155f.) observation that transparency phenomena are blocked by an **Aux_{Vparticiple} V_{participle}** sequence. See, for example:

- (i) a. Avrei voluto avervi conosciute prima
'I would have liked to have met you earlier.'
b.*Vi avrei volute aver conosciute prima
'I you would have liked to have met earlier'

The marginality of (ib) would seem to follow (in contrast to *Gli avrei voluto esser presentata prima* 'To-him I would have liked to be introduced earlier', where the two **Aux_{Vparticiple}** sequences express different heads) from the fact that in a single clause only one Perfect aspect head is available. Things, however, are more complex. Fresina (1981: 309, 315, 199i 111, 115) notes that some cases similar to (ib) are in fact possible:

- (ii) a. Maria l'avrebbe dovuta aver letta
'M. it would have had to have read'
b. La somma prestata da Mario gli sarebbe potuta esser già stata resa se la contabilità fosse stata buona.

'The sum loaned by M. to-him could have already been given back if the accounting had been fine.'

Boysen (1977: 289) reports another such case with Auxiliary Change rather than Clitic Climbing: *Un'ora più tardi* sarebbe dovuto *esservi arrivato*, ma nessuno lo vide (Silone) 'One hour later, he should have had to be there, but nobody saw him.' This may suggest that (active) **Aux_{Vparticiple}** can actually correspond to two distinct functional heads (**Asp_{perfect}** and **T_{anterior}**). See Cinque (1999, 74f) for some discussion, but more work is needed on this question.

19. This may suggest a reason for the often-made observation that the presence of negation is crucial for the well-formedness of (33). On the special status of the locution "know how," see also Chomsky (1973: n. 26). The same limitations appear to hold for the analogous cases of Clitic Climbing out of wh-phrases in Serbo-Croatian (cf [ia] and [b], Nedzad Leko and Ljiljana Progovac, personal communication) and Slovenian (Golden 2003, fr.12):

- (i) a. ?Ja **mu** to ne bih znao kako da objasnim
I him it not would know how to explain 'I wouldn't know how to explain it to him.'
b.*Ja sam ih pitala (Milana) kako da predstavim
I have them asked (M.) how to introduce 'I asked (M.) how to introduce them.'

20. A similar assumption (a single CP layer over the functional XP complement of the deontic modal) might be appropriate for Spanish *Los tiene que ver* '(He) them has to see' if *que* is a complementizer. Its alternation with *de* in Portuguese (Tenho que *vê-lo*, Tenho de *vê-lo* 'I have to see him'—Martins 1995: 226) would make it appear closer to prepositional "complementizers," which may not be instances of clausal CP (see section 8.4).

21. *Ku* can (but need not) be missing when the matrix and embedded subjects are coreferential (Terzi 1992, 1994, 1996). When *ku* is present, no Clitic Climbing is possible, as shown by (36)b (in contrast to what happens in Serbo-Croatian; see the text that follows. As Iliyana Krapova observed (personal communication) the same appears to be true of Bulgarian. In Southern dialects, where the subjunctive particle *da* may drop (after modals), Clitic Climbing is attested (see [20b] of Sobolev (2004, 751). In other dialects of Bulgarian and in the standard, where the particle *da* cannot drop, no Clitic Climbing is found.

22. See Terzi (1996: n. 15): "The verb of the embedded clause can only occur in the present Tense." Furthermore, as Terzi (1994 116f.) herself notes, "Salentino subjunctive subordinates appear to demonstrate fewer Tense dependences than their standard Romance counterparts—i.e., they are not subject to the usual Tense dependencies of Romance subjunctives."

23. Another transparency phenomenon, which at first sight appears to be able (for many, though not all, speakers) to cross the **finite** (subjunctive) CP complement of restructuring verbs, is *L-tous* in French. See (i), from Kayne (1977: para. 1.11), and (ii):

- (i) a. Il faut toutes qu'elles s'en aillent 'it is necessary that they all go'
b. Il faut tous qu'on se tire 'it is necessary that we all shoot'
- (ii) a. Il faut tout qu'on lui dise 'it is necessary that we tell him everything'
b. Il veut tout qu'on lui fasse 'he wants that we make him everything'

Such cases have quite peculiar restrictions (Kayne 1977: 69f.), which led Déprez (1997: n. 18) to conclude that "they do not seriously threaten the generalization that *tous à gauche* is essentially clause-bounded." Cinque (2002b), in fact, argues that in French Quantifier and Adverb Climbing (as opposed to En and y Climbing and Long Movement in easy-to-please constructions) are not dependent on restructuring. It remains to be seen whether the preverb climbing out of the apparently finite CP complements of *kell* 'must' and *szeretne* 'would like'

in Hungarian noted in Csirmaz (2003, 161) is amenable to the Salentino and Serbo-Croatian case discussed in the text or to the case of French subjunctives alluded to in this note and discussed in chapter 4.

24. This recalls Fresina's (1981, 1982, 1997), Napoli's (1981), and Rochette's (1988) idea that in their restructuring use these verbs act much like auxiliaries (see also Ledgeway 2000: chap. 5). It is also reminiscent of Rosen's (1990a, b) notion of "light verb" (without the need for an unspecified argument structure and a process of argument structure "merger" with the arguments and event specification of the embedded verb). See also Emonds's (1999) idea that verbs in restructuring contexts lack semantic features.

25. See section 4.2 for a discussion of the few apparent cases of object control restructuring verbs, which Kayne conjectures (correctly, I will argue) to be hidden causatives.

26. This would lead either to contraindexing or, with identical indexes, to a violation of principle B or C, depending on whether the object controller is a pronominal or an R-expression, respectively:

- (i) a. *Gianni_{i,k} lo INFL_k ha costretto lui_k a PRO, t_k fare
G. it has forced him to do
- b. *Gianni_i lo ha costretto il poveretto_i a fare
G. it has forced the poor guy to do

The only permissible case would be one with an anaphor as object controller. But in a structure like (ii), no Clitic Climbing is possible, either (cf. [iii]):

- (ii) Gianni ha costretto se stesso a farlo
- (iii) *Gianni lo ha costretto se stesso a fare
G. has forced himself to do it.

It could be claimed that the latter is too restricted a case to warrant a restructuring use of *costringere* 'force', but this is not obvious given the restricted restructuring use of *sembrare* 'seem' documented in the text.

27. *Sembrare* allows Clitic Climbing for Radford's (1976), Napoli's (1981: 883), and Ledgeway's (2000: 299, n. 15) informants, as well as for Burzio (1986: 354), but not for Rizzi (1976a: 173 and n. 12) or Fresina (1981: 49). My own judgment is that it allows it selectively, that is, with third-person clitics, as in (41a) or in *Non gli, sembra essere fedele t*, 'not to him (she) seems to be faithful', but not with first- and second-person Clitics: **Non mi/ti, sembra essere fedele t*, 'not to me/you (she) seems to be faithful' or *si* (impersonal or other): **Quelle case si sembrano poter costruire con poche spese* 'those houses *si* seem to be able to build inexpensively' (Rizzi 1976a: 173). *Sembrare* followed by a small clause appears to pattern in the same way, suggesting that it, too, is a case of restructuring (cf. Stowell 1991): *Non gli_i sembra fedele t_i* 'he to-him does not seem faithful' vs. **Non mi/ti_i, sembra fedele t_i*, 'he to me/you does not seem faithful.' The contrast between *Ne sembravate contenti* '(you) of-it seemed glad' and **Giorgio gliene sembrava contento* 'G. to-him-of-it seemed glad,' as well as **Giorgio ne sembrava a tutti contento* 'G. of-it seemed to everybody glad', with an overt dative complement of *sembrare* (noted in Cinque 1981: 1982: 257), in fact exactly parallels that between (41a) and (b). Other restructuring verbs that apparently allow third-person, but not first- and second-person clitics and *si*, are (for me) the following: *preferire* (?*Lo preferi fare Gianni* 'G. preferred doing it' vs. **Se ne preferì andare* '[He] preferred to go away'), *scordare* 'forget' [*Lo scordò di fare* '[He] forgot to do it' vs. **Mi scordai di presentare all'esame* 'I forgot to appear at the exam'), *stentare* 'to be hardly able' (*Lo stento a credere* 'I am hardly able to believe it[?him]' vs. **Lui ci stenta a credere* 'He is hardly able to believe us'), *sperare* 'hope' (?*Lo spera di poter fare anche lui* '[He] hopes

to be able to do it himself' vs. **Ce la spera di fare anche lui* 'He hopes to make it himself'), and so on. The phenomenology in question could have to do with the kind of empty category that third-person, on the one hand, and first- and second-person clitics and *si*, on the other hand, co-occur with (pro or trace, respectively, as proposed in Kayne 1999a).

28. The contrast in (41) is noted in Radford (1976). See also Napoli (1981: 875).

29. Raising *menacer* 'threaten' and *promettre* 'promise' (roughly '[unpleasantly] appear to' and '[pleasantly] appear to') behave analogously, as noted in Pollock (1978: 84f.):

- (i) a. Pierre avait tous menacé (*Marie) de les importer
P. had threatened (M.) to take them all away.
- b. Pierre avait tout promis (*à Marie) de lire
P. had promised (M.) to read everything.

Likewise, Wurmbrand (1998: 306) notes that Scrambling is only possible with *versprechen* 'promise' when it has no dative argument. Sabel's (1999) observation that Scrambling out of the infinitival complement of *versprechen* is possible even in the presence of a dative can perhaps be reconciled with Wurmbrand's if Sabel's is a control usage of *versprechen* that falls in the same category as that of the hidden causatives discussed in section 4.2.

30. Fresina (1981: 164ff.) also notes that *andare* 'go' and *venire* 'come' cease to allow Clitic Climbing when they take an internal directional complement:

- (i) a. Li andiamo (*alla stazione) a ricevere '(We) them go (to the station) to receive'
- b. Lo venne (*a casa) a prendere '(He) it came (home) to fetch'

Again, this is expected if functional verbs cannot take arguments. For evidence that the infinitival constituent that follows *andare* and *venire* is an adjunct clause when these take a directional complement, see note 10 earlier. A potential problem is constituted by the possibility of Clitic Climbing out of the infinitival complement of certain impersonal verbs that take a dative argument in certain varieties of Catalan, noted in Rigau (2000: sect. 6):

- (ii) No vos hi cal anar 'Not to-you (pl.) there is necessary to go'

Such cases would cease to be problematic if, as Richard Kayne pointed out to me, the dative DP were in fact the subject of the lexical V, raising with *cal* and similar verbs to a dative [rather than nominative] subject position.

31. For this reason I do not share Burzio's (1981: sect. 6.2.1, 1986: 333f.; see also Schrotten 1986) conclusion that "matrix ergative verbs do not 'lose' their direct object when restructuring applies" (Burzio 1981: 555). His argument, based on small clause relatives (in which only structural direct objects can be relativized), actually gives contradictory results. Whereas first- and second-person clitics and *si* are (marginally) possible, (cf. [i], [accusative]) third-person clitics are to my ear ungrammatical (cf. [iiia] and [iiib]), which contrast with the potentially nonrestricting [iiib] and [iiic], possible because the relative head can originate in the structural object position of the motion verb):

- (i) a. ?Le uniche persone venutevi a salutare . . . 'the only persons come to greet you . . .'
- b. ?[G.C.]Un vicino venutomi a chiedere un favore . . . (Burzio 1986: 334)
'A neighbor come to ask me a favor . . .'
- c. ?L'unico ragazzo venutosi a presentare . . . 'the only boy *si* come to introduce himself . . .'
- (ii) a. *L'unico ragazzo andatolo a prendere . . . 'the only boy gone to fetch it . . .'
- b. ??L'unico ragazzo andato a prenderlo . . . 'the only boy gone to fetch it . . .'

- (iii) a. *Le sole persone venutelo a raccogliere... 'the only persons come to gather it...'
 b. Le sole persone venute a raccoglierlo... 'the only persons come to gather-it...'

This divide in clitic types is reminiscent of that found with present participles in Italian, which allow for first- and second-person clitics and *si* but disallow (accusative) third-person clitics (see Benincà and Cinque 1991: 609; see also note 27 earlier). As for Burzio's argument based on auxiliary selection, which is *essere* 'be' even in the presence of Clitic Climbing (*Lo è venuto a prendere* '[He] is come to fetch it'), we do not have a clear answer. It may prove to depend on the proper analysis of Auxiliary Change (see the discussion in Kayne 1993: n. 50), or it may depend on the semifunctional character of motion verbs, which, like causatives (see Cinque 2003: n.18), contribute an argument even if entering a specific slot of the functional hierarchy. The different interpretation of the PP *da Torino* 'from Turin' in (iva) and (ivb), indeed shows that it must be *venire* 'come' that contributes a source argument to *venire a operare* 'come to operate':

- (iv) a. Lo verranno a operare da Torino '(They) will come to operate him from Turin'
 b. %Lo opereranno da Torino '(They) will operate him from Turin'

On the notion of semifunctional predicates, see also Cardinaletti and Shlonsky (2000) (some of whose judgments and conclusions, however, we do not share), Cardinaletti and Giusti (2001), and Wurmbrand (2001).

32. The account sketched in Kayne (1989b: n. 52) of the similar contrast between "*Lo è andato Gianni apredere* 'It has gone G. to fetch' and *Lo è andato apredere Gianni* 'It has gone to fetch G.' (see Burzio 1986: 333 and 386, n. 11) is incompatible with the antisymmetric framework because it crucially rests on rightward extraposition of *a prendere* around *Gianni*.

33. As a matter of fact, there is evidence that when *venire* 'come' has an inverted subject (as in [43a]), the infinitival clause is an adjunct; an even stronger reason for why Clitic Climbing fails (see note 10 earlier). This is shown by the impossibility of extracting an argument PP from it: **A chi ne sono venuti molti a portare un regalo?* 'To whom have many of them come to bring a present?' Acceptable sentences are *Molti ti sono venuti a portare un regalo; (?)Tisono venuti aportare un regalo molti* 'Many have come to bring you a present,' for which the absence of *ne* 'of-them' makes it possible for *molti* to originate not as the internal subject of unaccusative *venire* 'come', but as the external subject of the transitive *portare* 'bring', with *venire* functional. *Ne* is licit when the embedded verb is unaccusative, which is again compatible with *venire* being a complementless functional verb. Compare *Te ne sono venuti a morire vicino molti* 'Many of them have come to die near you.' The same reason may account for the nonrestructuring nature of *mettersi a* 'start' (vs. *cominciare a*; see (i). and other verbs with ('inherent') *si*, if this *si* betrays a necessarily unaccusative origin of the subject, (namely) its generation in an internal argument position:

- (i) a. Maria si mise a leggerlo
 b.*Maria lo si mise a leggere
 'Maria started reading it.'

Ledgeway (1998: 531), however, lists *metterse a* among the restructuring verbs of Neapolitan.

34. The restructuring nature of verbs of this kind is also assumed in the literature on Germanic. See, for example, Wurmbrand (1998: 39) and Sabel (1999).

35. This is a case of indirect object control, as are the Spanish cases discussed in the text. As far as I can tell, Italian (the same is true for other languages: Bordelais 1988: 73. Sabel 1999) allows Clitic Climbing with no *direct* object control verb (see, e.g., **Me lo*

invitarono/aiutarono a leggere 'They invited/helped me to read it'; **Me lo costrinsero/obbligarono/forzarono a leggere* 'They forced me to read it'; **Me lo convinsero/persuasero a leggere* 'They convinced me to read it'). An exception appears to be *mandare* 'send', as in *Me lo mandarono apredere* 'They sent to get it for me.' This, however, is not related to *Mi mandarono a prenderlo* 'They sent me (ACC) to get it' (via Climbing of *lo*), for *mi* must be dative (cf. *Glielo mandarono apredere* 'They sent to get it for him'). Rather, it seems related to *Mandarono a prendermelo* 'They sent (scilicet: someone) to get it for me,' though climbing is impossible if the implicit object of *mandare* ('someone') is present: **Me lo mandarono qualcuno a prendere* 'They sent someone to get it for me.' *Mandare* 'send' appears to be the causative of 'go' but can also render 'cause to go (by saying)': *Mi ha mandato al diavolo* '(He) sent me to hell (lit. to the devil)' can be used to report someone saying to the speaker *vai al diavolo!* 'go to hell.'

36. In a decomposition analysis à la Hale and Keyser (1993), *allow*, *order*, and *teach*, for example, would closely correspond to something like 'cause to be able to', 'cause to do (by saying)' (see the previous note), and 'cause to learn' (or 'cause to come to know'), respectively.

37. This is, of course, orthogonal to the question of whether (obligatory) control reduces, or not, to movement (local raising from and into a theta position), as in O'Neil (1995, 1997), Hornstein (1999), Manzini and Roussou (2000) (see also Bošković 1994). For critical discussion of this possibility, however, see Landau (1999, 2000). The evidence concerning control restructuring verbs argues for movement into a nontheta position, as in classical raising configurations.

38. The possibility found in (56) to (59), though, is apparently restricted to unaccusative verbs whose subject can receive a volitional interpretation. See the contrast between the latter sentences and (ia–c):

- (i) a. *Ne sarebbero voluti morire molti 'Many would have liked to die.'
 b.*Ne vorrebbero essere ricevuti pochi 'Few would like to be welcomed.'
 c.*Ne vorrebbero esser noti molti 'Many would like to be well known.'

The contrast is plausibly an effect of the selectional requirement of *volere* 'want' and the ability or inability of the 'inverted' subject to be interpreted volitionally. The same requirement can perhaps account for why purely presentational contexts like *ce ne sono molti* 'there are many of-them' are unacceptable in this construction (vs. the one with raising *dovere* 'must', which does not impose any volitionality requirement). See (iia) and (b), from Burzio (1986: 362), which in this view no longer instantiate a control versus raising contrast:

- (ii) a.*Ci vorrebbe essere molta gente alla festa 'there would like to be many people at the party'
 b. Ci dovrebbe essere molta gente alla festa 'there should be many people at the party.'

The contrast between (iiia) and (b) (also from Burzio 1986: 389) can analogously be attributed not to Control versus Raising but to a failure in complying with the volitionality requirement on the subject (theme of the embedded passive verb):

- (iii) a.*Un interprete ciascuno, vorrebbe essere assegnato a quei visitatori,
 'One interpreter each would want to be introduced to those visitors.'
 b. Un interprete ciascuno, potrebbe essere assegnato a quei visitatori,
 'One interpreter each could be introduced to those visitors.'

When such a subject is more easily interpretable as volitional, the contrast, indeed, tends to disappear:

- (iv) ?A quei visitatori, vorrà forse andare incontro un interprete ciascuno,
'To those visitors will want to go up one interpreter each'

Rizzi (1976a: 172ff.) mentions the existence of another Control versus Raising contrast in the restructuring construction. Raising, but not Control, verbs would seem to allow for the impersonal *si* on the embedded infinitival. See (v), given with Rizzi's judgment:

- (v) a. Queste case devono/possono costruirsi alla svelta
'These houses must/can si build quickly'
- b.*Queste case vogliono costruirsi alla svelta
These houses want to *si* build quickly

I (and other speakers), however, find such cases as (vb) not to be impossible, and actually quite natural with other moods and lexical choices: Certe esperienze vorrebbero potersifare subito 'Certain experiences would want to be able to do si immediately.' The (near) impossibility of the other case given by Rizzi (the one with *andare*: *Queste medicine vanno a comprarsi in farmacia 'These medicines go to si buy at the chemist's') can perhaps be due to the fact that impersonal *si* is located higher than the functional head that hosts motion verbs (indeed a very low one: see Cinque 2003). Similar considerations may apply to the (near) impossibility of ??Certe esperienze vorrebbero/dovrebbero poter farsi subito 'Certain experiences would want tolshould be able to si do immediately', where the clitic is found on the lexical verb.

39. +Analogouscases of transparency of want in various languages are noted in the relational grammar literature. Frantz (1976: 182f), for example, notes that in MicMac (Algonkian) the complex verb formed by want and the embedded verb retains the valency properties of the embedded verb (it shows transitive or Intransitive inflection, depending on the transitive or intransitive nature of the embedded verb). Similarly, Gerdts (1988: 845f.) notes that in Eskimo and Halkomelem Salish the subject of "want" receives absolute Case if the embedded verb is intransitive and ergative Case if it is transitive (thus apparently inheriting the status of the latter). Gonzalez (1986, 1990) reports that with querer 'want' (and more marginally *tratar* 'try') in certain varieties of Spanish the "inversion property of an embedded predicate like *gustar* can in effect 'transfer' to the matrix" (1990: 87). In *A Juan le quieren gustar las matematicas* 'J. wants to like mathematics,' it is Juan who "wants" even if querer does not normally take a dative subject. This suggests that the selectional requirement of querer can be satisfied under restructuring by the dative argument of the embedded psych-verb *gustar*. For more general discussion of the optional inheritance property of desideratives across languages, see Gerdts (1988).

40. The presence of Clitic Climbing is meant to exclude the lexical use of *volere* (for which see section 6.3). Plural number agreement on *volere* also appears to exclude it (**Sembra essersi voluti andare* volentieri 'Seems to be si wanted to go willingly') because 'lexical' *volere* is followed by an abstract predicate that takes an object clause (see section 6.3), whence third-person singular agreement on the participle. The third-person singular agreement, indeed, is acceptable in the same context: *Sembra non essersi voluto andare* incontro a nessuno 'Seems to be si wanted to go toward nobody.'

41. In addition to impersonal(-passive) *si*, which absorbs the external theta role and Accusative Case (thus forcing a direct object, when present, to become the subject), another *si* exists (see Cinque's 1988 [-arg si]), which absorbs no external theta-role or Accusative, only Nominative, and which can thus render impersonal those predicates that have no external theta-role or Accusative Case (unaccusative, passive, psych-, copular, and raising verbs). When this *si* applies to transitives, there is no object promotion to the subject (Cinque 1988, Dobrovie-Sorin 1998):

- (i) a. Si è perso molti soldi 'One has lost (sing.) a lot of money (pl.).'
b. Li si è persi 'them one has lost'

This construction (which is somewhat marked with transitive verbs, giving rise to a special interpretation in specific time reference contexts) is the only possible one when there is no agreement (as in [ia]), when the object is cliticized (as in [ib]), when it contains the *cisi* form (replacing an impossible *si si* sequence), or when it has floating *tutti* 'all' (see Cinque 1988; see also the next note).

42. The contrast in (71), in fact, provides additional evidence for the already-discussed non-argument-taking nature of *volere* 'want' in restructuring contexts. If it could assign an external theta role and thus license impersonal(-passive) *si*, it is not clear why it should require the embedded transitive verb to select *essere* when Long Object Preposing occurs. In the absence of such preposing, no avere → *essere* change on the embedded verb can in fact take place (see [i]; Fresina 1981: 335), even in the presence of other transparency effects (like Loro climbing; cf. [ib]):

- (i) a. Si vorrebbe averle (**esserle*) vendute a un prezzo più alto 'One would have liked to have sold them at a higher price.'
b. Si vorrebbe loro averle (**esserle*) già vendute 'One would like to have already sold them to them.'

These examples would seem to show that *si*, after all, can originate directly with *volere*; hence that the modal assigns an external theta role. But (ib) and the Clitic Climbing variant of (ia)—*Le si vorrebbe aver vendute a un prezzo più alto*—show that the *si* of (i) is not the impersonal(-passive) one (i.e., the [+arg] one of Cinque 1988, which absorbs the external theta-role and Accusative Case) but the pure impersonal one mentioned in the previous note (the [-arg] one of Cinque 1988, which absorbs only Nominative Case and which renders impersonal unaccusative, passive, psych-, copular, and raising verbs). Also, (ib) suggests that, in one and the same clause, (-arg) *si* is higher than complement clitics. Now, the following facts indeed suggest that such *si* is higher in the functional structure of the clause than impersonal (-passive) *si* (and the other types of *si*). See the contrast between (iib), with the (-arg) impersonal *si* of note 41, and (iiib) and (ivb), with impersonal(-passive) and reflexive *si*:

- (ii) a. Si stava convincendolo tutti a restare 'We were all convincing him to stay.'
b. **Stava convincendosi tutti a restare
- (iii) a. Questi articoli *si* stanno vendendo a prezzi stracciati 'These items are being sold very cheap.'
b. ?Questi articoli stanno vendendosi a prezzi stracciati
- (iv) a. Loro *si* stanno scrivendo dei biglietti 'They are writing cards to each other.'
b. Loro stanno scrivendosi dei biglietti

Examples (72) and (74) in the text show that the progressive periphrasis in Italian, like other contexts, does not allow split clitics. In this respect, (ii) is not exceptional in our analysis, as *si* actually originates higher than all other complement clitics. As Richard Kayne pointed out to me, (ii) recalls such Friulian examples as *Si vuodilu* 'One sees it/him' (see Benincà 1989: 572), which would make such cases as *Si lu vuodilu* (and *Lo si stava convincendo*) cases of Clitic Climbing.

43. The requirement of "uniform cliticization" found in Italian in restructuring contexts (Rizzi 1976a: n. 18), in the progressive and prospective periphrases of (74) and (75), and in

negative imperatives (Kayne 1992: n. 5—cf. **Non gli datelo* vs. *Non dateglielo* or *Non glielo date* 'Don't give it to-them') remains to be understood, especially given the fact that it is not found in other Romance languages or dialects (Kayne 1989b: 248, 256, n. 34) or in Serbo-Croatian (Stjepanović 1998). The presence/absence of the requirement could turn out to depend on whether clitics form a cluster (i.e., each one is adjoined to the next) or not. That the ill-formedness of (65b) may have to do with one but not the other clitic climbing up is also found in Longobardi (1979: n. 7) and Burzio (1981: chap. 6, n. 4).

44. Taraldsen (1981: 273) gives *Maria deve loro averlo già dato* 'M. must to-them have it already given' as ungrammatical, but this and similar sentences seem to me quite acceptable. The optionality of Clitic Climbing in long *Tough* movement contexts, also a diagnostic for the restructuring configuration (Rizzi 1978: 140ff.), is not easy to check. Although examples such as *Questa tavola è difficile da poter venderti* 'this table is difficult to be able to sell to you' are, according to Zubizarreta (1980: 154, 175) accepted by some native speakers on a par with *Questa tavola è difficile da poterti vendere* 'this table is difficult to be able to you to sell,' for others, myself included, clitics (in either position) are quite marginal. In this connection, see also Radford (1977b: 109), Napoli (1981: 850f.), and Rizzi (2000: 101). Additional evidence for the optionality of Clitic Climbing is provided by the paradigms in (i) (prompted by an observation of Anna Cardinaletti) and (ii), adapted from Longobardi (1980: n. 5):

- (i) a. Gianni lo tornb a salutare 'G. greeted him again.'
- b. Gianni tornb a salutarlo 'G. greeted him again' or 'G. came back to greet him.'
- (ii) a. ??Dovrebbe detestare studiare questa materia 'He should detest studying this subject.'
- b. ??Vorrebbe potere fare questo anche lui 'Even he would like to be able to do this.'
- c. **Lo** vorrebbe poter(??e) fare anche lui 'Even he it would like to be able to do'
- d. Vorrebbe poter(??e) far**lo** anche lui

In (ia), with Clitic Climbing (which forces the restructuring configuration), *tornare* '(lit.) go/come back' is unambiguously interpreted as a marker or 'iterative aspect' (= 'do again'). In (ib), where the clitic is on the embedded infinitival, *tornare* is ambiguous between the literal meaning 'go/come back' and 'do again.' This suggests that the restructuring option is available even when the clitic does not climb. (iia) and (b) exemplify a constraint against the sequence of two infinitives, one of which is the complement of the other (Longobardi 1980); (iic) shows that with restructuring verbs that display Clitic Climbing the constraint becomes inoperative, provided that the final vowel of the first infinitive is deleted. But the same is true of (iid), even though the clitic has not climbed. This suggests that (iid) is a case of restructuring despite the lack of Clitic Climbing (note that deletion of the 'e' of *detestare* in [iia] does not improve its status; retention of the -e in [ii] is better than the retention of the -e with enclitics: ***Farelo sarebbe difficile* 'To do it would be difficult'). See also Monachesi (1999) for experimental evidence that restructuring verbs and their infinitival complement form a prosodic unit whether or not Clitic Climbing has applied.

45. *Ho mangiatolo* is possible in other Romance dialects (see the references cited in Rizzi 2000: 100). When no finite verb is present, a clitic can attach to the past participle even in Standard Italian: (*Una volta*) *mangiatolo, si alzò e se ne andò* '(Once) eaten it, (he) stood up and left.' On such 'absolute' usages of the past participle, see Belletti (1981, 1990), Kayne (1989a), and Cinque (1990a: sect. 4.1).

46. Though apparently, only with a subset of the verbs that allow Clitic Climbing in Spanish and Italian.

47. Serbo-Croatian is another language where Clitic Climbing is obligatory (with infinitival complements of restructuring verbs). See Stjepanović (2001, 2002). One context where Clitic Climbing appears *obligatory* also in standard Italian is Long Passive, a construction only possible with restructuring verbs (Rizzi 1976b: n. 21; Aissen and Perlmutter 1983: postscript, Burzio 1986: 373ff, Cinque 2003). Here a clitic cannot remain on the infinitive. See (ib) (a similar observation is made in Rizzi 2000: 101):

- (i) a. I pezzi **gli** furono finiti di consegnare l'anno dopo
'The parts were finished delivering to him a year later'
- b. **I** pezzi furono finiti di consegnargli l'anno dopo

But even this obligatoriness may prove illusory. As noted in the preceding references, Long Passive in Romance is restricted to restructuring verbs of "finishing," "beginning," and (more marginally) "motion" and "continuation"—in fact, a subset of these (see Cinque, 2003). In that article, I argue that such limitations can be understood if restructuring verbs are taken to be functional verbs inserted directly under the corresponding functional heads. In such cases it is to be expected that only those restructuring verbs that correspond to aspectual heads lower than Voice (comitative, inceptive, continuative, and motion) will be able to be passivized (in addition to the lexical verb). All other aspectual, modal, and mood heads higher than Voice cannot be passivized, as lowering is barred. If that is correct, the ungrammaticality of (ib) could be due, then, not to the obligatory character of Clitic Climbing but to the fact that no clitic position is available (in Italian) under Voice. Although the same generalization concerning Long Passive in restructuring Romance languages appears to hold in French (the only cases cited in Grevisse 1993: 1124f. are with "finish"-type verbs: *Le chateau n'était pas achevé de meubler* 'the castle was not finished furnishing'; *une boite qui n'était pas tout à fait finie d'installer* 'a box which was not at all finished installing') and Japanese (Nishiguchi 1993), Wurmbrand (1998: 34f., 119ff.) notes that in German Long Passive is not as restricted as in Romance. For example, it is also found with such restructuring verbs as '**try**', 'manage', 'dare', and so on. Rather than taking the contrast to depend on the different location of these aspectual heads, I conjecture it may depend on the higher location of passive morphology in German, which corresponds more to an impersonal than to a personal Voice (it can, e.g., affect unergative verbs, like Italian *si*, which, interestingly, also "passivizes" 'try', 'manage', 'dare', etc.). For further discussion on this topic, see Taraldsen (2002).

48. Auxiliary Change is possible only from *avere* 'have' to *essere* 'be' (not vice versa) and with a subset of the restructuring verbs (*volere* 'want', *potere* 'can', *dovere* 'must', *corninciare*, *inizicare* 'begin', and *continuare* 'continue') for reasons that remain to be understood. See Kayne (1989b: 253) and references cited there.

49. Burzio (1986: 365) also attributes equal status to the variant with Auxiliary Change and to that without in (ia) and (b), and (iia) and (b), in the presence of Clitic Climbing. (I, in fact, find the variant without Auxiliary Change slightly better):

- (i) a. Giovanni le ?sarebbe dovuto essere fedele 'G. would have had to be faithful to her.'
- b. Giovanni le ?avrebbe dovuto essere fedele 'G. would have had to be faithful to her.'
- (ii) a. Giovanni ne ?sarebbe dovuto essere il presidente 'G. would have had to be the president of it.'
- b. Giovanni ne ?avrebbe dovuto essere il presidente 'G. would have had to be the president of it.'

In more colloquial styles of Italian, Auxiliary Change may in fact fail to apply even in such contexts as (81)a. See (iii) and the case in (iv), given by Rizzi (1978: 136). The same is true in Occitan (see [v] from Hernanz and Rigau 1984: 47):

- (iii) a. Maria c'ha (*ci ha) dovuto venire molte volte 'M. there had to come many times'
- b. Gli hai per caso potuto andare incontro? 'him could you by chance go toward?'
- c. Non ne ha mai voluto venir fuori 'he from-it has never wanted to get out'
- (iv) ??Laura ci ha cominciato ad andare un mese fa 'L. has begun to go there a month ago'
- (v) a. Me son volgut venjar 'I wanted to take revenge'
- b. M'ai volgut venjar

Concerning the contrast **ci ha* versus *c'ha* [tʃa] in (iii), note that (81b) and the like also degrade considerably with *ci è* in place of *c'è*.

50. In this connection, Pearce (1990: 21) reports that Auxiliary Change was lost in the history of French more or less at the same time (early seventeenth century) that Clitic Climbing began to be lost (which is also the time when Aux-to-COMP apparently was lost—Roberts 1993b: 203).

51. Landau (1999,2000) draws a comparable distinction between what he calls exhaustive Control (with implicative, aspectual, and modal predicates) and partial Control (with factive, propositional, desiderative, and interrogative predicates). I'll come back to his analysis, as he explicitly claims that exhaustive Control does not coincide with restructuring (contrary to what I propose later).

52. Landau (2000: chap. 2, sect. 6) explicitly claims that "strict" or, in his terms, "exhaustive" Control does not reduce to Raising (because of the Control character of some of the modal and aspectual verbs), nor does it coincide with restructuring (given that exhaustive control is a property of modal, aspectual, and implicative verbs, regardless of whether they are in a restructuring context or not, and given that some of the implicative verbs that show exhaustive control are not, according to him, restructuring). In the context of my analysis, none of these arguments is compelling. For one thing, we saw earlier evidence for the Raising character of even apparent Control restructuring verbs like 'want'. As to the second claim, I am suggesting that restructuring verbs enter a restructuring (monoclausal) configuration even in the absence of transparency effects; that is, they enter only restructuring contexts—whence their exclusively Raising character (which derives their exhaustive Control property in all situations). Finally, the claim that there are nonrestructuring implicative verbs, which still display exhaustive Control, does not seem to be substantiated by the facts. Among implicative verbs, we find that only the restructuring ones (*riuscire* 'manage', *dimenticare* 'forget', *mancare* 'fail', and *osare* 'dare') display exhaustive control (cf. [i]). Nonrestructuring ones (all the others) appear to us to allow (in Italian) partial Control (cf. [ii]):

- (i) *Loro dissero che Gianni non riuscì a (Idimenticò di/mancò di/osò) incontrarsi alle 5
'They said that G. did not manage (/forgot/failed/dared) to meet at 5.'
- (ii) Gianni fece in modo di/ritenne opportuno/accondiscese a/evitò di incontrarsi alle 5
'G. made sure/saw fit/condescended/avoided to meet at 5.'

"Weak implicatives" (Pesetsky 1991)—which are plausibly hidden causatives (see Kayne 1989b: 248 and section 4.2 earlier)—also seem to me to allow partial Control (cf. [iii]). At any rate, (ii) and (iii) sharply contrast with (i), which indeed makes it plausible that exhaustive Control and restructuring coincide:

- (iii) Gianni costrinse/forzò Maria a incontrarsi alle 5 'G. compelled/forced M. to meet at 5.'

53. Here I in fact assume, immaterially for the argument, that the abstract understood verb is something like OBTAIN (= [COME [TO HAVE]]). **Vorrei DP*' as opposed to '*Vorrei*

avere DP' cannot be interpreted as 'I would like to be in the state of having DP.' Cf. *Vorrei* (**avere*) *vent'anni* 'I would want (to have) 20 years.'

54. As pointed out to me by Dominique Sportiche, this also means that the che-clause that follows *volere* in *Gianni vuole che Maria resti* 'G. wants that M. stays' is not directly a complement of *volere* but of HAVE (or OBTAIN):

- (i) Gianni vuole [vp OBTAIN [cp che Maria resti]]

This introduces a systematic ambiguity in infinitival cases such as (iia), which can thus instantiate either the structure in (iib), or that in (iic):

- (ii) a. Gianni vuole restare 'G wants to stay.'

- b. Gianni, vuole . . . [vp t, OBTAIN [cp PRO, restare]]

- c. Gianni, vuole . . . [vp t, restare]

Evidence that supports such structural ambiguity is discussed in section 7.1.

55. That is, *Mary began the novel* can be interpreted as '... began to read/write' but not as '... *to hate/*to appreciate/etc.); similarly, *John finished the beer* can be interpreted as '... finished drinking' but not as '... *pouring/*praising/etc.'

56. In the case of (88c), the abstract verbal complement must be one of existence, presumably.

57. As is perhaps to be expected, motion verbs without an overt directional PP are still ambiguous between the lexical and the restructuring use. This can be seen from the double possibility they allow under *fare* (see Rizzi 1978: 153 and Burzio 1986: 388, n. 26):

- (i) a. Gianni lo farà andare a prenderlo 'G. him will make go to fetch it'

- b. Gianni glielo farà andare a prendere 'G. to him it will make go to fetch'

In the first, causativization treats *andare* as intransitive, assigning Accusative to its subject (cf. also the split clitics); in the second, it takes the restructured *andare a prendere* as a transitive configuration, assigning dative to its subject.

58. That the commitment on the part of the speaker in the evidential, restructuring usage of *sembrare* is not due to the presence of an optionally deleted dative *a me/mi* 'to me' is shown by the fact that the restructuring use is no longer possible when *a me/mi* is actually present:

- (i) a. *Non me lo sembra apprezzare molto 'He doesn't seem to me to appreciate it much.'

- b. *Non lo sembra a me apprezzare molto 'He doesn't seem to me to appreciate it much.'

- c. *A me, non lo sembra apprezzare molto 'To me, he doesn't seem to appreciate it much.'

59. The peculiar pause required in the (a) cases of (23)–(26), noted in section 3.1, is perhaps a reflex of the more complex, biclausal structure. Replacement of *volere* with other modals or aspectuals (which have no access to the biclausal option) leads to ungrammaticality. See, for example:

- (i) a. *Maria deve già averlo già lasciato 'M. already must have already left him.'

- b. *Maria comincia già ad esserci già antipatica 'M. already begins to already be unpleasant.'

60. *Non (*la) può [0]* 'He (it) cannot' of (96a) thus contrasts with *Mangiare fredda, non la può* 'eat cold, he it cannot,' which has a structured empty category [_{[xp} *Mangiare la fredda*] *non la pub* [*mangiare la fredda*]] under the copy theory of movement (Chomsky 1995: 3.5).

61. This conclusion, coupled with the evidence for the Raising nature of restructuring

verbs ('want' included), leads him to suggest that movement can be from a theta position to another theta position. If my analysis of NCA is correct, no such conclusion is warranted.

62. The partial visibility of the internal structure of the null complement in NCA (the subject, but not the verb and its complements, "covered by do it) is also shown by the possible appearance of benefactive PPs (and other adjuncts) that modify the understood predicate (problematic in an opaque '[CP/IP 0]' pro-form) versus subcategorized PPs. See (Porterai da mangiare?) *Potrò*, solo per qualcuno '(Will you bring something to eat?) I will be able [to do it] only for someone' vs. **Potrò*, solo a *qualcuno* 'I will be able [to do it] only to someone.' The NCA appears not to be reducible to an abstract do it in all cases. In addition to restructuring verbs, many other predicates allow null complements. See (i), adapted from Grimshaw (1979: 288ff.):

- (i) A: John is telling lies.
B: I know/ I have already found out/ I am not surprised/ It's too bad . . .

For these, the analysis must be different. The understood complement is not do it but a pronominal DP or PP, as also suggested by the obligatory presence in Italian of a clitic for direct object DPs, though not for PPs, which recalls the English and Italian contrast between empty operators and resumptive clitics in Topicalization and CLLD:

- (ii) A: Dice bugie (He tells lies.)
B: *(Lo) so/ *(L')ho già scoperto/Non (ne) sono sorpreso
'I know/ I already found out/I'm not surprised.'

What all the different types of NCA appear to have in common is some kind of pronominal element ('it,' pro-PPs, 'do it,' etc.): the exponents of 'deep anaphora'. The possibility of *Je sais* 'I know' in French is perhaps related to that of *Ça, je sais* 'That, I know.'

63. As the strength of INFL is a necessary but not a sufficient condition for Clitic Climbing (Kayne 1989b: 251), only the presence of Clitic Climbing implies, for Kayne, the presence of null subjects, not vice versa.

64. Kayne (1989b: 243) attributes the blocking effect of negation to the inability of the NegP head to L-mark VP.

65. Note that the sentences in (110) do not require the special intonation discussed in Rizzi (1976b: n. 9), which rescues even the negation between an auxiliary and a participle. It remains to be determined whether Long Object Preposing and Auxiliary Change are less sensitive to the intervention of negation than Clitic Climbing (as claimed in Watanabe 1993: 366 and Kayne 1989b: 253, respectively). I do not find any appreciable difference between Watanabe's example (30): (?)*Quei libri si potrebbero non leggere subito* 'those books SI would-be-able not read immediately' and Li potresti *non leggere subito* 'Them you could not read immediately,' or between Kayne's example (45): ??*Sarebbe voluto non andare al mare* '(He) would-be-wanted NEG to go to the seaside' and ?*Ci sarebbe voluto non andare subito* 'There (he) would-be-wanted NEG to go immediately.'

66. This sentence was pointed out to me by Richard Kayne.

67. For example, Fresina (1981: 49) does not accept Clitic Climbing with *desiderare*, while Monachesi (1998: 362 n. 9) does. For Spanish, Roldán (1975: 344) does not allow Clitic Climbing with *preferir*, whereas Luján (1978: 105) does. Some Italians have *pensare* 'think' as a restructuring verb, not in its propositional meaning (cf. [ia.]) but in its volitional one, of intending planning to (cf. [ib.]). For an analogous contrast in Spanish, see Suñer (1980: 314):

- (i) a.**Lo penso di aver trattato male* 'Him (I) think to have treated badly'
b. *Lo penso di vedere domani* 'Him (I) think to see tomorrow'

Similarly, dimenticare 'forget' is restructuring, for some speakers, in the implicative sense of *mancare* di 'fail to', but not in its propositional sense (for the analogous behavior of German *vergessen*, see Wurmbrand 1998: 222ff.):

- (ii) a. Lo dimentico di spegnere 'It (he) forgot to switch off.'
b.**Lo dimenticò di aver spento* 'It (he) forgot he had switched off.'

68. We abstract here from the possibility, argued for in Kayne (1999b), that such prepositions are in fact higher than the selecting verb and act as attractors of the infinitival phrase to their Spec, then raising to the next higher head, and attracting the remnant to the higher Spec (see also the roll-up derivation proposed in Koopman and Szabolci 2000 for restructuring verbs in Hungarian and Dutch). We also abstract from additional projections that may make up such "small clauses," which include the agreement heads discussed in Kayne (1993) and possibly Topicalization and Focalization projections, if such restructuring cases with "middle field" Focalization and Topicalization are possible: ?*Avrebbero loro voluto I SOLDI riconsegnare al più presto (non i vestiti)* '(they) would have to-them wished the money (focus) to hand back immediately (not the suits)'; *Avrebbero loro voluto, i soldi, poterli riconsegnare più avanti* '(they) would have to-them wished the money to be able to hand back later.'

69. These are verbs that, though merged as heads of the extended projection of the lexical verb (like causative, perception, and [certain] motion verbs), still contribute an external argument or a participant PP to the complex predicate, differently from purely functional ones (see Cinque 2003, fn. 18, chap. 1, fn. 31, and, for related discussion, Corver and van Riemsdijk 2001, Cardinaletti and Giusti 2001, and Cardinaletti and Shlonsky 2004: 546ff.).

The Interaction of Passive, Causative, and "Restructuring" in Romance

In this chapter, I want to show how the hierarchy of functional projections investigated in Cinque (1999) provides an unforeseen solution to a puzzle of Romance syntax: the selective application of passive to verbs that trigger "restructuring" (or "clause reduction").¹

1. The puzzle

As Aissen and Perlmutter (1983: 390ff) observed, in "clause reduction" contexts the object of the embedded verb should quite generally become the subject of the matrix verb when the latter is passivized. This is indeed the case in Spanish, with such verbs as *terminar* and *acabar* 'finish' (cf. [1] and [2], their [P32] and [P33]), but is, unexpectedly, not possible with the majority of "clause reduction" triggers (see, for example, [3] and [4], their [P36] and [P37]):

- (1) a. Los obreros están terminando de pintar estas paredes.
The workers are finishing painting these walls.'
- b. Estas paredes están siendo terminadas de pintar (por los obreros).
(Lit.) These walls are being finished to paint (by the workers).
- (2) a. Los obreros acabaron de pintar las casas ayer.
The workers finished painting the houses yesterday.'

- b. Las casas fueron acabadas de pintar (por los obreros) ayer.
 (Lit.) The houses were finished to paint (by the workers) yesterday.
- (3) a. Trataron de pintar las paredes ayer.
 'They tried to paint the walls yesterday.'
- b.*Las paredes fueron tratadas de pintar ayer.
 (Lit.) The walls were tried to paint yesterday.
- (4) a. Quieren cortar esta madera
 'They want to cut this wood.'
- b.*Esta madera es querida cortar
 (Lit.) This wood is wanted to cut.

This is all the more surprising as the embedded object has no difficulty in becoming the matrix subject in the corresponding "se-passives." See (5):

- (5) a. Las paredes se trajeron de pintar ayer
the walls se tried to paint yesterday
 (Lit.) The walls were tried to paint yesterday.
- b. Esta madera se quiere cortar
this wood se wants to cut
 (Lit.) This wood is wanted to cut.

As Aissen and Perlmutter (1983: 391f) observe, "[t]he subclass of Clause Union triggers that allow passives like (1b) and (2b) seems to be roughly the class that specifies the end point of an action. We have no explanation for this, which we assume to be a language-particularfact that needs to be stated in the grammar of Spanish. Thus we assume that there are languages in which Passive in Clause Union structures is not limited to a small subclass of Clause Union triggers."

This limitation to verbs that mark the end point of a process (and to few other verb classes, as we shall see) is not a quirk of Spanish syntax, however, but holds in Italian, Portuguese, Catalan, and various northeastern Italian dialects (I conjecture, in fact, throughout Romance). Its general character thus calls for a principled explanation, and I want to suggest that this resides in the position that the Voice head occupies in the hierarchy of functional projections relative to the modal and the different aspectual heads.²

Before getting to that, consider the situation of Italian (and, more briefly, that of other Romance varieties). As shown in (6), indeed very few restructuring verb classes in Italian allow for the "Long Passive" seen in (1) and (2):³

- (6) a.*Mi è stato voluto dare (da Gianni). (Rizzi 1976b: 31)
 (Lit.) It was wanted to give to me (by G.).
 (cf. Gianni me lo ha voluto dare. 'G. it wanted to give to me.')
- b.*È stata dovuta riscrivere. (Burzio 1986: 374)
 (Lit.) It was had to rewrite.
 (cf. L'ha dovuta riscrivere. 'He it had to rewrite.')

- c.*Non fu pih potuto rivedere. (Burzio 1986: 374)
 (Lit.) It was no longer been able to see again.
 (cf. Non lo potè più rivedere. 'He it could no longer see.')
- d.*Era desiderato conoscere da tutti.
 (Lit.) It was desired to meet by everybody.
 (cf. Tutti lo desideravano conoscere. 'Everybody him desired to meet.')
- e.*Non era usato dire da nessuno.
 (Lit.) It was not used to say by anybody.
 (cf. Nessuno lo usava dire. 'Nobody it used to say.')
- f.*Fu cercato/tentato di aggiustare (da Gianni).
 (Lit.) It was tried to mend (by G.).
 (cf. Lo cercbltentb di aggiustare Gianni. 'It tried to mend G.')
- g.*Fu provato ad aggiustare (da Gianni).
 (Lit.) It was tried to mend (by G.).
 (cf. Lo provb ad aggiustare Gianni. 'It tried to mend G.')
- h.*Non era osato fare da nessuno.
 (Lit.) It was not dared to do by anybody.
 (cf. Nessuno lo osava fare. 'Nobody it dared to do.')
- i.*Non fu saputo tradurre da nessuno.
 (Lit.) It wasn't known to translate by anybody.
 (cf. Nessuno lo seppe tradurre. 'Nobody it could translate.')
- l.*Non fu saputo come fare (da nessuno).
 (Lit.) It wasn't known how to do (by anybody).
 (cf. (?)Non lo sapeva come fare. 'It he didn't know how to do.')
- m.*Era teso a fare da tutti
 (Lit.) It was tended to do by everybody.
 (cf. (?)Tutti lo tendevano a fare. 'Everybody it tended to do.')
- n.*Fu smesso/cessato di vedere.
 (Lit.) It was stopped/quit seeing.
 (cf. Lo smisero/(??)cessarono di vedere. 'It they stopped/quit seeing.')
- o.*Non fu riuscito a vedere da nessuno.
 (Lit.) It wasn't managed to see by anybody.
 (cf. Nessuno lo riuscì a vedere. 'Nobody it managed to see.')
- p.*Era stato comprando.
 (Lit.) It had been buying.
 (cf. Lo stavano comprando. 'They it were buying.')
- q.*Era stato per comprare.
 (Lit.) It had been about to buy.
 (cf. Lo stavano per comprare. 'They it were about to buy.')

r.*Fu ripreso a fare da tutti.

(Lit.) It was resumed to do by everybody.

(cf. Lo ripresero a fare tutti 'Everybody it resumed to do.')
s.*Fu finito per accettare da tutti.

(Lit.) It was ended up accepting by everybody.

(cf. Lo finì per accettare 'He it ended up accepting.')
t. ??Fu continuato/seguitato a fare nonostante la loro opposizione.

(Lit.) It was continued/kept on doing their opposition notwithstanding.

(cf. Lo continuaron/seguitarono a fare. 'They it continued/kept on doing.')
u. La casa fu finita di costruire il mese scorso.

(=[116b] of Van Tiel-Di Maio 1978: 97)

(Lit.) The house was finished building the last month.

(cf. La finì di costruire il mese scorso. 'He it finished building.')
v. Quelle case furono iniziata/?cominciate a costruire negli anni '20.

(Lit.) Those houses were started to build in the '20s.

(cf. Le iniziarono/cominciarono a costruire negli anni '20. 'They them started to build in the '20s.')
z. Sarete passati a prendere più tardi.⁴

(Lit.) You (pl.) will be passed to fetch later.

(cf. Vi passeremo a prendere più tardi. 'We you will pass to fetch later.')
w. Furono mandati a prendere a casa.⁵

(Lit.) They were sent to fetch at home.

(cf. Li mandarono a prendere. 'They them sent to fetch.')
Comparable data are found in Portuguese. *Acabar* 'finish', *começar* 'begin', and *mandar* 'send' can be passivized in restructuring contexts (see [7a–c]), but neither modals nor other aspectual verbs can (see [8a–d]).⁶

- (7) a. As casas foram acabadas de construir em 1950.
'The houses were finished building in 1950.'

- b. ?As casas foram começadas a construir em 1950.
'The houses were begun to build in 1950.'

- c. As crianças foram mandadas alcançar à estação.
'The children were sent to fetch at the station.'

- (8) a.*As casas foram podidas/devidas/queridas demolir só recentemente.
'The houses were could/should/wanted to pull down only recently.'

- b. ???As casas foram continuadas a construir durante essa época.
'The houses were continued to build during this period.'

- c.*As casas foram tentadas demolir muitas vezes.
'The houses were tried to pull down many times.'

d.*As casas foram finalmente tratadas demolir.

'The houses were finally managed to pull down.'

Similarly, in Catalan, "restructuring" FINISH and BEGIN verbs can be passivized (*Aquestes parets han estat acabades de pintar pels obrers* 'these walls have been finished painting by the workers'; *Aquestes cases van ser començades a construir el 1950* 'these houses were begun to build in 1950'), but neither modals (**Els documents van ser poguts aprovar* 'the documents were been able to approve') nor other aspectual verbs can (Lluïsa Grkcia, personal communication).⁷ Analogous facts hold in Paduan (Paola Beninck, personal communication) and Venetian (Cecilia Poletto, personal communication).

2. A solution to the puzzle

Why should only *finire* 'finish', *iniziare* 'begin', and (some of) the motion verbs be passivizable, whereas all other "restructuring" verbs resist passivization? What do the former verbs have in common that distinguishes them from the latter?

An answer to these questions appears to come from the relative position of the distinct clausal functional heads in the hierarchy proposed in Cinque (1999), at least if we accept the idea that restructuring verbs are merged as functional heads (rather than in a lexical VP).⁸

Modal functional heads, and the majority of aspectual functional heads appear to be higher than the (Active/Passive) Voice head (see Cinque 1999: chap. 4 and appendix 2, for a cross-linguistic survey). One instance of Completive aspect ('terminate a process at its natural ending point', 'finish') is, however, crucially lower than Voice (see the discussion in Cinque 1999, sec. 4.26, and note 10 later).

If, following current assumptions, we assume that for a verb to be passivized it must raise to Voice^o, either overtly or covertly, to pick up passive morphology (alternatively, to check the features of its passive morphology), it follows that only those verbs that are generated lower than Voice^o will be passivizable. In other words, only the lexical verb, head of VP, and restructuring FINISH verbs, which can be licensed in the completive aspect head lower than Voice^o, will be able to be passivized. All "functional" verbs licensed in heads higher than Voice^o (such as the modals and the majority of aspectual restructuring verbs) will be unable to bear passive morphology, as lowering is excluded.⁹

This almost accounts for the pattern in (6). What is left out is the possibility of passivizing motion verbs and BEGIN verbs. The latter case is particularly problematic as Inceptive aspect ('begin doing something') appears to be higher than (heads higher than) Voice^o in several languages documented in Cinque (1999: appendix 2): for example, in the Niger-Congo language Kako, in the Eskimo language Aleut, in the Papuan language Tauya, and in the Amerind language Ika.

The position of Inceptive aspect (and that of Conative and of "Success" [or Frustrative] aspects), as well as the position of the functional head that corresponds to motion verbs, were not systematically investigated in Cinque (1999).

At least for the case of restructuring motion verbs, there is some evidence that the functional head in which they are merged is lower than Voice^o.

A number of Australian and African languages possess a verbal affix (rendered as 'go and . . .', sometimes called Andative or Distantive), which signals that "a distance is traversed before the action is done" (Fagerli 1994: 35). See also Evans (1995: 311), and Dixon (1977: 219ff), where these affixes are called coming/going aspectual affixes. The West African language Fulfulde offers direct evidence that the functional head that corresponds to this affix is lower than Voice^o. The "distantive" suffix in this language is a derivational suffix, closer to the verb stem than the suffix that expresses Voice, which is a portemanteau inflectional suffix that also marks aspect and polarity distinctions (Fagerli 1994: 35):¹⁰

- (9) Bingel soof-oy-i.
child wet-DIST-Voice/Aspect/Polarity
 'The child went and urinated.'

Extrapolating from Fulfulde, motion verbs (in their restructuring use) are thus compatible with passivization. This leaves us with BEGIN-type verbs, which also allow passivization (6v) although they shouldn't, as the available evidence appears to show that Inceptive aspect is higher than Voice.

Here I would like to follow a suggestion of Paola Beninch's (personal communication), which seems to offer a principled solution to the problem. She notes that parallel to the pair of Terminative aspect (which marks the termination of an unbounded, or bounded, process at an arbitrary point: 'stop'/'quit'/'cease') and Comitative aspect (which marks the termination of a bounded process at its natural end point: 'finish'), one could posit the existence of two distinct Inceptive aspects: one marking the beginning of an unbounded, or bounded, process at an arbitrary point (e.g., *start to shiver* or *start to sing the aria* [from some arbitrary point]); the other marking the beginning of a bounded process at its natural starting point (e.g., *begin building the house* or *begin to sing the aria* [from the beginning]).

Now, just as Terminative aspect is higher than Voice, and (one type of) Comitative aspect is lower than Voice, so one could hypothesize that the former Inceptive aspect is higher, and the latter lower, than Voice. This implies that the BEGIN-type verbs that can be passivized should only be of the bounded/natural-starting-point kind (as only this kind of Inceptive aspect is lower than Voice).

Indeed, there is some evidence that bears out this prediction and thus supports Beninch's conjecture. While passivization of *iniziare/cominciare* is possible in (6v) or (10a), which constitute bounded processes (with a natural starting point), it becomes impossible if the process is turned into an unbounded one, say, by having a bare plural DP subject, as in (10b):¹¹

- (10) a. Furono iniziate/?cominciate a costruire solo due case.
 (Lit.) Were begun to build only two houses.
 b.*Furono iniziate/cominciate a costruire case.
 (Lit.) Were started to build houses.

Conversely (given this line of analysis), we expect that d l the restructuring verb that *cannot* passivize (as they are in heads higher than Voice^o) should be able to embed a passive, whereas the restructuring verbs that *can* passivize (as they are located lower than Voice^o) should not be able to embed a passive.

These predictions appear to be largely confirmed, too. The verbs in (6a-s) indeed can embed a passive (see [1la-s]), whereas those in (6t-w) cannot, except for *continuare*, *finire*, and *iniziare/cominciare*, to which I return:

- (11) a. Gianni gli voleva essere presentato.
 G. to-him wanted to be introduced
 b. Gianni gli doveva essere presentato.
 G. to-him had to be introduced
 c. G. non gli poteva esser presentato.
 G. not to-him could be introduced
 d. Gianni ne desiderava essere informato.
 G. of-it desired to be informed
 e. Non gli solevano essere presentati.
 (they) not to-him used to be introduced
 f. ?Gli cercò/tentò di esser presentato.
 to-him (he) tried to be introduced
 g. Gli provò ad esser presentato.
 to-him (he) tried to be introduced
 h. Non gli osava essere presentato.
 not to-him (she) dared to be introduced
 i. Ne sapeva essere affascinato.
 from-it (he) was able to be fascinated
 j. Non gli sapeva come essere presentato.
 not to-him (he) knew how to be introduced
 k. Ne tendeva ad essere affascinato.
 from-it (she) tended to be fascinated
 l. Gli smise di essere indicato come la persona più adatta.
 to-him (he) stopped being indicated as the most suitable person
 m. Ne riuscì ad essere informata prima di noi.
 of-it (she) managed to be informed before us
 n. Ne stava venendo ottenebrato anche lui.
 from-it was being clouded over even him
 o. Gli stava per essere presentata.
 to-him (she) was about to be introduced

- r. Vi riprese ad esser ammesso.
there he resumed to be admitted
- s. Gli finiranno per essere concessi tutti i prestiti.
to-him will end up being granted all the loans
- t. Ne continuò/seguì ad essere affascinato.
from-it (he) continued/kept on being fascinated
- u. Gli finirono di essere concessi prestiti.
to-him finished to be granted loans
- v. Gli cominciarono/?iniziarono ad esser inflitte delle punizioni.
to-him began to be inflicted punishments
- z.*Gli passò ad esser presentato uno straniero.¹²
to-him passed to be introduced a foreigner
- w.*Gli mandarono ad esser presentato uno straniero.
to-him they sent to be introduced a foreigner

The problem raised by the well-formedness of (1lt–v) disappears if we consider the fact that a Continuative, a Completive, and an Inceptive aspect head is also present to the left of Voice^o (Cinque 1999: chap. 4).¹³

3. An extension to causative (and perception) verbs

Along similar lines, the fact that causative verbs in Italian can be passivized (cf. *Gli fu fatto leggere* [Lit.] To-him it was made read) but cannot embed a passive (**Farò essere invitati tutti* [Lit.] I will make to be invited all—see Rizzi 1976: 31f, Radford 1977: 226, and Burzio 1986: 280f, among others) can now be seen as a consequence of the fact that the Causative functional head is lower than the Voice head.¹⁴

This is confirmed by the fixed order of causative and passive suffixes (V-CAUS-PASS) in those languages that have, like the Romance languages, Baker's type 1 causatives (namely, those that change the subject of an embedded transitive verb into an oblique object, rather than a direct object—Baker 1988: 162ff).

If so, it is also to be expected that those restructuring verbs that are licensed in heads higher than Voice^o will, a fortiori, be unable to embed under a causative verb (as this is lower than Voice). This expectation is also fulfilled. See (12) (and Burzio 1981: 587):

- (12) a.**La feci voler leggere a tutti.*
(Lit.) It (I) made want to read to everybody.
'I made everybody want to read it.'
- b.**Lo faranno dover ammettere anche a Gianni.*
(Lit.) It (they) will make have to admit to G., too.
'They will make G. too have to admit it.'

- c.**Lo farb poter leggere a tutti.*
(Lit.) It (I) will make be able to read to everybody
'I will make everybody be able to read it.'
- d.**La farà desiderare di incontrare a tutti.*
(Lit.) Her (he) will make desire to meet to everybody.
'He will make everybody desire to meet her.'
- e.**Lo faceva sempre usar fare alle sue amiche.*
(Lit.) It (she) made always use to do to her friends.
'She always made her friends use to do it.'
- f.**La farò cercare/tentare di incontrare a Gianni*
(Lit.) Her I will make try to meet to G.
'I will have G. try to meet her.'
- g.**La farb provare ad incontrare a Gianni.*
(Lit.) Her I will make try to meet to G.
'I will have G. try to meet her.'
- i.**Glielo faremo saper tradurre.*
(Lit.) To-him it (we) will make be able to translate.
'We will have him be able to translate it.'
- l.**Glielo farb saper come fare.*
(Lit.) To-him it (I) will make know how to do.
'I will make him know how to do it.'
- m.**Lo facevano tendere a fare a tutti.*
(Lit.) It (they) made tend to do to everybody.
'They used to have everybody tend to do it.'
- n.**Fallo smettere di importunare anche a Gianni.*
(Lit.) Make him stop pestering to G. too.
'Make G. too stop pestering him.'
- o.**La fecero riuscire ad aggiustare anche a Maria.*
(Lit.) It (they) made manage to fix even to M.
'They made even M. manage to fix it.'
- p.**Lo faremo star facendo anche a Gianni.*
(Lit.) It (we) will make be doing even to G.
'We will have even G. be doing it.'
- q.**Glielo feci star per comprare.*
(Lit.) To-him it ~~comprare~~ made be about to buy.
'I had him be about to buy it.'
- r.**La fecero riprendere a interpretare a Gianni.*
(Lit.) It (they) made resume to interpret to G.
'They had G. resume interpreting it.'

s.*Lo faranno finire per comprare anche a Gianni.

(Lit.) It (they) will make end up buying even to G.
'They will have even G. end up buying it.'

t. (?)?Glielo fece continuare a costruire. (Burzio 1981: 591)

(Lit.) To-him it (he) made continue building.
'He had him continue building it.'

While (12t) is somewhat intermediate (possibly suggesting the presence of some type of Continuative aspect head below Causative^o, and Voice^o—see also note 3 on the marginal possibility of passivizing continuare, noted by Burzio), the embedding under *fare* of restructuring *finire/terminare*, *iniziare/cominciare*, and *passare/mandare/andare* is perfectly grammatical (cf. [13]). This suggests that the corresponding functional heads are also lower than Causative^o, not just lower than Voice^o):¹⁵

- (13) a. La fecero finire/terminare di costruire a Gianni.
(Lit.) It (they) made finish/terminate to build to G.
'They had G. finish/terminate building it.'
- b. Gliela fecero iniziare/cominciare a costruire.
(Lit.) To-him it (they) made initiate/begin to build.
'They had him begin to build it.'
- c. Gliela fecero passare a prendere alle cinque.
(Lit.) To-him it (they) made pass to fetch at five o'clock.
'They made him pass and fetch it at five o'clock.'
- d. Ce lo fecero andare a prendere subito.¹⁶
(Lit.) To-us it (they) made go to fetch immediately.
'They made us go and fetch it immediately.'
- e. Glielo fecero mandare a prendere subito.
(Lit.) To-him it (they) made send to fetch immediately.
'They made him send to fetch immediately.'

Conversely, causatives should be possible under the restructuring verbs in (12) but not under those in (13), as the former are higher and the latter lower than the causative head. The first prediction is correct (see [14]). As to the second prediction, it cannot be tested with *finire/terminare* and *iniziare/cominciare*, which can also be licensed in heads higher than Causative^o, as we have seen, but it can be tested with motion verbs, and it appears confirmed. See (15):

- (14) a. Gliela volevo far vedere.
(Lit.) To-him it (I) wanted to make see.
'I wanted to have him see it.'
- b. Gliela dovevo far vedere.
(Lit.) To-him it (I) had to make see.
'I had to make him see it.'

c. Non gliela potrò far vedere.

(Lit.) Not to-him it (I) will be able to make see.
'I will not be able to have him see it.'

d. Gliela desideravo far conoscere.

(Lit.) To-him her I desired to make meet.
'I desired to have him meet her.'

e. Gliela usavano far guidare d'estate.

(Lit.) To-him it (they) used to make drive in the summer.
'They used to have him drive it in the summer.'

f. Gliela cercarono/tentarono di far guidare.

(Lit.) To-him it (they) tried to make drive.
'They tried to have him drive it.'

g. Gliela provarono a far guidare.

(Lit.) To-him it (they) tried to make drive.
'They tried to have him drive it.'

i. Gliela sapremo far tradurre.

(Lit.) To-him it (we) will be able to make translate.
'We will be able to have him translate it.'

l. Gliela sapremo come far tradurre.

(Lit.) To-him it (we) will know how to make translate.
'We will know how to have him translate it.'

m. Gliela tenderebbero a far portare sempre.

(Lit.) To-him it (they) would tend to make carry always.
'They would tend to have him always carry it.'

n. Glielo smise di far leggere.

(Lit.) To-him it (he) stopped to make read.
'He stopped to have him read it.'

o. Glielo riuscii a far vedere.

(Lit.) To-him it (I) managed to make see.
'I managed to have him see it.'

p. Gliela stava facendo firmare.

(Lit.) To-him it (he) was making sign.
'He was having him sign it.'

q. Gliela stava per far firmare.

(Lit.) To-him it (he) was about to make sign.
'He was about to make him sign it.'

r. Gliela riprese a far vedere.

(Lit.) To-him it (he) resumed to make see.
'He resumed to make him see it.'

- s. Gliela finì per far comprare.
 (Lit.) To-him it (he) ended up making buy.
 'He ended up making/letting him buy it.'
- t. Glielo continuò a far vedere.
 (Lit.) To-him it (he) continued to make see.
 'He continued to let him see it.'
- (15) a.*La sono passata a far firmare a Gianni.
 (Cf. Sono passato a farla firmare a G.)
 (Lit.) It (I) have passed to make sign to G.
 'I have passed and make G. sign it.'
- b.*Gli siamo andati a far firmare la lettera.
 (Cf. Siamo andati a fargli firmare la lettera.)
 (Lit.) To-him (we) went to make sign the letter.
 'We went and make him sign the letter.'
- c.*Mandaglielo a far prendere.
 (Cf. ?Manda a farglielo prendere)
 (Lit.) Send to-him it to make fetch.
 ↵ 'Send to make him fetch it.'

The order of functional heads for which evidence was discussed here is thus the following:¹⁷

- (16) . . . Voice° > Perception° > Causative° > Asp_{inceptive(II)}/ (Asp_{continuative(II)})
 > Andative° > Asp_{completive(II)}

The dots are meant to cover such aspects as Predispositional ('tend to'), Terminative, Conative, Success/Frustrative ('[not] manage to'), Continuative(I), Inceptive(I), Completive(I), Progressive, Prospective ('to be about to'), and others (Cinque 1999), whose relative order remains in part to be determined.¹⁸

Notes

I am indebted to Manuela Ambar, Paola Beninch, Anna Cardinaletti, Giuliana Giusti, Luisa Grhcia, Cecilia Poletto, and Eduardo Raposo for comments and judgements, especially to Paola, for suggesting to me an ingenious solution to an ordering paradox that involved the Inceptive aspect head.

1. Although cast in different frameworks, Rizzi's (1976a,b, 1978) "Restructuring" hypothesis and Aissen and Perlmutter's (1976, 1983), "Clause Reduction/Union" hypothesis share the idea that modal, aspectual, and motion verbs in Romance, when followed by a sentential complement, may be affected by a process that turns the biclausal structure into a monoclausal one. For my concerns, I will consider the two hypotheses as identical. Alternative analyses such as Kayne's (1989b), and others mentioned there, are also equivalent, as far as I can see, with respect to the problem addressed here. For a more detailed discussion of the general analysis of restructuring adopted here see the previous chapter.

2. If correct, the account to be proposed must be valid beyond Romance, to which my discussion here is confined. See fn. 47 of the previous chapter for further discussion.

3. Rizzi (1976b: 31) states that "the output of verb raising but not that of restructuring can undergo the passive transformation" [my translation], *cominciare* 'begin' being a partial exception (cf. his n. 21) in that it can be passivized (marginally) in certain contexts (?*Questa chiesa fu cominciata a costruire nel 1525* '(Lit.) This church was begun to build in 1525'), though not in others (**Questo articolo sarà cominciato a leggere domani* '(Lit.) This article will be begun to read tomorrow').

Also according to Burzio, matrix passives with restructuring are at best unsystematic" (1981: 689) and "impossible with exceptions with restructuring" (1986: 382). He suggests that the impossibility of such cases as (6a) is due, in his analysis (pro, mi è stato voluto [dare t_i] [s_{PRO} ____]), to the fact that PRO lacks an antecedent; but he says he has "no precise answer" as to why the case with *cominciare* "differ[s] from the *volere* case . . . with respect to the possibility of interpreting the embedded subject PRO" (1986: 378).

In addition to *cominciare* 'begin', mentioned in Rizzi (1976b, n. 21), Burzio takes *continuare* 'continue' to marginally allow passivization (?*Il palazzo fu continuato a costruire per ordine del principe* '(Lit.) The palace was continued to build at the order of the prince—1981: 591; ?(?)*L'affitto fu continuato a pagare fino alla fine dell'anno* '(Lit.) The rent was continued to pay till the end of the year—1986: 376). I find such cases somewhat harder than those with *cominciare*.

4. The restructuring use of this motion verb is very restricted. It is only possible (in either the active or passive form) with *prendere* 'fetch', *salutare* 'greet', and perhaps a couple of other verbs. Nonetheless, to the extent that it is possible in the active it appears to be possible in the corresponding "Long Passive."

Similar remarks hold for *mandare* (see [6w]), the causative of *andare* 'go'. As to *andare* itself in its restructuring use, although considered ungrammatical in Burzio (1986:374), it appears (marginally) possible in certain contexts (for some speakers): (?)*I libri saranno andati a prendere entro domani* 'The books will be gone to fetch by tomorrow'; ?*I malati furono andati a prendere a casa* '(Lit.) The ill were gone to fetch at home'. Also see (13d) and note 16 here.

5. *Mandare* 'send' also enters a "complement object deletion" construction (Fiengo and Lasnik 1974): *Mandarono la macchina a riparare* '(Lit.) they sent the car to fix.' Cliticization or passivization of the object (*La mandarono a riparare* 'They it sent to fix'; *Fu mandata a riparare* 'It was sent to fix') yields a word order identical to that formed by "Ctic Climbing" or "Long Passive" with the restructuring use of *mandare* (see [6w], for which no 'Complement Object Deletion' interpretation is possible: **Mandarono i bambini a prendere a casa* 'They sent the children to fetch home').

6. I thank Manuela Ambar, Manuel Gonçalves Simões, and Eduardo Raposo for sharing with me their intuitions, which were remarkably consistent.

7. For Luisa Grhcia, however, motion verbs are very hard to passivize.

8. As seen in the preceding chapter, verbs whose meaning closely corresponds to the functional meaning of a certain functional head can be restructuring verbs.

9. That the cause of the ungrammaticality of (6a-s) is in the passive morphology rather than in the DP-movement component of the construction is confirmed by the fact, noted earlier, that the corresponding "si-passives" (which involve the DP-movement component of passive but no passive morphology) are all grammatical.

10. Incidentally, Completive aspect, in Fulfulde, is also a derivational suffix closer to the verb stem than both the Andative and Voice suffixes. See Fagerli (1994: 53). Fulfulde thus gives evidence for the (partial) relative order of heads shown in (i):

- (i) . . . Voice° . . . > . . . Andative° . . . > . . . Asp_{completive} . . . (V)

11. Positing an Inceptive aspect for unbounded processes (higher than Voice) distinct from an Inceptive aspect for bounded ones (lower than Voice) may also make sense of the preference for *iniziare* 'initiate' vs. *cominciare* 'begin' in the passivization cases. Although both are possible with either Inceptive aspect, *iniziare* is slightly more natural for marking the natural starting point of a bounded process (something that has an *inizio* 'a proper starting point'). So, for example, while *ha cominciato a cantare l'aria* 'he started to sing the aria' is equally appropriate whether someone started singing the aria from the beginning or from the middle, the preferred interpretation of *ha iniziato a cantare l'aria* is definitely the former situation.

12. Burzio (1981: 611f) also notes the "difficulty" with cases such as *Gianni gli andrà ad esserpresentato* 'G. to-him will go to be introduced', for which he has "no precise account."

13. *Finire* 'finish', in Italian, can apparently also be licensed in the head of Terminative aspect (which signals termination of a process at an arbitrary, rather than at the natural, end point), a usage that is not available to *finish* in English, as Richard Kayne pointed out to me (personal communication). Cf. *Finì di piovere* vs. **It finished raining*. On the marginal acceptability of *finish* in the quasi-accomplishment interpretation of activities (*?John finished working for the day*), see Binnick (1991: 176).

14. As in Italian, French and Spanish do not allow causatives to embed passives (Kayne 1975: 251ff, Zubizarreta 1985: 282: **Pierre a fait être lu(s)* ces passages; **Pedro hizo ser leído[s]* esos pasajes [Lit.] P. made be read these passages'), which suggests that in these languages, too, the causative head is lower than Voice. However, the fact that (contrary to Italian) their causatives cannot be passivized, either (Kayne 1975: 244ff, Zubizarreta 1985: 268: **La maison a été faite construire*; **La casa fue hecha construir* [Lit.] The house was made to build') remains to be understood. Note that there is no semantic ban on having passive under the scope of a causative verb, as shown by such sentences as *Ho fatto sì che fosse invitato* 'I made it so that he be invited', or by the faire-par construction in Romance (Kayne 1975). The only ban is on the embedded verb bearing passive morphology (ultimately, a consequence, in this analysis, of the unavailability of lowering). Perception verbs can also enter the causative construction, but, to judge from the contrast in (i), they appear to correspond to a head higher than Causative^o, as they can embed but cannot be embedded under causatives (note that *vedere*, qua lexical verb, can embed under fare: *gliel'ho fatta vedere* 'I made him see it'):

- (i) a. *Gliel'ho vista far cadere*. I saw him make it fall.'
- b.**Gliel'ho fatta veder cadere*. 'I made him see it fall.'

The contrast in (ii) suggests that this head is still lower than Voice":

- (ii) a. *Gli fu vista cadere addosso*. 'She was seen to fall on him.'
- b.**Gliel'ho vista esser presentata*. 'I saw her be introduced to him.'

15. Interestingly, in Aissen's (1977) investigation of clause reduction under causatives in Spanish all the examples are with *empezar* 'begin', except one with *tratar* 'try': (i) *Al niño le dejaron tratar de hacer los deberes solo* 'They let the boy try to do his homework alone.' While the Italian analogue of *empezar*, *cominciare* can also embed under causatives, as seen earlier, *cercare*, *tentare*, *provare* 'try' cannot. Should (i) really turn out to be possible in Spanish, an interference could be involved with Exceptional Case Marking (admitted by *dejar* 'let'), perhaps with *leísmo* (as in *Le hice correr* 'I made him run').

16. Although, as noted, the passive of *andare* in its restructuring use (*?Furono andati a prendere a casa* 'they were gone to fetch at home') is somewhat marginal and is judged impossible by Burzio, he nonetheless cites as only slightly marginal a sentence like (i), which

gives evidence for the location of the corresponding functional head below Causative^o and Voice^o even in his Italian:

- (i) ?*Il libro fu fatto andare a prendere a Giovanni*. (Burzio 1981: 580)
The book was made go to fetch to G.'

17. The evidence for locating the Andative head below the Inceptive(II) and Continuative(II) aspect heads comes from the following contrasts:

- (i) a. *Lo comincio ad andare a vedere domani*.
it I begin to go and see tomorrow
- b.**Lo vado a cominciare a vedere domani*.
it I go and begin to see tomorrow
- (ii) a. *Lo continuò ad andare a vedere tutti i giorni*.
it he continued to go and see every day
- b.**Lo andb a continuare a vedere l'anno scorso*.
it he went and continued to see last year

The well-formedness of both (iiiia) and (iiib) suggests, instead, that the Andative head is higher than the lower Completive aspect head and lower than the higher one:

- (iii) a. *Lo finisco di andare a leggere domani*.
it I finish to go and read tomorrow
- b. *Lo vado a finire di leggere domani*.
it I go and finish reading tomorrow

18. See, now, the discussion in chapter 3. Perhaps, grammatical function changing heads such as Causative should not be completely assimilated to "grammatical" functional heads of the mood, modality, tense, and aspect kind. The former, but not the latter, besides operating on the lexical verb's arguments, can apparently freely iterate (cf. [i]) and appear to be able to enter partially different orderings within and across languages. For example, the causative suffix is inside the distative suffix in *Fulfulde* (see Fagerli 1994: 53), which suggests that the Causative head is lower than the Andative head in this language, differently from Italian.

- (i) a. *Taroo ga Ziroo ni Itiroo o aruk-ase-sase-ta*
T. NOM Z. DAT 1. ACC walk-CAUS-CAUS-PAST
'T.had Z. make I. walk' (Japanese — Shibatani 1976: 244)
- b. A daay-n-in-i Yero bingel e wuro na
You far-CAUS-CAUS-VOICE/ASP/POL Y. child from town Q
'Did you make Y. take the child out of town?' (Fulfulde — Fagerli 1994: 42)
- c. Gliela faremo far riparare
To-him it (we) will make make fix
'We will make him have it fixed' (Italian)

"Restructuring" and the Order of Aspectual and Root Modal Heads

If functional affixes and particles are interpreted as the overt realization of distinct functional heads (Baker 1985, Pollock 1989, Ouhalla 1988, 1991a, Chomsky 1995: chap. 2, among others), there is reason to posit the existence of a substantial number of distinct aspectual heads (ordered among each other):

See the *Habitual* aspect suffixes of Mongolian (Svantesson 1991: 197) and of Central Alaskan Yup'ik (Mithun and Ali 1996: 112f); the *Predispositional* aspect morpheme of American Sign Language (Klima and Bellugi 1979), rendered with 'tends to'; the *Delayed* aspect particle of Ulithian, glossed by Sohn and Bender (1973: 116) as 'finally', and the suffix between the frequentative and the past tense suffixes of Macushi, also rendered as 'finally' by Abbott (1991: 113ff); the *Frequentative* aspect suffix of Yareba (Weimer 1972: 61) and that of Macushi, just mentioned; the *Repetitive* aspect particle ('again') of Hidatsa (Hengeveld to appear: ex. [42]), called by him iterative; the *Celerative* aspect suffix of Fulfulde (Fagerli 1994: 36ff) and the suffixes of Dyirbal and Evenki, glossed as 'quickly' by Dixon (1972: 248) and Nedjalkov (1997: 252); the *Terminative* aspect suffix of Kiribatese (Groves, Groves and Jacobs 1985: 58); the *Continuative* aspect suffix of Lczgian, rendered as 'still' by Haspelmath (1993: 140ff) and that of Walmadjari, rendered as 'keep on' by Hudson (1976: 656); the *Perfect* aspect suffixes of Ponapean (Rehg 1981: 269ff) and Chinese (Smith 1991: 344ff); the *Retrospective* particles of the French creoles reported in Cinque 1999, chap. 3, which are rendered in the literature with 'venir de', 'to have just'); the *Proximative* prefix of Big Nambas (Fox 1979: 64) and the proximative particle of Kwaio (Keesing 1985: 118ff), rendered by both authors as 'soon'); the *Durative* aspect suffixes of Hua (Haiman 1980: 149) and Tauya (MacDonald 1990: §3.3.2.1), meaning "for a while"); the *Progressive* aspect suffix

of Zuñi (Nichols 1993: 104) and Menya (Whitehead 1991: 266); the Prospective aspect particle of Gungbe (Aboh 1996) and the Prospective aspect suffixes of Comanche (Robinson and Armagost 1990: 318), meaning "to be about to"; the Inceptive aspect suffixes of Ika (Frank 1990: 57) and Waorani (Peeke 1994: 276); the *Conative* aspect suffix of Hua (Haiman 1980: 147) and Tauya (MacDonald 1990: §3.3.2.1); the *Frustrative* aspect suffixes of Wayampí, rendered as 'without success' by Jensen (1994: 359f), and the "Success" aspectual morpheme of Spokane, which Carlson (1996: 59) renders with 'manage'; and the Completive aspect suffixes of Fulfulde (Fagerli 1994: 19) and Chinese (Smith 1991: 382).

Discussing a number of such heads, Cinque (1999) arrived (for a subset of them) at a specific order based on the evidence available from their relative order:¹

- (1) $\text{Asp}_{\text{habitual}} > \text{Asp}_{\text{repetitive (I)}} > \text{Asp}_{\text{frequentative (I)}} > \text{Asp}_{\text{celerative (I)}} > \text{Asp}_{\text{terminative}} >$
 $\text{Asp}_{\text{continuative}} > \text{Asp}_{\text{perfect(?)}} > \text{Asp}_{\text{retrospective}} > \text{Asp}_{\text{proximative}} > \text{Asp}_{\text{durative}} >$
 $\text{Asp}_{\text{progressive}} > \text{Asp}_{\text{prospective}} > \text{Asp}_{\text{completive (I)}} (> \text{Voice}) > \text{Asp}_{\text{celerative (II)}} >$
 $\text{Asp}_{\text{completive (II)}} > \text{Asp}_{\text{repetitive (II)}} > \text{Asp}_{\text{frequentative (II)}} \dots$

Having no cross-linguistic evidence at my disposal concerning the relative orders of the corresponding affixes or particles, I made no systematic attempt there to integrate in this order such aspectual heads as *Asp_{predispositional}*, *Asp_{delayed}* (or "finally"), *Asp_{inceptive}*, *Asp_{frustrative/success}*, and *Asp_{conative}*. The positions occupied by root modals with respect to the other heads of (1) were also left partly open.

In what follows, I would like to present some facts, internal to just one language, Italian, which appear to offer some evidence for ordering these heads among one another and within the larger hierarchy in (1) (at least under the analysis of "restructuring" proposed in chapter 1, the main features of which will be sketched directly).²

No existing analysis of "restructuring" offers, it seems, a natural account of why the transparency effects characteristic of this phenomenon occur across languages with just the classes of modal, aspectual, and movement verbs (all analyses assume some form of arbitrary lexical specification or arbitrary semantic condition). The analysis sketched in chapter 1 centers instead on the fact that these verbs are the only verbs whose meaning happens to correspond to a particular functional head of the universal hierarchy proposed in Cinque (1999) independently of the "restructuring" phenomenon.

If we assume that when it "lexicalizes" a particular functional head, a verb is merged directly in that head position, both the monoclausal nature of the phenomenon and the membership of the verb in the "restructuring" class can be naturally derived (I refer to chapter 1 for a detailed discussion). Moreover, if the various functional heads of the clause are rigidly ordered (Cinque 1999), it follows that "restructuring" verbs should display a rigid relative order among one another. This expectation is generally fulfilled. But, as with the order of adverbs, care should be taken to single out those cases where the same verb can be generated in more than one functional head (often with a concomitant change in meaning), for that possibility can give rise to apparent multiple orders with another functional verb. Some cases of this sort will in fact be discussed later.

1. Aspectual verbs and the order of aspectual heads

I will start with the relative order between the Habitual and Predispositional aspects, by considering the relative order between the "restructuring" verbs *solere* (*usare*) 'use' and *tendere* (a) 'tend' (cf. [2]–[3]) which, I take, lexicalize these aspects in Italian.³

- (2) Gianni lo soleva/usava dire spesso
G. it used to say often
- (3) Gianni ne tendeva a far pochi (di errori)
G. of-them tended to do few (of errors)

The order appears to be rigid, with *solere* (or *usare*) preceding *tendere* (a), thus suggesting the order *Asp_{habitual}* > *Asp_{predispositional}* (cf. [4] and [5]):⁴

- (4) a.?Certe cose le si suole tendere a fare subito
Certain things them si (one) use to tend to do immediately
- b.*Certe cose le si tende a soler fare subito
Certain things them si (one) tend to use to do immediately
- (5) a.(?)Certe cose si sogliono tendere a fare in vecchiaia
Certain things si (one) use to tend to do when old
- b. *Certe cose si tendono a soler fare in vecchiaia
Certain things si (one) tend to use to do when old

In turn, when transparency effects obtain, *tendere* (a) appears to obligatorily precede *tornare* (a) 'do again', which expresses repetitive aspect. Cf. (6):⁵

- (6) a. Certe cose si tendono a tornare a fare da vecchi
Certain things si (one) tend to do again when old
- b.*Certe cose si tornano a tendere a fare da vecchi
Certain things si (one) again tend to do when old

These contrasts, then, suggest the partial order of functional heads in (7):

- (7) ... *Asp_{habitual}* > *Asp_{predispositional}* > *Asp_{repetitive}* ...

Consider now the relative order between Predispositional aspect and Terminative aspect, which in Italian is expressed by the "restructuring" verb *smettere* (di) 'stop' (as well as by the AdvP *più* 'no longer'):⁶

- (8) a. Certe cose si tendono a smettere di fare dopo una certa età
Certain things si (one) tend to stop doing after a certain age

- b.*Certe cose si smettono di tendere a fare dopo una certa età
 Certain things si (one) stop to tend to do after a certain age

This gives the order ... ASP_{predispositional} ... > ... ASP_{terminative} ...⁷ Where does ASP_{terminative} locate itself with respect to ASP_{repetitive}, which also follows ASP_{predispositional}?⁸ The fact that both orders in (9) appear possible suggests that Terminative aspect follows the higher Repetitive aspect head and precedes the lower one (cf. [1]):

- (9) a. Certe persone si tornano a smettere di frequentare in certe circostanze
 Certain people si (one) again stop frequenting under certain circumstances
 b. Certe persone si smettono di tornare a frequentare in certe circostanze
 Certain people si (one) stop frequenting again under certain circumstances

Altogether, we have thus evidence for the partial order of heads in (10):

- (10) ... ASP_{habitual} > ASP_{predispositional} > ASP_{repetitive(I)} > ASP_{terminative} ... (> ASP_{repetitive(II)})

(9) is, thus, the first case of an apparent free ordering of two aspectual verbs. As noted, however, it is only an illusion given by the possibility of licensing *tornare* (a) in two different aspectual heads separated by Terminative aspect (as well as other aspects). Terminative aspect appears to be ordered before Continuative aspect, expressed in Italian by the "restructuring" verb *continuare* (a) (as well as by the adverb *ancora* 'still').⁸ See (11), with Clitic Climbing, and (12) with "Long Object Preposing":

- (11) a.?Vi smise di continuare ad andare
 There (he) stopped continuing to go
 b.*Vi continuò a smettere di andare
 There (he) continued to stop going
- (12) a. Certi errori non si smettono mai di continuare a fare
 Certain errors si (one) never stop continuing to do
 b.*?Certi errori si continuano sempre a smettere di fare
 Certain errors si (one) continue always to stop doing

This gives the partial order in (13):⁹

- (13) ... ASP_{habitual} > ASP_{predispositional} > ASP_{repetitive(I)} > ASP_{terminative} > ASP_{continuative}.
 (> ASP_{repetitive(II)})

By transitivity, we expect *continuare* (a) to also follow *tendere* (a) and *solere*. This is indeed what we find. See (14) and (15):

- (14) a. Certe cose si sogliono continuare a fare tutta la vita
 Certain things si (one) use to continue doing for the all life

- b.*Certe cose si continuano a soler fare tutta la vita
 Certain things si (one) continue to use doing for the all life

- (15) a. Certe cose si tendono a continuare a fare sempre
 Certain things si (one) tend to continue doing always
 b.*Certe cose si continuano a tendere a fare sempre
 Certain things si (one) continue to tend to do always

Given that *tornare* (a) can be licensed both in ASP_{repetitive(I)}, higher than ASP_{continuative}, and in ASP_{repetitive(II)}, lower than ASP_{terminative}, we expect both orders of *tornare* (a) and *continuare* (a) to be possible. This is again what we find:

- (16) a. Certe cose si tornano a continuare a fare appena è possibile
 Certain things si (one) again continue to do as soon as is possible
 b. Certe cose si continuano a tornare a fare appena è possibile
 Certain things si (one) continue to again do as soon as is possible

Consider next the relative order of the Conative and Frustrative/Success aspects and their order relative to the aspects so far examined. The "restructuring" verbs that express these two aspects in Italian are provare (a) (*tentare (di)/cercare (di)*) 'try'¹⁰ and (*non*) *riuscire* (a) '(not) manage', respectively.

The data in (17)–(18) appear to indicate that Frustrative/Success aspect precedes Conative aspect:

- (17) a. Certe cose non si riescono nemmeno a provare a fare
 Certain things not si (one) manage to try to do
 b.*?Certe cose non si provano nemmeno a riuscire a fare
 Certain things not si (one) try to manage to do

- (18) a. Le riuscirai almeno a provare a telefonare?
 'Will you manage at least to try to call her?'
 b.*Le proverai almeno a riuscire a telefonare?
 'Will you try at least to manage to call her?'

What about the order of these two aspectual heads with respect to the aspectual heads in (13)? The following contrasts suggest that ASP_{frustrative/success} and ASP_{conative} are ordered after ASP_{continuative} (and, a fortiori, after ASP_{terminative}, ASP_{predispositional}, and ASP_{habitual}, which precede ASP_{continuative}):¹¹

- (19) a. Gianni le continuò a provare a telefonare
 G. her continued to try to call
 b.??Gianni le provò a continuare a telefonare
 G. her tried to continue to call

- (20) a. Gianni li continuò a riuscire a vedere
G. them continued to manage to see
- b.??Gianni li riusci a continuare a vedere
G. them managed to continue to see
- (21) a.?Gianni la smise di provare a riparare
G. it stopped trying to repair
- b.*Gianni la provb a smettere di riparare
G. it tried to stop repairing
- (22) a. Gianni non vi smetterà mai di riuscire a convincere.
G. not you will ever stop managing to convince ..
- b.*Gianni non vi riuscira mai a smettere di convincere.
G. not you will ever manage to stop convincing ...
- (23) a.?Gianni li tende a riuscire a fare
G. them tends to manage to do
- b.*Giannili riesce a tendere a fare
G. them manages to tend to do
- (24) a. Gianni gli tende a provare a parlare ogni volta che pub
G. to-him tends to try to speak every time he can
- b.*Gianni gli prova a tendere a parlare ogni volta che pub
G. to-him tries to tend to speak every time he can
- (25) a. Gianni li soleva riuscire a convincere
G. them used to manage to convince
- b.*Gianni li riusciva a soler convincere
G. them managed to use to convince
- (26) a. Gianni li suole provare a chiamare
G. them uses to try to call
- b.*Gianni li prova a soler chiamare
G. them tries to use to call

But where exactly after $\text{Asp}_{\text{continuative}}$ are $\text{Asp}_{\text{frustrative/success}}$ and $\text{Asp}_{\text{conative}}$ located in the hierarchy in (1)? There is some evidence that they are located between $\text{Asp}_{\text{implicative}}$ and the $\text{Asp}_{\text{completive}}$ above Voice. As (27)–(28) show, $\text{Asp}_{\text{frustrative/success}}$ must follow, rather than precede, $\text{Asp}_{\text{progressive}}$ and $\text{Asp}_{\text{prospective}}$:

- (27) a. Gianni gli stava riuscendo a parlare, finalmente
G. to-him was managing to speak, finally

- b.*Gianni gli riusciva a star(e) parlando, finalmente
G. to-him managed to be speaking, finally

- (28) a. Gianni lo stava per riuscire a convincere
G. him was about to manage to convince
- b.*Gianni lo riusciva a star(e) per convincere
G. him managed to be about to convince

This is also true (a fortiori, in this analysis) for $\text{Asp}_{\text{conative}}$. See (29)–(30):¹²

- (29) a. Gianni la stava provando a riparare
G. it was trying to repair
- b.*Gianni la provava a star(e) riparando
G. it tried to be repairing
- (30) a. Gianni lo stava per provare a riparare
G. it was about to try to repair
- b.*Gianni lo provava a star(e) per riparare
G. it tried to be about to repair

Finally, the fact that riuscire (a) and provare (a) always precede finire (di) (cf. [31]–[32]) suggests that $\text{Asp}_{\text{frustrative/success}}$ and $\text{Asp}_{\text{conative}}$ precede the $\text{Asp}_{\text{completive}}$ above Voice (as well as the one below Voice):¹³

- (31) a. Gianni non la riusci a finire di imparare a memoria
G. it did not manage to finish to learn by heart
- b.*Gianni non la fini di riuscire a imparare a memoria
G. it did not finish to manage to learn by heart
- (32) a. Gianni ne provb a finire di tradurre solo due
G. of-them tried to finish to translate only two
- b.*Gianni ne fini di provare a tradurre solo due
G. of-them finished to try to translate only two

The evidence that $\text{Asp}_{\text{frustrative/success}}$ and $\text{Asp}_{\text{conative}}$ are above Voice comes from the observation that, like all other "restructuring" verbs that are higher than Voice, they resist "Long Passivization" (cf. [33] and chapter 2 for relevant discussion). In essence, their incompatibility with passivization follows from the fact that no lowering is admitted and that a passive form must raise to Voice to check its marked Voice feature. This implies that only a lexical verb, generated in VP or a functional verb generated in a head lower than Voice, will be able to passivize. As is well known, only few "restructuring" verbs allow "Long Passivization" (typically finire [*di*] 'finish' and corninciare [a] 'begin'—cf. (34) and chapter 2 for discussion).¹⁴ The

conclusion that only the functional heads corresponding to these "restructuring" verbs are lower than Voice (whence their passivizability) is supported by the independent evidence given in Cinque (1999) for an Asp_{completive} head lower than Voice (see also chapter 2).

- (33) a.*Quelle case furono riuscite a costruire negli anni cinquanta
Those houses were managed to build in the '50's
- b.*Quelle case furono provate a costruire negli anni cinquanta
Those houses were tried to build in the '50's
- (34) a. Quelle case furono finite di costruire negli anni cinquanta
Those houses were finished building in the '50's
- b.?Quelle case furono corninciate a costruire negli anni cinquanta
Those houses were begun to build in the '50's

To summarize, the order suggested by the evidence considered so far is the one in (35):

- (35) ... Asp_{habitual} > Asp_{predispositional} > Asp_{repetitive (I)} > Asp_{terminative} > Asp_{continuative} ...
Asp_{progressive} > Asp_{prospective} > Asp_{frustrative/success} > Asp_{conative} > Asp_{completive (I)} >
Voice > ... Asp_{completive (II)} > Asp_{repetitive (II)}

Consider now inceptive aspect, expressed in Italian by such verbs as *cominciare* (a) / *iniziare* (a). In chapter 2 some evidence is discussed for positing two distinct inceptive aspect heads, one lower than Voice, marking inception at the natural starting point of a process, just as Completive aspect marks cessation at the natural end point of the process (whence the well-formedness of the "Long Passivization" of [34]), and one higher than Voice, marking inception at an arbitrary point, just as Terminative aspect marks cessation at an arbitrary point (whence the possibility for *cominciare* to embed a passive: *l'operu cominciò ad esser rappresentata nel 1950* 'the opera began to be performed in 1950'). Starting with the Inceptive aspect above Voice, we may note that *corninciare* cannot precede *solere* and *tendere* (cf. [36]–[37]):¹⁵

- (36) a. Gianni gli soleva cominciare a scrivere dopo mesi
G. to-him used to begin to write many months later
- b.*Gianni gli cominciava a soler scrivere dopo mesi
G. to-him began to use to write many months later
- (37) a.?Gianni ne tendeva a cominciare ad affrontare troppi
G. of-them tended to begin to confront too many
- b.*Gianni ne cominciava a tendere ad affrontare troppi
G. of-them began to tend to confront too many

Consider now the relative location of the higher Inceptive aspect head with respect to the Terminative and Continuative aspect heads. Although the judgments are

perhaps not very sharp, it seems that the higher Inceptive head has to follow the Terminative and Continuative aspect heads; cf. (38)–(39):

- (38) a.?Ne smisero di cominciare ad esser riparate molte
Of-them stopped beginning to be repaired many
- b.*Ne cominciarono a smettere di esser riparate molte
Of-them began to stop being repaired many
- (39) a.?Ne continuaron a cominciare ad esser riparate molte
Of-them continued to begin to be repaired many
- b.*Ne cominciarono a continuare ad esser riparate molte
Of-them began to continue to be repaired many

To judge from (40), Inceptive aspect appears to also follow the Progressive and Prospective aspects:

- (40) a. Ne stavano cominciando/?per cominciare ad esser riparate alcune
Of-them were beginning/about to begin to be repaired some
- b.*Gianni ne cominciava a star perdendo/per perdere molti (di capelli)
G. of-them was beginning to be losing/to be about to lose many (of hair)

By transitivity, Inceptive aspect should follow Retrospective aspect, which precedes Progressive aspect (see Cinque 1999: chaps. 3 and 4). The Iberian Romance languages allow us to check this prediction, as they lexicalize this aspect with the verb *acabar* 'finish'. Cf. the case of Catalan, (41), Portuguese, (42), and Spanish, (43):¹⁶

- (41) a. En Joan les acaba de començar a construir
'J. has just begun to build them' (*'J. finishes to begin to build them')
- b.?En Joan les comenqa a acabar de construir
'J. begins to finish building them' (*'J. begins to have just built them')
- (42) a. Acabam-as de começar a construir
'They have just begun to build them' (*'They finish to begin to build them')
- b. Comesam-as a acabar de construir
'They begin to finish to build them' (*'They begin to have just built them')
- (43) a. Juan lo acaba de empezar a leer
J. has just begun reading it (*'Juan finishes to begin to read it')
- b. Juan lo empieza a acabar de leer
J. begins to finish reading it (*'Juan begins to have just read it')

In the (a) cases, *acabar*, preceding *començar/começar/empezar* 'begin', must indeed express Retrospective aspect ('to have just V-ed'), which it no longer can when

following *començar/começar/empezar* 'begin'. See the (b) cases, where the only meaning available is that of "finish" (expressing Completive aspect). Inceptive aspect apparently precedes Frustrative/Success aspect and Conative aspect; see (44a) and (45a) (the fact that *cominciare* can also be found following *riuscire* and *provare*—[44b] and [45b]—can be attributed to the fact that it can also lexicalize the lower Inceptive aspect head below Voice).¹⁷

- (44) a. Gianni ne cominciava a riuscire a tradurre molti
G. of-them began to manage to translate many
 - b. Gianni ne riusciva a cominciare a tradurre molti
G. of-them managed to begin to translate many
- (45) a. Gianni ne cominciò a provare a tradurre uno
G. of-them began to try to translate one
 - b. Gianni ne provò a cominciare a tradurre uno
G. of-them tried to begin to translate one

This allows us to integrate the order in (35) as in (46):

- (46) ...Asp_{habitual} > Asp_{predispositional} > Asp_{repetitive(I)} > Asp_{terminative} > Asp_{continuative} > ...
 Asp_{retrospective} ... > Asp_{progressive} > Asp_{prospective} > Asp_{inceptive} > Asp_{frustrative/success} >
 Asp_{conative} > Asp_{completive(I)} > Voice > ... Asp_{completive(II)} > Asp_{repetitive(II)}

2. Modal verbs and the position of root modal heads

In Cinque (1999) it was noted that, while the modal heads of alethic necessity and possibility seem to occur higher than the various aspectual heads, the heads corresponding to the so-called root modalities (volition, obligation, ability, and permission) seem to be interspersed among the aspectual heads, even though no definite proposal was put forth there. If we consider the relative orders of "restructuring" aspectual and modal verbs, a fixed order emerges, which suggests a particular rigid order of the corresponding functional heads. Starting with the modal verb *potere* 'can', the facts seem to suggest that Mod_{perm},... occupies a position Qstinct from, and lower than, Mod_{ability}. Both Mod_{permission} and Mod_{....} precede Asp_{...} (expressed by *provare*); cf. (47), where the interrogative context in the first person of the present tense forces a (request of) permission reading of *potere*, and (48), where *potere* expresses ability:

- (47) a. Gliene posso provare a parlare io?
 To-him-of-it can I try to speak myself!
 b.*Gliene provo a poter parlare io?
 To-him-of-it do I try to be allowed to speak myself?

- (48) a. Gliene posso provare a parlare io
 To-him-of-it I can try to speak myself
 b.*Gliene provo a poter parlare io
 To-him-of-it I try to be able to speak myself

Consider next (49), where again a permission reading of *potere* is involved. The contrast between the well-formedness of (49a) and the ill-formedness of (49b) suggests that *potere* of permission follows Asp_{frustrative/success}:

- (49) a. Vi riuscirà a poter entrare dopo la mezzanotte?
 There will he manage to be allowed to enter after midnight?
 b.(*)Vi potrà riuscire ad entrare dopo la mezzanotte?¹⁸
 There will he be allowed to manage to enter after midnight?

The *potere* of ability, instead, appears to precede Asp_{frustrative/success}, and follow Asp_{prospective}, see (50) and (51):

- (50) a. Li puoi riuscire a convincere solo tu
 'Only you are able to manage to convince them'
 b.*Li riesci a poter convincere solo tu
 'Only you manage to be able to convince them'

Here the context favors an ability reading of *potere* and the relevant judgments point to the order Mod_{....} > Asp_{frustrative/success}. The contrast in (51), finally, argues for the order of Mod_{ability} after Asp_{prospective} (and all higher heads):¹⁹

- (51) a. Adesso, vi sto per poter sentire
 'Now, I am about to be able to hear you'
 b.*Adesso vi posso stare per sentire
 'Now, I am able to be about to hear you'

The preceding facts, thus, seem to substantiate the order in (52):

- (52) ... Asp_{prospective} > Mod_{ability} > Asp_{frustrative/success} > Mod_{permission} > Asp_{conative} ...²⁰

Consider next the root modal of obligation *dovere*.²¹ This verb apparently follows the prospective aspect head (and all heads higher than that) and precedes the root modal head of ability; cf. (53)–(54):

- (53) a. Gli stava per dover ridare tutti i soldi che le aveva prestato
 To-him he was about to have to give back all the money he lent to her
 b.*Gli doveva star per ridare tutti i soldi che le aveva prestato²²
 To-him he had to be about to give back the money he lent to her

- (54) a. Per quel posto Gianni **si** dovrà poter dedicare al lavoro 16 ore al giorno
 'For that job G. will have to be able to devote 16 hours to work'

- b.* Gianni **si** potrà dover dedicare di più al suo lavoro²³
 'G. will be able to have to devote himself more to work'

Consider, now, the position of the root modal of volition (*volere*). This appears to be located somewhat higher, possibly after *Asp_{frequentative(I)}* (as conjectured in Cinque 1999)²⁴ and before *Asp_{terminative}*; cf. (55)–(58):

- (55) a. Non gli soleva voler dare i suoi appunti
 Not to-him he used to want to give his notes

- b.*Non gli voleva soler dare i suoi appunti
 Not to-him he wanted to use to give his notes

- (56) a.?Gli tornò a voler dare il suo appoggio
 To-him he again wanted to give his support

- b. Gli volle tornare a dare il suo appoggio
 To-him he wanted to again give his support

- (57) a. Gli vorrebbe smettere di parlare
 To-him he would want to stop talking

- b.*Gli smetterebbe di voler parlare
 To-him he would stop wanting to talk

- (58) a. Gliene voglio continuare a parlare
 To-him-of-it I want to continue to speak

- b.*Gliene continuo a voler parlare
 To-him-of-it I continue to want to speak

Adding the *Mod_{volition}* and *Mod_{obligation}* functional heads, we obtain the partial order in (59):

- (59) ... (*Mod_{volition}* ... *Asp_{progressive}* > *Asp_{prospective}* > *Mod_{obligation}* > *Mod_{ability}* > *Asp_{frustrative/success}* > *Mod_{permission}* > *Asp_{conative}* ...

Having added *Mod_{obligation}* and *Mod_{ability}* between *Asp_{prospective}* and *Asp_{frustrative/success}*, we must assess their order relative to *Asp_{inceptive}*, which was also argued to be between *Asp_{prospective}* and *Asp_{frustrative/success}* (cf. [46] earlier). The sentences in (60) suggest that *Asp_{inceptive}* precedes both *Mod_{obligation}* and *Mod_{ability}*:

- (60) a. Ci comincia a dover andare anche di notte
 There he begins to have to go even at night

- b. Lo comincio a poter suonare solo adesso
 It I begin to be able to play only now

The well-formedness of (61) is compatible with this conclusion as *dovere* and *potere* there appear to have only an epistemic or alethic interpretation ('it is probable' or 'it is necessary', and 'it is possible'):

- (61) a. Gli deve cominciare ad essere garantito il loro appoggio
 To-him must begin to be secured their support

- b. Questa responsabilità non gli può cominciare ad essere attribuita di nuovo
 This responsibility not to-him can begin to be attributed again

Finally, consider the position of so-called Delayed (or Finally) aspect, mentioned by Cinque (1999: 105). If the Italian "restructuring" verb *finire* (per) 'end up doing' indeed lexicalizes this aspect, we may draw some indication about its position (beyond that deriving from the position officially in the hierarchy of adverbs). The following contrasts would seem to indicate that it is located between *Asp_{habitual}* and *ASP_{predispositional}*.²⁵

- (62) a.*Gianni ne finisce per soler accettare molte
 G. of-them ends up using to accept many

- b. Gianni ne suole finire per accettare molte
 G. of-them uses to end up accepting many

- (63) a.?Gianni le finirà per tendere a fare da solo
 G. them will end up tending to do alone

- b.*Gianni le tenderà a finire per fare da solo
 G. them will tend to end up doing alone

3. Conclusions

By exploiting the rigidity in relative order of the "restructuring" verbs, we found some evidence to determine the relative position of a number of aspectual and root modal heads that had remained undetermined in Cinque (1999). In particular, this allowed us to add to the partial order proposed there the functional heads corresponding to *Asp_{conative}*, *Asp_{frustrative/success}*, *Asp_{inceptive}*, *Asp_{predispositional}*, *Asp_{delayed}* (or 'finally') and to refine the positions of the root modal heads within the overall hierarchy in (1). The revised (portion of the) hierarchy thus obtained is given in (64):^{26,27}

- (64) ... *Asp_{habitual}* > *Asp_{delayed}* (or 'finally') > *Asp_{predispositional}* > *Asp_{repetitive(I)}* > *Asp_{frequentative(I)}* > *Mod_{volition}* > *Asp_{celerative(I)}* > *Asp_{terminative}* > *Asp_{continutive}* > *Asp_{perfect}* > *Asp_{retrospective}* > *Asp_{proximate}* > *Asp_{durative}* > *Asp_{progressive}* > *Asp_{prospective}* > *Asp_{inceptive}* > *Mod_{obligation}* > *Mod_{ability}* > *Asp_{frustrative/success}* > *Mod_{permission}* > *Asp_{conative}* > *Asp_{completive(I)}* > *Voice* > *Asp_{celerative(II)}* > *Asp_{inceptive(II)}* > *Asp_{completive(II)}* > *Asp_{repetitive(II)}* > *Asp_{frequentative(II)}* ...

Notes

For their comments and judgments I wish to thank Paola Beninch and Anna Cardinaletti.

1. Some of these orders were corroborated by the relative order of the adverbs that correspond to these aspects, taken there to be generated in the specifier position of the relevant functional projections. In a few cases the only evidence available to determine the order between two aspectual heads came in fact from the relative order among the corresponding adverbs. Note the repetition, in (1), of repetitive, frequentative and celerative aspect in two distinct "zones," one quantifying over the event expressed by the sentence, the other over the process, or state, expressed by the V(P).

2. The analyses of "restructuring" are too numerous to list here. For references see note 1 of chapter 1.

3. Note that in principle nothing forces a particular verb to be used as a functional ("restructuring") verb. A necessary (but, perhaps, not sufficient) condition appears to be the (close to) perfect match between the verb's semantics and the semantic features of a functional head. While *solere* and *usare* belong to a rather formal register of Italian (see Renzi and Salvi 1991: 521), *tendere* (a) is felt by some as colloquial.

4. All of the examples discussed here display transparency effects (so as to force the presence of a monoclausal structure). As noted in chapter 1, § 6.1, the same rigid order is found even in the absence of transparency effects. While for me, and other speakers, the order *solere* > *tendere* (a) is the only one available, for Paola Beninch (and possibly other speakers) the other order (*tendere* [a] > *solere*) is also admitted. I take this to mean that *solere*, for the second group of speakers, not only corresponds to the higher, event-related, Habitual aspect projection (the one that hosts in its specifier such adverbs as *di solito/solitamente* and *abitualmente*), but also to the lower, process- or state-related, Habitual aspect projection (which can host *abitualmente* but not *di solito/solitamente*), cf. (i):

- (i) a. Gianni *di solito* frequentava le stesse persone *abitualmente*
G. generally frequented the same persons habitually
- b.*Gianni *abitualmente* frequentava le stesse persone *di solito*
G. habitually frequented the same persons generally
- c.?Gianni *abitualmente* frequentava le stesse persone *abitualmente*
G. habitually frequented the same persons habitually

5. As noted in Cinque (1999), Repetitive aspect can occupy a higher position, quantifying over the event (between the Habitual and Frequentative aspects) and a lower one, lower than Voice, quantifying over the process or state expressed by the predicate. Both positions, apparently, follow the Predispositional aspect head, given that the order *tornare* (a) > *tendere* (a) is not possible (cf. [6b]). The existence of two distinct repetitive aspects (located in two distinct quantificational "zones") is corroborated by the possibility of having a higher, and a lower, repetitive adverb (e.g., *di nuovo/ancora/... again*) in one and the same sentence:

- (i) a. Gianni *ha di nuovo* alzato il braccio *di nuovo* (ancora una volta)
G. has again lifted his arm again (once more)

6. The paraphrase relation between *smettere* (di) and pi3 is, nonetheless, complex, involving different values of other functional heads. Cf. Aveva smesso *di farlo* 'he had stopped doing it,' with anterior of the past (and imperfect aspect), and Non lo faceva *pid* 'he didn't do it any longer,' with past tense and imperfect aspect. Terminative aspect (as opposed to completive aspect) expresses the termination of a certain process (or state) at an arbitrary point,

rather than at the natural end point of the process (when there is one). For further discussion on this point, see chapter 2.

7. By transitivity, given that Predispositional aspect follows Habitual aspect, we expect that Terminative aspect also follows Habitual aspect; which is what we find:

- (i) a. Certe cose si sogliono smettere di fare dopo una certa età
Certain things si (one) use to stop doing after a certain age

- b.*Certe cose si smettono di soler fare dopo una certa età
Certain things si (one) stop to use doing after a certain age

8. As noted by Cinque (1999: §4.17), if they can cooccur at all, the Terminative aspect adverb *pid* 'no longer' also has to precede the continuative aspect adverb *ancora* 'still':

- (i) a.?Spero che tu non sia piii ancora arrabbiato con me
(I) hope that you are no longer still angry with me

- b.*Spero che tu non sia ancora piii arrabbiato con me
(I) hope that you are still no longer angry with me

9. Continuative aspect is apparently to be distinguished from an aspect that means "continuously, constantly" (cf. the aspectual suffix *-ruku-* of Tuyuca—Barnes 1994: 331). The latter appears to correspond to English *keep*, Italian *seguitare* (a), which, as noted by Freed (1979: 90f) differs from *continue/continuare* (a) in presuppositional content. While John continued *slamming* the door all night/John *continuò* a sbattere la porta tutta la notte presupposes that someone had been slamming the door earlier, John kept slamming the door all night/John *seguitò* a sbattere la porta tutta la notte does not (though Italian *continuare* [a] can marginally also be used non-presuppositionally). I leave the location of this "Continuously" aspect undetermined here.

10. While all (or the great majority of) speakers have a "restructuring" use of *provare* (a), not all accept *tentare* (di)/*cercare* (di) as "restructuring" verbs.

11. The nontotal ungrammaticality of (19b) and (20b) may be related to the (quite marginal) possibility for Continuative aspect to be found below Voice (hence below *Asp_{frustrative/success}* and *Asp_{....}*). See note 14 later for independent evidence concerning this (marginal) possibility.

12. Converging evidence for the location of Conative aspect below Progressive aspect comes from the relative order of the corresponding suffixes in the Papuan language Hua, under the Mirror Principle. Cf. (i), from Haiman (1980: 147):

- (i) hu-ko- bau- mana
do-CONAT-PROG-INCONSEQUENTIAL
'I was trying to do (but it didn't work out in some way)'

13. The evidence for a completive aspect head above Voice, and one below Voice, is given by the possibility of embedding a passive underinfinite, (ia), and by the possibility of "Long Passivization" of *finire*, (ib). (For discussion, see chapter 2):

- (i) a. Le case gli finirono di esser consegnate a marzo
The houses to-him finished to be handed in March

- b. Ne furono finite di costruire solo due
Of-them were finished to build only two

(31b) and (32b) are partially rescued if *finire* is assigned a terminative interpretation (similar to 'stop'), rather than its completive one ('finish/end'), a possibility open to *finire* in Italian, though not to *finish* in English. See again chapter 2.

14. Burzio (1981: 591, 1986: 376) takes *continuare* (a) to marginally allow "Long Passivization"; cf. (i). This would seem to imply the (marginal) presence of an instance of continuative aspect below Voice. But the status of (i) is far from clear:

- (i) ?(?)L'affitto fu continuato a pagare fino alla fine dell'anno
the rent was continued to pay till the end of the year

15. It seems that it also has to follow the higher Frequentative aspect head. This can be seen if, by embedding a passive, we exclude the lower Frequentative and Inceptive aspect heads. If so, the contrast in (i) suggests the order $\text{Asp}_{\text{frequentative}}(\text{I}) > \dots > \text{Asp}_{\text{inceptive}}(\text{I})$:

- (i) a. Ne tomb a cominciare ad esser riparata una parte
Of-it again began to be repaired one part
b. *Ne cominciò a tornare ad esser riparata una parte
Of-it began to be again repaired one part

16. I thank Carme Picallo, Pilar Barbosa, and Maria Luisa Zubizarreta, respectively, for providing the relevant sentences and judgments.

17. The conclusion that the *iniziare/cominciare* that follows *riuscire* and *provare* is the Inceptive aspect head below Voice seems supported by the contrasts in (i) and (ii), which show that *iniziare* can be passivized but cannot embed a passive (the judgments, however, are quite subtle):

- (i) a. ?Ne riuscirono ad esser iniziare a costruire solo due
Of-them managed to be begun to build only two
b.*?Ne riuscirono ad iniziare ad esser costruite solo due
Of-them managed to begin to be built only two
(ii) a. ?Vi provarono ad esser iniziati a curare
They in-it tried to be begun to cure
b.*?Vi provarono ad iniziare ad esser curati
They in-it tried to begin to be cured

18. While (49b) is unacceptable under a 'permission' reading of *potere*, it is acceptable (though awkward) with either an 'ability' or a 'possibility' reading (both of which correspond to higher heads).

19. The order $\text{ASP}_{\text{prospective}} > \text{Mod}_{\text{ability}}$ is also attested in (East Lothian) Scottish English. Miller (1980) cites (his example [9b]) a sentence such as: He's gonna *can pass* his driving test next week. The head immediately above $\text{Asp}_{\text{prospective}}$ is Asp_- (cf. Cinque 1999: chaps. 3 and 4). Interestingly, both Turkish and Ladakhi (Sino-Tibetan) have their modal ability suffix closer to the verb stem than their Progressive aspect suffix (cf. [i] and [iia]). Ladakhi, in fact, provides evidence that $\text{Mod}_{\text{obligation}}$ and $\text{Mod}_{\text{permission}}$, too, are lower than $\text{Asp}_{\text{progressive}}$ (cf. [iib-c]) and that $\text{Mod}_{\text{ability}}$ is higher than $\text{Asp}_{\text{completive}}$ (cf. [iid]), in accord with (64) (all the Ladakhi examples are from Koshal 1979: 229ff):

- (i) inan- a- mi- yor- um (Yavag, 1980: 66)
believe-ABIL-NEG-PROG-1 pers.sg.
'I can't believe it'
(ii) a. sta-e čhu big- thub- bin- yot-kak
horse water cross-ABIL-PROG-narrative PAST
'The horse had been able to cross the water'

- b. nəpod-ne lok- ste yoŋnɒŋ-čhog- gin- yot- pin- tshuk
I Tibet return-having come- PERMISS-PROG-reportive-PAST-EVALUAT
'I was allowed to come back from Tibet'
- c. thug-guə-fə p-tə-əčhə-ə-phog- gin- yot- pin- tshuk
child school go- OBLIG-PROG-reportive-PAST-EVALUAT
'Children had to be going to school'
- d. kho-e las čo-tshər- thub-duk- pin
he work do-COMPLET-ABE-observed PAST
'He could complete the work (speaker saw it)'

20. In this connection, it is interesting to note that certain usages of English ability can (e.g., Can you hear me? where the speaker asks whether there are any external factors hindering his communication with the addressee) cannot be rendered in Italian with ability *potere* (**Puoi sentirmi?*). They can only be rendered with *riuscire* 'manage' (Riescia *sentirmi?*) (or with the simple *Mi senti?* 'Do you hear me'). I interpret this as suggesting that ability *potere* is more restricted than ability can (essentially to abilities that depend on the active participation of the subject), with *riuscire* taking over the missing reading (abilities depending on external factors), presumably after raising to the (contiguous) ability modal head.

21. The same verb can also express the higher functional heads of alethic modal necessity ('it is necessary that . . .'), and epistemic modality ('it is probable that . . .').

22. The sentence is possible if *dovere* is interpreted epistemically.
23. The sentence becomes grammatical if *potere* is interpreted alethically ('it is possible that he will have to . . .').

24. Frequentative adverbs (often, twice, etc.) appear to precede volitional adverbs (intentionally, willingly, etc.) (see Cinque 1999: chap. 1). The nonexistence of ("restructuring") aspectual verbs corresponding to $\text{Asp}_{\text{frequentative}}(\text{I})$ does not allow us to confirm this ordering. If *affrettarsi* (a) 'hasten', which marginally allows "restructuring," lexicalizes (the higher) Celerative aspect head, the contrast in (i) would seem to suggest that $\text{Mod}_{\text{volition}}$ precedes $\text{Asp}_{\text{celerative}}$:

- (i) a.?Gianni gli si è voluto affrettare a telefonare
G. to-him wanted to hasten to telephone
b.*Giannigli si è affrettato a voler telefonare
G. to-him hastened to want to telephone

Notice that the well-formedness of (56b), in the text, is expected if *tornare* there is in the lower Repetitive aspect head.

25. Recall from the introduction earlier that the 'finally' suffix of Macushi is ordered higher than the Frequentative aspect suffix and lower than the past tense suffix, a fact compatible with the orders in (62) and (63).

26. This analysis also predicts the existence of ordering restrictions among the rigid sequence of "restructuring" verbs and different classes of adverbs. If the latter are generated in the Spec position of distinct functional heads (Cinque 1999), it is to be expected that an adverb corresponding to a functional projection higher than the one filled by a certain "restructuring" verb that remains put will not be able to follow the verb. As the examples in (i)–(ii) show, this prediction appears to be confirmed. But the whole question deserves a separate treatment.

- (i) a. Non gli riesco più a continuare a parlare
I don't manage any longer to continue to speak to him'
b.*Non gli riesco a continuare più a parlare

- (ii) a. Lo sta ancora **finendo** di scrivere
 'He is still finishing to write it'

- b.*Lo sta **finendo** ancora di scrivere

In the (a) examples, the "restructuring" verb generated lower than the adverb ("Frustrative" aspect is lower than "Terminative" aspect) can come to precede the adverb due to its raising across the adverb in its movement to Tense and Agr. This is not possible in the (b) examples where the "restructuring" verb in question cannot cross the trace of the other "restructuring" verb moved to Tense and Agr.

27. Laca (2004) thinks that "the explanatory value [of the hierarchy] is undermined by the very existence of combinatorial restrictions among aspectual verbs (as in the French **Il continue de venir de sortir* 'he continues having just gone out') and by the possibility of alternative orders for some of them (as in the Italian (?)*Torna a stare perpiangere* 'he/she is again about to cry' and *Sta per tornare a piangere* 'he/she is about to cry again'). We feel that neither case is a real argument against the postulation of a hierarchy of clausal functional projections. As shown by adverbs, the existence of combinatorial restrictions between two of them is not incompatible with the conclusion that they are hierarchically ordered. So, for example, there is evidence that *già* 'already' (Anterior Tense) occupies a position higher than *ancora* 'still' (Continuative aspect), despite the fact that they cannot easily co-occur (*?*E già ancora addormentata* 'she is already still sleeping'). This appears to be shown by the fact that *già* necessarily precedes (non) *più* 'no longer' (Cinque 1999: 5) and (non) *più* necessarily precedes *ancora* (Cinque 1999: 95).

Similarly, the existence of alternative orders is no argument against the hierarchy if, as already noted, it can be shown to arise from the possibility of merging one of the two verbs either above or below the other. This is indeed supported, to take Laca's example earlier, by the possibility of merging *tornare a* 'do again' both above and below *stare per*: (?)*Torna a stare per tornare a piangere* 'he/she is again about to cry again.'

A Note on "Restructuring" and Quantifier Climbing in French

1. "Restructuring" effects in French

The fact that Modern French (as opposed to Italian) has no systematic Clitic Climbing (1a), Long Object Preposing in se constructions (1b), or Auxiliary Change (1c) was initially taken to suggest that it lacks "restructuring" altogether (see, e.g., Kayne 1978: fn. 7, 1980: 3940, 1981: fn. 5, and Rochette 1988: sec. 2.3):¹

- (1) a.*Jean *le* voudrait manger.
 Jean it would-like eat
 'Jean would like to eat it.'
- b.**Ces maisons* se doivent détruire.
 these houses SE must destroy
 'These houses have to be destroyed.'
- c.*Je suis voulu partir.
 I am wanted leave
 'I wanted to leave.'

It was soon realized, however, that some transparency effects exist in Modern French that point to the existence of "restructuring" in this language too.² So, for example, *tous* 'all', *tout* 'everything', *rien* 'nothing' and other quantifiers) are known (since Kayne 1975) to extract out of the infinitival complement—and, for many, out of the subjunctive complement (if any)—of certain verbs (*vouloir* 'want', *oser* 'dare',

devoir 'have to', *pouvoir* 'be able to', *falloir* 'be necessary', etc.; see [2]) but not of others (*avouer* 'confess', *certifier* 'certify', *jurer* 'swear', *croire* 'believe', *dire* 'say', etc.: see [3]).

(2) *Quantifier climbing*

- a. Marie a *tous* voulu les lire.
Marie has all wanted them read
'Marie wanted to read them all.'
 - b. Elle n' aurait rien osé dire.
she NEG would-have nothing dared say
'She would have dared to say nothing.'
 - c. Tu vas tout devoir apprendre.
you are-going everything have learn
'You will have to learn everything.'
 - d. Vous n'avez rien pu dire.
you NEG have nothing been-able say
'You were able to say nothing.'
 - e. *Il n'a rien fallu que je fasse.
it NEG have nothing been-necessary that I do
'It was necessary that I do nothing.'
- (3) a.*Elle va tout avouer mtpriiser.
she is-going everything confess scorn
'She will confess scorning everything.'
- b.*Elle a tous certifié les connaitre.
she has all certified them know
'She certified knowing them all.'
- c.*Jean a tous jurt les avoir lus.
Jean has all sworn them have read
'Jean swore to have read them all.'
- d.*Je crois tout qu'elle leur a enlevt.
I think everything that she from-them has taken-away
'I think that she took away everything from them.'
- e.*Je dis tous qu'ils sont partis.
I say all that they are left
'I say that they have all left.'

Pollock (1978: 103) characterized the verbs that allow such extraction as verbs that enter a "close semantic connection" with their complement, and subsequent work explicitly suggested that they correspond to the "restructuring" verbs that allow

for Clitic Climbing and other transparency effects in Italian and other Romance languages.³

A second "restructuring" effect noted by Pollock (1978: fn. 18) (see also Kayne 1975: chap. 2, fn. 7) is "the survival of an Italian-like structure" with *en* and *y* (see [4a–b]), "which are only felt slightly more literary than [(5a–b)]":⁴

(4) *En and y climbing*

- a. J'en voudrais voir beaucoup.
I of-them would-like see many
'I would like to see many of them.'
- b. J'y voudrais aller.
I there would-like go
'I would like to go there.'

(5) a. Je voudrais *en* voir beaucoup.

- b. Je voudrais *y* aller.

En and *y* climbing indeed appears possible (in noncolloquial styles) with verbs like *vouloir*, *devoir*, *pouvoir*, *falloir*, *oser*, *finir* 'finish', *terminer de* 'finish', and so on, which correspond to "restructuring" verbs in Italian, and impossible with verbs like *avouer*, *dire*, *croire*, *certifier*, *admettre* 'admit', *déclarer* 'declare', and so on, which correspond to non-"restructuring" verbs in Italian. Compare (4) with (6):⁵

- (6) a.*Il en a dit avoirvu trois.
he of-them has said have seen three
'He said he saw three of them.'
- b.*Il y a dit d'être resté.
he there has said to be remained
'He said he remained there.'
- c.*Il en a cru aimer beaucoup.
he of-them has thought love many
'He thought he loved many of them.'
- d.*Il y a cru avoir dormi.
he there has thought have slept
'He thought he had slept there.'

A third "restmcturing" effect was noted by Kayne (1989b: sec. 12). Modern French "easy-to-please" constructions, like Italian (and unlike English) ones, are normally limited to one infinitive:

- (7) a. Ce genre de livre serait difficile à lire.
this kind of book would-be hard to read

b.*Ce genre de livre est facile à promettre de lire.
this kind of book is easy to promise to read

c.*Ce genre de livre serait difficile à convaincre Jean à lire.
this kind of book would-be hard to convince Jean to read

"[W]hen the gap is two infinitives distant, the higher infinitive must be of the class that allows clitic climbing [in Italian]" (Kayne 1989b: 250):⁶

(8) *Long Movement in "easy-to-please" constructions*

a.? (Pour moi), ce livre serait impossible à commencer à lire aujourd'hui.
for me this book would-be impossible to begin to read today

b.? Ce genre d'article est difficile à savoir où classer.
this kind of article is hard to know where to file

A fourth transparency effect that has been claimed (Bok-Bennema and Kampers-Manhe 1994: 200) to be possible in Modern French only with "restructuring" verbs is the climbing of adverbs originally observed by Kayne (1975: chap. 1, fn. 29):⁷

(9) *Adverb climbing*

a.(?) Vous avez mal dû raccrocher.
you have badly must hang-up
'You must have hung up badly.'

b. Il aurait mieux voulu se comporter.
he would-have better liked himself behave
'He would have liked to behave better.'

c. Il faut très bien que tu te compores.
it is-necessary very well that you yourself behave
'It is necessary that you behave very well.'

d.?? Marie a soigneusement fini de ranger sa chambre.
Marie has carefully finished to tidy her room
'Marie finished tidying up her room carefully.'

(10) a.* Il a mal avoué s'être comporté.
he has badly confessed himself be behaved
'He confessed to having behaved badly.'

b.* Il a mal dit avoir mangé.
he has badly said have eaten
'He said he ate badly.'

c.* Il a très bien assuré de se comporter.
he has very well guaranteed to himself behave
'He guaranteed he would behave very well.'

d.* Marie a très bien prétendu avoir travaillé.

Marie has very well claimed have worked
'Marie claimed to have worked very well.'

Closer scrutiny, however, shows the matter to be more complex, as the four transparency effects just illustrated do not pattern alike. Quantifier climbing and Adverb climbing appear to behave differently from en and y climbing and Long Movement in "easy-to-please" constructions. We may begin to see this by examining a special instance of Quantifier climbing (returning later to Adverb climbing).⁸

2. A special instance of quantifier climbing

As Kayne (1975: sec. 1.11) noted, many (though not all)⁹ French speakers allow a quantifier to climb across the finite (subjunctive) *que* complement of verbs like *faalloir* and *vouloir* (also see Kayne 1981):

(11) a.% Il faut tous que Jean les lise.
it is-necessary all that Jean them read
'It is necessary that Jean read them all.'

b.% Je veux tout que tu leur enlèves.
I want everything that you from-them take-away
'I want that you take away everything from them.'

c.% Il faut tout que je leur enlève.
it is-necessary everything that I from-them take-away
'It is necessary that I take away everything from them.'

d.% Il ne faut rien que tu fasses.
it NEG is-necessary nothing that you do
'It is necessary that you do nothing.'

e.% Il faut beaucoup que tu lis(es) de livres.
it is-necessary many that you read of books
'It is necessary that you read many books.'

It would be surprising if such instances of quantifier climbing were a function of "restructuring," as no "restructuring" effect is found in such contexts in Italian.¹⁰ It is thus interesting that independent evidence exists for concluding that (11) is not a genuine case of "restructuring."¹¹

First, two of the transparency effects examined earlier (en and y climbing and Long Movement in "easy-to-please" constructions) are excluded in that context (which makes them bona fide manifestations of "restructuring"):

(12) a.* J'y veux que tu ailles.
I there want that you go

'I want you to go there.'
(Pollock 1978: fn. 18 [x])

- b. **J'en* veux que tu manges.
I of-it want that you eat
'I want you to eat some of it.'
(Pollock 1978: fn. 18, [xi])

- (13) *Ce genre de livre est difficile à vouloir qu'un enfant lise.
this kind of book is difficult to want that a child read

Second, speakers who accept (11) can also raise the quantifier out of the complement of clearly non-“restructuring” verbs (see [14a] and [14b], provided by Marie Christine Jamet and Pierre Pica, respectively).

- (14) a. Il n'a *rien* exigé que tu fasses.
he NEG has nothing demanded that you do
'He has demanded that you do nothing.'
- b. Ils auraient *tout* cru que je mangerais.
they would-have everything thought that I would-eat
'They would have thought that I would eat everything.'

Third, even speakers (like Jean-Yves Pollock) who allow Quantifier climbing with fewer predicates (thus not accepting, say, [14b]) still allow it from at least some non-“restructuring” verbs (see [15a] and [b]) and distinguish between extraction from an infinitive (possible), extraction from a subjunctive clause (possible to marginal), and extraction from an indicative clause (always impossible).¹²

- (15) a. Je lui ai *tous* promis de les lire.
I him have all promised to them read
'I promised him to read them all.'
(Pollock 1978: fn. 15)

- b. ??Je dis *tous* qu'ils partent.
I say all that they leave
'I say they all ought to leave (SUBJ).'
(Pollock 1978: 102)

- c. *Je dis *tous* qu'ils sont partis.
I say all that they are left
'I say that they have all left (IND).'
(Pollock 1978: 103)

I conclude that Quantifier climbing out of subjunctive clauses should be treated differently from other transparency effects such as *en* and *y* climbing, Long Movement in “easy-to-please” constructions (and Long Passive): namely, as an A-operator movement (not dependent on “restructuring”).¹³ In particular, I would like to ana-

lyze it in ways reminiscent of Kayne's (1998) analysis of the ambiguity of sentences like (16):¹⁴

- (16) I will force you to marry no one.

Kayne argues that the ambiguity in relative scope between *force* and *no one* in (16) is best captured through two different overt (rather than covert) leftward movements of the negative quantifier *no one*. One moves *no one* to the embedded Spec,NegP, which is in the scope of *force* (yielding the interpretation ‘I will force [on] you that there is no x such that you marry x’; see [17]); the other moves *no one* to the matrix Spec,NegP, which takes *force* in its scope (yielding the interpretation ‘There is no x such that I will force you to marry x’; see [18]):¹⁵

- (17) I will force you to marry no one → (neg phrase preposing)
I will force you to no one marry t → (VP-preposing)
I will force you to [marry t] no one

- (18) I will force you to marry no one → (neg phrase preposing)
I will no one force you to marry t → (VP-preposing)
I will [force you to marry t] no one

(11) involves an analogous overt movement of *tous*, *tout*, *rien*, *beaucoup* to the matrix sentence (in addition to their possible movement within the embedded one). The similarity between the two cases is supported by two facts. The first, noted by Sportiche (1996: 232, 1998: 316), is that quantifiers extracted from subjunctive *que* clauses “have matrix scope, not embedded scope.” Sportiche shows this with the minimal pair in (19). (In, [19a], but not [19b], *tous* necessarily takes scope over the embedded negation—as the paraphrases illustrate—and, I take it, over *falloir*.)

- (19) a. Il aurait *tous* fallu que tu ne les aies pas vus.
it would-have all been-necessary that you NEG them have not seen
'It would have been necessary that you see none of them.'

- b. Il aurait fallu que tu ne les aies pas *tous* vus.
it would-have been-necessary that you NEG them have not all seen
'It would have been necessary that you not see all of them.'

The second fact that supports the similarity is that (as noted in Kayne 1978: fn. 9) Quantifier climbing shows the same grammaticality pattern as *personne* (the analogue of *no one*). Just as overt extraction of *tous*, *tout*, *rien* (and other quantifiers) out of (selected) infinitives is accepted by all speakers, and out of subjunctive *que* clauses by only some (see [20]), so all speakers accept (21a), but only some (the same that accept [20b–c]) accept (21b–c).¹⁶

- (20) a. Je veux *tout* voir.
I want everything see
'I want to see everything.'

- b.%Je veux tout que tu leur enlèves.
 I want everything that you from-them take-away
 'I want you to take away everything from them.'
- c.%Je n' exige rien que tu fasses.
 I NEG demand nothing that you do
 'I demand that you do nothing.'

- (21) a. Je ne veux voir personne.
 I NEG want see nobody
 'I do not want to see anybody.'
 (Kayne 1978: fn. 9)
- b.%Je ne veux que tu vois personne.
 I NEG want that you see nobody
 'I want you to see nobody.'
 (Kayne 1978: fn. 9)
- c.%Je n'exige qu'elle voie personne.
 I NEG demand that she see nobody
 'I demand that she see nobody.'
 (Kayne 1980: 37)

Although the parallelism between (20) and (21) is enhanced in Kayne's (1998) overt movement analysis of *personne*,¹⁷ the extraction of *tous*, *tout*, *rien* (and other quantifiers) still differs from that of *personne* in not triggering (in his analysis) further movement of the remnant VP—whence the OV order. I take this difference between negative phrases like *personne* and quantifiers like *tous*, *tout*, and *rien* (which is especially acute in the contrast between *personne* and *rien*) to stem from the different positions they (come to) occupy. While (after Kayne 1998) we may take nonspecialized negative phrases to target Spec, NegP, there is evidence that *tous*, *tout*, *rien*, and so on, target (or, rather, are merged in) distinct specialized Spec positions, interspersed among various classes of adverbs (see Cinque 1999: 8, 119, and, for a finer-grained analysis, Vecchiato 1999).¹⁸

More technically (in Kayne's framework), the difference could reduce to the ability of Neg⁰ but not the heads of the projections that contain *tous*, *tout*, *rien*, *trop*, *beaucoup*, and so on, to raise to W, thus attracting the remnant VP to Spec, WP, though the reason for such a difference remains to be understood. An alternative would be to restrict the possibility of head raising (to W) to heads that attract an XP to their own Spec (Neg⁰) and to assume that *tous*, *tout*, *rien*, *trop*, *beaucoup*, and so on, are directly merged in the Spec of distinct functional projections, rather than being attracted there, even when they bind a variable. This seems to account for the fact that in sentence-internal position they can be either bare or modified/coordinated/focused, but in sentence-final position they must be modified/coordinated/focused. In a direct merger analysis of their sentence-internal position, that could be a consequence of VP-movement around them, motivated by their focus status (see Cinque 1999: sec. 1.4). Also note that, under the direct merger analysis, Relativized Minimality issues inherent in such putative multiple attraction cases as (22) do not even arise:¹⁹

- (22) Ils ont tous tout bien compris.
 they have all everything well understood
 'They all have understood everything well.'

Also note that (Long) Movement of *personne* appears possible in the same contexts that allow long extraction of *tous*, *tout*, *rien* (infinitives and subjunctives; see [21]) and impossible in contexts that do not (indicatives; see [23]):

- (23) a.*Je n'ai dit qu'il a vu personne.
 I NEG have said that he has seen nobody
 'I did not say that he saw anybody.'
- b.*Il n'a avoué qu'il a aidé personne.
 he NEG has confessed that he has helped nobody
 'He did not confess that he helped anybody.'

3. Adverb climbing

As opposed to en and y climbing and Long Movement in "easy-to-please" constructions, which are impossible out of subjunctive complements (recall [12] and [13]), Adverb climbing is apparently possible in that context (at least for speakers, like Pierre Pica, Jean-Yves Pollock, and one of the reviewers, who accept extraction of *tous*, *tout*, and *rien* out of the same contexts). See (24a–c).²⁰

- (24) a. Elle aurait mieux voulu que tu te compores.
 she would-have better liked that you yourself behave
 'She would have liked that you behave better.'
- b. Il faut très bien que tu te compores.
 it is-necessary very well that you yourself behave
 'It is necessary that you behave very well.'
- c. Il aurait mieux fallu que tu te compores.
 it would-have better been-necessary that you yourself behave
 'It would have been necessary that you behave better.'

4. "Restructuring" and non-"restricturing" configurations in French

We have seen that subjunctive *que* clauses discriminate between en and y climbing and Long Movement in "easy-to-please" constructions, on one hand, and Quantifier climbing and Adverb climbing, on the other. Only the latter are possible in that context. We also concluded that only the former are bona fide "restricturing" phenomena, as "restricturing" is never found, in Italian, across subjunctive (*che*) clauses.

Given this, we might expect there to be other contexts that allow Quantifier climbing and Adverb climbing while excluding en and y climbing and Long Movement

in "easy-to-please" constructions. and indeed such contexts exist. In each case we have independent evidence from Italian that the context in question is non- "restructuring." For example, the infinitival complements of (25), which allow Quantifier climbing out of them, are non- "restructuring," to judge from the Italian cases in (26):

- (25) a. Je lui ai *tous* promis de les lire.
I him have all promised to them read
'I promised him to read them all.'
(Pollock 1978: fn. 15)

- b. Elle a *tous* envie de les lire.
she has all desire to them read
'She feels like reading them all.'
(Kayne 1975: 26, fn. 28)

- c.(?)Tu n'as rien le droit de dire.
you NEG have nothing the right to say
'You have the right to say nothing.'
(Kayne 1975: 26, fn. 28)

- d. Il a *tous* été obligé de les lire.
he has all been obliged to them read
'He has been obliged to read them all.'
(Pollock 1978: 99)

- (26) a.*Non te *lo* avrà mica promesso di leggere.
not you it will-have not promised to read
'(He) will not have promised you to read it.'

- b.*L'ho voglia di leggere.
it have desire to read
'(I) feel like reading it.'

- c.*Tu non l'hai il diritto di dire.
you not it have the right to say
'You do not have the right to say it.'

- d.*Li è stati/o obbligati/o a leggere.
them is been obliged to read
'(He) has been obliged to read them.'

Significantly, the same contexts also allow Adverb climbing (see [27]) but crucially neither en and y climbing (see [28]) nor Long Movement in "easy-to-please" constructions (see [29]).

- (27) a. Il a *mieux* promis de se comporter.
he has better promised to himself behave
'He promised to behave better.'

- b. Elle a *très* bien envie de se comporter.
she has very well desire to herself behave
'She feels like behaving very well.'
- c. Tu as *mal* le droit de te comporter.
you have badly the right to yourself behave
'You have the right to behave badly.'

- d. Il a *mieux* Ctt obligé de travailler.
he has better been obliged to work
'He has been obliged to work better.'²¹

- (28) a.*Il en a promis de lire trois.
he of-them has promised to read three
'He promised to read three of them.'

- a.*Il y a promis d'aller.
he there has promised to go
'He promised to go there.'

- b.*Elle en a envie de posséder beaucoup.
she of-them has desire to own many
'She feels like owning many of them.'

- b.*Elle n'y a envie de rester.
she NEG there has desire to remain
'She does not feel like remaining there.'

- c.*Tu n'en as pas le droit de posséder beaucoup.
you NEG of-them have not the right to own many
'You do not have the right to own many of them.'

- c.*Tu n'y as pas le droit d'entrer.
you NEG there have not the right to enter
'You do not have the right to enter there.'

- d.*Il en a été obligé de lire beaucoup.
he of-them has been obliged to read many
'He was obliged to read many of them.'

- d.*Il y a Ctt obligé d'aller.
he there has been obliged to go
'He was obliged to go there.'

- (29) a.*Ce genre de livre est facile à promettre de lire.
this kind of book is easy to promise to read
(Kayne 1989b: 251)

- b.*Ce genre de livre est facile d'avoir envie d'écrire
this kind of book is easy to have desire to write
'This kind of book is easy to feel like writing.'

- e.*Cette richesse n'est pas facile d'avoir le droit de posséder.
 this wealth NEG is not easy to have the right to own
 'This wealth isn't easy to have the right to own.'
- d.*Ce livre est difficile d'être obligé de savoir par cœur.
 this book is difficult to be obliged to know by heart

I conclude that Quantifier climbing and Adverb climbing (as opposed to *en* and *y* climbing and Long Movement in "easy-to-please" constructions) do not depend on "restructuring." Their acceptability seems rather to depend on an *irrealis* context (infinitive or subjunctive vs. indicative), although the precise nature of this context (also at work, apparently, in the Icelandic case mentioned in note 12) remains to be investigated.²²

5. The apparent sensitivity of Quantifier climbing and Adverb climbing to "restructuring"

The conclusion that Quantifier climbing and Adverb climbing do not depend on "restructuring" (as shown by their application out of subjunctive and infinitive contexts that otherwise preclude bona fide "restructuring" phenomena such as *en* and *y* climbing and Long Movement in "easy-to-please" constructions) at first sight appears to miss a simple account of the differences between (2) and (3) and between (9) and (10), which indeed seemed to involve a contrast between "restructuring" and non-"restructuring" verbs. But this is illusory. If Quantifier climbing and Adverb climbing are restricted (to *irrealis* contexts) only when they apply across a clause boundary, being unrestricted in simple clauses, and if "restructuring" configurations are monoclausal (see chapter 1), the grammaticality of (2) and (9) is unsurprising. The ungrammaticality of (3) and (10) must then derive from the fact that such contexts neither are "restructuring" contexts nor belong to the restricted class of *irrealis* contexts that allow Quantifier climbing and Adverb climbing to extract from a complement clause.

The contrast between (30a) and (30b), noted by Pollock (1978: 98), appears perhaps amenable to the same account:²³

- (30) a.?Elle a tous semblé les avoir lus.
 she has all seemed them have read
 'She seemed to have read them all.'
- b.*Elle m'a tous semblé les avoir lus.
 she to-me has all seemed them have read
 'She seemed to me to have read them all.'

As Pollock observes, the presence of the dative argument of *sembler* blocks the climbing of *tous* and other quantifiers. This in itself is rather curious, as in other contexts a dative argument of the matrix verb does not block Quantifier climbing (see, e.g., [25a]: *Je lui ai tous promis de les lire* 'I promised him to read them all'; Pollock 1978: fn. 15).

The contrast in (30), I submit, is due to the combination of the following factors: *sembler* 'seem' is a "restructuring" verb (as *sembrare* is for many Italian speakers; see chapter 1: n. 27)—but, crucially, only when the verb has no internal arguments (as the evidence presented in chapter 1: sec. 4.1 for Italian suggests). This implies that only (30a) is a monoclausal configuration (whence the unrestricted application of Quantifier climbing). The ungrammaticality of (30b) derives, instead, from the fact that it is neither "restructuring" (owing to the presence of the dative argument) nor, plausibly, *irrealis*—a conclusion supported by the impossibility of extracting a quantifier from the finite counterpart of (30b) (and [30a], for that matter, even in the absence of a dative argument):²⁴

- (31) a.*Il me semble tous qu'elle les a lus.
 it to-me seems all that she them has read
 'It seems to me that she read them all.'
- b.*Il semble tous qu'elle les a lus.
 it seems all that she them has read
 'It seems that she read them all.'

Another contrast, noted by Bonneau and Zushi (1994: 30ff.), also appears reducible to the same account:²⁵

- (32) a. Combien est-ce que Jean a (à) tous voulu leur donner de vélos?
 how-many is it that Jean has (to) all wanted to-them give of bicycles
 'How many bicycles did Jean want to give to all of them?'
- b.*Combien est-ce que Jean a (à) tous voulu que tu leur donnes de vélos?
 how-many is it that Jean has (to) all wanted that you to-them give of bicycles
 'How many bicycles did Jean want you to give to all of them?'

Quantifier climbing, in interaction with the fronting of *combien*, gives rise to a violation in (32b), but not in (32a). (32a) can in principle be a "restructuring" configuration but not (32b), given the presence of the subjunctive complement. I suggest that a Relativized Minimality violation arises only in the non-"restructuring" configuration (32b) because it alone involves genuine extraction from a CP (the "restructuring" configuration being instead "monoclausal"; chapter 1). As both the extraction of the quantifier and that of *combien* apply successively cyclically (Rizzi 1990, Cinque 1990b), they come to compete for one and the same C "escape hatch." If this is so, we must conclude that the sensitivity of Quantifier climbing and Adverb climbing to "restructuring" is only apparent.

Notes

I wish to thank Rose-Marie Déchaine, Marie Christine Jamet, Pierre Pica, and Jean-Yves Pollock for patiently offering me their judgments and Richard Kayne and two anonymous reviewers for their comments on a previous version of this chapter.

1. This conclusion was rendered even more plausible by the observation that such transparency effects were all attested in French before the seventeenth century (Kayne 1978: 162).

2. This is not surprising if "restructuring" is a universal phenomenon dependent on the functional makeup of the clause (see chapter 1 earlier), with languages differing only in the way they overtly manifest it (in ways that remain largely to be worked out). Here I will not consider how best to account for the difference in "restructuring" effects found between Modern French and Italian (or between Old/Middle French and Modern French).

3. See Taraldsen 1981: 271ff., 1983: sec. 4.2, Haïk 1985: sec. 1.7.3, Watanabe 1993, Bok-Bennema and Kampers-Manhe 1994, Bonneau and Zushi 1994, Zushi 1995, De Cat 2000, Nicolis 2000.

4. This property of en and y appears to go together with their ability to occur separated from the verb (see [i] and [ii]). DP clitics do not have this ability (see [iii]), although Bonneau and Zushi (1994: fn. 1) report a case where le 'him' separated from the verb by bien 'well' is not entirely excluded (?*Elle veut le bien voir* ([Lit.] She wants him well see) 'She wants to see him well').

- (i) a. N'en presque rien dire...
NEG of-it almost nothing say
 'To say almost nothing about it...'
 (Kayne 1991: fn. 18)

- b. En (fort) bien parler...
 of-it (strong) well speak
 'To speak very well about it...'
 (Kayne 1991: fn. 18)

- c. N'en pas parler...
NEG of-it not speak
 'Not to speak about it...'
 (Kayne 1991: fn. 19, Sportiche 1996: fn. 22)

- d.?N'y plus en trouver serait surprenant.
NEG no-longer of-it find would-be surprising
 'To no longer find some there would be surprising.'
 (Kayne 1991: fn. 44)

- (ii) a.?J'aimerais mieux n'y point accéder.
 I would prefer **NEG** to-there at-all accede
 'I would rather not accede to it at all.'
 (Taraldsen 1983: 308)

- b.?Elle a décidé de n'en plus parler.
 she has decided to **NEG** of-it no-longer speak
 'She decided to no longer speak about it.'
 (Taraldsen 1983: 308)

- (iii) a.*J'aimerais mieux ne les point voir.
 I would prefer **NEG** them at-all see
 'I would rather not see them at all.'
 (Taraldsen 1983: 308)

- b.*Elle a décidé de ne lui plus adresser la parole.
 she has decided to **NEG** to-him no-longer speak

'She decided to no longer speak to him.'
 (Taraldsen 1983: 308)

5. It is also possible withfaillir 'to almost . . .', venir de 'to have just . . .', and *être* en train de 'to be -ing', to which no "restructuring" verbs correspond in Italian, but which are nonetheless arguably "functional," corresponding to the so-called Prospective, Retrospective, and Progressive aspects, respectively (see Cinque 1999 and chapters 1 and 3 earlier).

En and y climbing actually appears to be more restricted, for some speakers, than Long Movement in "easy-to-please" constructions. A reviewer finds a contrast between (8a–b) and (i)–(ii), judging the latter to be ungrammatical:

- (i) a.*Il en a commence à lire trois.
 he of-them has started to read three
 'He started to read three of them.'

- b.*Il y a commencé à penser.
 he of-it has started to think
 'He started to think of it.'

- (ii) a.*Il en a su où classer trois.
 he of-them has known where classify three
 'He knew where to classify three of them.'

- b.*Il y a su quand penser.
 he of-it has known when think
 'He knew when to think of it.'

This state of affairs finds an analogue in Italian, where transparencies that involve non-third-person DPs (climbing of *ne*, *ci*, etc.) are also possible with fewer "restructuring" verbs than cases that involve third-person DPs (climbing of *lo*, Long Object Preposing in *si* and "easy-to-please" constructions). See chapter 1: fn. 27 and (iii)–(vi):

- (iii) a. *Lo* scordò di fare anche lui.
 it (he) forgot to do also he
 'He too forgot to do it.'

- b. Certe cose non si scordano mai di fare.
 certain things not **SI** forget never to do
 'One never forgets to do certain things.'

- c.?Questo è facilissimo da scordare di fare.
 this is most-easy to forget to do
 'This is very easy to forget to do.'

- (iv) a.*Ne scordò di parlare.
 about-it (he) forgot to talk
 'He forgot to talk about it.'

- b.*Ci scordò di andare.
 there (he) forgot to go
 'He forgot to go there.'

- (v) a. Non lo so dove mettere.
 not it (I) know where put
 'I don't know where to put it.'

- b. *Certe cose non si sanno mai dove mettere.*
 certain things not SI know never where put
 'One never knows where to put certain things.'

- c.?*Questo non è facile da saper dove mettere.*
 this not is easy to know where put
 'This is not easy to know where to put.'

- (vi) a.**Non ne sa dove parlare.*
 not about-it know where talk
 'He doesn't know where to talk about it.'
- b.**Non ci sa come andare.*
 not there knows how go
 'He doesn't know how to go there.'

Whatever principle derives this difference will also account, it seems, for the difference between (8) and (i)–(ii) noted by the reviewer. Thus, (ii) provides no evidence against the monoclausal nature of (8b) (for which see chapter 1: sec. 3.3).

6. Kayne suggests that this restriction may be due to the (covert) movement of a null pronominal clitic (as opposed to the null operator of the corresponding English construction).

7. The adverbs involved include manner adverbs and other lower adverbs like *ne plus* 'no longer', *jamais* 'never', and *toujours* 'always', though exactly which adverbs participate in this construction remains to be investigated.

8. Modern French actually displays another "restructuring" effect: "Long Passive" (Grevisse 1993: 1124–1125, Rochette 1988: 245, fn. 23, chapter 1, n. 47, and chapter 2), which is possible only with "restructuring" predicates:

- (i) a. une boite qui n'était pas tout à fait finie d'installer
 a box that NEG was not completely finished to install
 'a box that was not completely finished being installed'
- b. Le château n'était pas achevé de meubler.
 the castle NEG was not finished to furnish
 'The castle was not finished being furnished.'

I leave this effect aside here, as it is found only with a subset of "restructuring" verbs, as in Spanish, Japanese, and Italian (see Aissen and Perlmutter 1983, Nishiguchi 1993, chapter 1; and see chapter 2 also, as well as Taraldsen 2002, for a possible account of such a restriction in Romance versus Germanic).

9. De Cat (2000: fn. 37) indeed reports that none of her eleven informants accepted Quantifier climbing out of subjunctive complements.

10. In the analysis of "restructuring" proposed in chapter 1, (11) is unexpected for two reasons: (1) because Quantifier climbing spans two clauses, and (2) because it applies (at least with *vouloir*) across an embedded subject distinct from the matrix subject (a non-"*restructuring*" configuration). Cases such as (11) appear to be different from the Salentino and Serbo-Croatian cases discussed by Terzi (1992, 1996): first, because the apparent finite form of the verb in the latter languages, but not in French, is a surrogate form of the infinitive (which is either nonexistent or highly restricted in use); and, second, because the embedded subject in the latter languages not only must be identical to the matrix subject but also must be unpronounced (see chapter 1, sec. 3.3, for a "*monoclausal*" analysis of such cases in Salentino and Serbo-Croatian).

11. Bonneau and Zushi (1994) and Déprez (1997) also conjecture that (11) should perhaps receive a separate treatment.

12. This recalls quantifier(phrase) movement in Icelandic as described by Svenonius (2000) (see also Kayne 1998: 141 and references cited there). According to Svenonius's description:
- All speakers allow a quantifier to cross an infinitival/participial clause boundary (complement of certain verbs) (pp. 266–267):

- (i) a. þorgerður mun lítið borda.
 þorgerð will little eat
 'þorgerð will eat little.'
- b. Eyþór getur ekkert gert.
 Eyþór can nothing done
 'Eyþór can't do anything.'
- c. Hann mun mikið hafa viljað lesa.
 he will much have wanted read
 'He has wanted to read much.'
- d. Hann hefur margar bækur lofað að lesa.
 he has many books promised to read
 'He has promised to read many books.'

- Some speakers allow a quantifier to cross a subjunctive clause boundary (complement of certain verbs) (p. 267):

- (ii)%Hún hafði margt viljað að hann gæti keypt.
 she had many wanted that he could.SUBJ bought
 'She had wanted him to be able to buy many.'

- No speakers allow a quantifier to cross an indicative clause boundary (pp. 267—268):

- (iii) *Hún hefur lengi margt vitað að hann getur keypt.
 she has long many known that he can bought
 'She has long known that he could buy many.'

A further resemblance between the two languages is that quantifier (as opposed to wh-) movement cannot extract a subject from a subjunctive clause:

- (iv) a.*Hún hafði marga stelpur viljað að kæmu í veisluna.
 she had many girls wanted that came in-the-party
 'She had wanted many girls to come to the party.'
 (Svenonius 2000: 270)
- b.*Je veux tout que/qui leur soit enlevé.
 I want everything that from-them be taken-away
 'I want everything to be taken away from them.'
 (Kayne 1981: sec. 4.2.1)

13. See Sportiche 1988, where it is suggested that *L-tous* is overt Quantifier Raising (QR).

14. That cases such as (i) might be similar to (16) is also suggested by Kayne (1998:141):

- (i) Il n'a rien fallu que je fasse.
 it NEG has nothing been-necessary that I do
 'It was necessary that I do nothing.'

15. I abstract away here from the further raising of Neg⁰ to the abstract head W introduced later in Kayne (1998).

16. Jean-Yves Pollock tells me that to his ear (20a) and the like are ambiguous in terms of scope. *Tout* may have narrow or wide scope with respect to *veux*. This suggests (1) that *tout* is merged below *veux* (in which case it has narrow scope) and (2) that it may move to a position to the left of *veux* (in which case it has wide scope), with *veux* subsequently moving past it on its way to T (a movement that is known not to alter scope relations). Expectedly (if past participles remain lower), he finds a definite preference for *tout* to take wide scope in (ia) and narrow scope in (ib):

- (i) a. J'ai tout voulu revoir.
I have everything wanted see-again
'I wanted to see everything again.'
- b. J'ai voulu tout revoir.
I have wanted everything see-again
'I wanted to see everything again.'

17. See, for example, the derivation that (21b) receives:

- (i) je ne veux que tu vois personne → (neg phrase preposing)
je personne ne veux que tu vois t → (VP-preposing)
je [ne veux que tu vois t] personne (%)

18. On the basis of their partial relative order (and of other considerations), Vecchiato (1999) arrives at the following (sub)hierarchy: ... > *guère* > *trop* > *rien* > *complètement* > *tout* > *beaucoup/peu* > *bien* > ...

19. Contrasts with respect to quantification at a distance like (ia–b) (vs. [iia–b] and [iiia–b]), which show that *beaucoup* can be interpreted only "in situ," and not in the "reconstructed position (Obenauer 1984/85), may be taken as further evidence for direct merger (vs. movement) of *beaucoup* (and similar quantifiers) (see Kayne 1975: 29ff, but also 2002a: sec. 2):

- (i) a. Il a beaucoup rencontré de collègues.
he has many met of colleagues
'He met many colleagues.'
- b.*Il a beaucoup apprécié de collègues.
he has many appreciated of colleagues
'He appreciated many colleagues.'
- (ii) a. Combien a-t-il rencontré de collègues?
how-many has he met of colleagues
'How many colleagues did he meet?'
- b. Combien a-t-il apprécié de collègues?
how-many has he appreciated of colleagues
'How many colleagues did he appreciate?'
- (iii) a. Il a rencontré beaucoup de collègues.
he has met many of colleagues
'He met many colleagues.'
- b. Il a apprécié beaucoup de collègues.
he has appreciated many of colleagues
'He appreciated many colleagues.'

20. Bok-Bennema and Kampers-Manhe (1994: 205) claim that Adverb climbing is not allowed out of subjunctives, but they cite no source, nor do they give any examples. It is of

course to be expected that just as some speakers reject (11) (see note 9), so some will reject (24). Whether the order in (24) depends on scope (as seems to be the case with *tous*, *tout*, *rien*) is much less clear.

21. Adverb climbing in this context is apparently less good with other embedded verbs (Jean-Yves Pollock, Marie Christine Jamet, personal communications):

- (i) *Il a mieux été obligé de se comporter.
he has better been obliged to himself behave
'He has been obliged to behave better.'

22. See Haspelmath (1989: 298–299), where irrealis complements are characterized as those that the speaker presents as not realized or for which there is no guarantee that they will be realized.

Concerning Quantifier climbing and Adverb climbing, I have found two contexts where apparently they do not pattern alike (see [i] and [ii]), but I will not explore this dissociation further here. (I point out a similar context in note 24.)

- (i) a. J'ai tous été ravi de les voir.
I have all been enthusiastic to them see
'I was enthusiastic about seeing them all.'
- b.*Il a très bien été ravi de se comporter.
he has very well been enthusiastic to himself behave
'He was enthusiastic about behaving very well.'
- (ii) a. Je n'ai rien promis que je ferais.
I NEG have nothing promised that I would-do
'I promised that I would do nothing.'
- b.*J'ai mieux promis que je travaillerais.
I have better promised that I would-work
'I promised that I would work better.'
- (iii) a.*J'en ai été ravi d'acheter beaucoup.
I of-them have been enthusiastic to buy many
'I was enthusiastic about buying many of them.'
- a'.*J'y ai été ravi d'aller.
I there have been enthusiastic to go
'I was enthusiastic about going there.'
- b.*Ce livre est difficile d'être ravi d'avoir lu.
this book is difficult to be enthusiastic to have read
'This book is difficult to be enthusiastic about having read.'
- (iv) a.*J'en ai promis que je ferais beaucoup.
I of-them have promised that I would-do many
'I promised that I would do many of them.'
- a'.*J'y ai promis que je travaillerais.
I there have promised that I would-work
'I promised that I would work there.'

As expected (given their non-“restructuring” nature, to judge from Italian), these contexts also exclude *en* and *y* climbing and Long Movement in “easy-to-please” constructions:

- b.**Ce livre est facile à promettre que je lirais aux enfants.*
 this book is easy to promise that I would-read to-the kids

Another context where Quantifier climbing and Adverb climbing do not pattern alike is (v), pointed out by a reviewer (this, to judge from Italian, is also a non-'restructuring' context; see chapter 1: sec. 3.3).

- (v) a.**Il a bien su quand se comporter.*
 he has well known when himself behave
 'He knew when to behave well.'
- b. *Il a tous su quand les lire.*
 he has all known when them read
 'He knew when to read them all.'

For the same reviewer, (27), with Adverb climbing, is also slightly worse than (25), with Quantifier climbing (thus echoing the contrasts in [i], [ii], and [v]). But for this reviewer the contrast with (28) remains quite sharp.

23. One reviewer does not find a contrast between (30a) and (30b) (instead finding both marginally possible). The same reviewer also assigns the same status to (3a–c), which might suggest that for this reviewer the conditions under which Quantifier climbing takes place are somewhat more liberal than Pollock's.

24. However, Jean-Yves Pollock (personal communication) finds no comparable contrast with ,Adverb climbing in the same context:

- (i) a. *Il a très bien semblé s'être comporté.*
 he has very well seemed himself be behaved
 'He seemed to have behaved very well.'
- b. *Il m'a très bien semblé s'être comporté.*
 he to-me has very well seemed himself be behaved
 'He seemed to me to have behaved very well.'

25. (32b) has in fact been slightly modified following a reviewer's suggestion, to make the pair more minimal. The reviewer points out that the significance of the contrast between (32a) and (32b) may be somewhat diminished by the fact that the climbing of dative *tous* out of subjunctive clauses is already a bit marginal:

- (i)??*Il a tous voulu que tu leur présentes des filles.*
 he has all wanted that you to-them introduce some girls
 'He wanted you to introduce some girls to all of them.'

Issues in Adverbial Syntax

1. The functional nature of adverbs

The question how adverbs (and adverbials, more generally)¹ integrate into the structure of the clause has been, and continues to be, a moot question.

In work of the early 1990s, later merged into Cinque (1999), I suggested that adverbs should not be seen as accessory appendices to clause structure (as the traditional notion of "adjunct" would suggest) but rather as an integral part of it, despite their general optionality. Much as inflectional morphology, functional particles, and auxiliaries were at the time considered to be the overt manifestation, in head format, of the functional portion of the clause, AdvPs, I argued, could be seen as the overt manifestation of the same functional distinctions in specifier format. The main evidence for their belonging to the functional makeup of the clause was the observation that cross-linguistically the number and type of the different classes of AdvPs and their relative order appears to exactly match the number, type, and relative order of functional heads morphemes (see Cinque 1999: chaps. 2, 3, and 4).²

Recently a number of works have appeared that argue for a return to the traditional "adjunct" approach, and against what we might call the functional specifier approach.³ These works notwithstanding, there are, I think, reasons to retain the "functional specifier" approach. Before considering such reasons, let me mention two additional clues in favor of the functional nature of adverbs. They come from the study of sign languages and language acquisition.

In sign languages, lexical information conveyed by verbs and noun phrases is characteristically expressed manually, while functional information (e.g., negation,

agreement, aspect, etc.) characteristically has both a manual and a nonmanual marking (sometimes just a nonmanual marking). See Neidle et al. (2000: chap. 3). Interestingly, adverbs in both American Sign Language (Neidle et al. 2000: 42f, Neidle and MacLaughlin 2002: sect. 3.3.3) and Italian Sign Language (Zucchi 2002) typically have both a manual and a nonmanual marking (with some adverbs, for some speakers, having just a nonmanual marking). The strong similarity between them and agreement, aspect, and negation in the way they are expressed (manually *and* nonmanually or just nonmanually) again suggests that they should be assimilated to the functional rather than the lexical portion of the clause.

Work on first language acquisition of functional elements and of adverbs suggests a similar conclusion. Just as the acquisition (or maturation) of aspectual distinctions precedes that of temporal ones (Antinucci and Miller 1976, Weist 1986, Schlyter 1990), so are lower aspectual adverbs apparently acquired earlier than temporal (and still higher) ones. In a longitudinal study of a group of bilingual Swedish/French children, Schlyter (2001) reports that "[i]n the initial stages (MLU around 2) of the children (bilingual L1 acquirers), we do not find any evidence for adverbs other than the most low-level ones. In the next stage (MLU around 3), adverbs specifying intermediate categories—aspect of different kinds—appear, and later (MLU around 4), adverbs specifying still higher F(unctional) C(ategorie)s, such as Tense, appear. The adverbs appear simultaneously with the corresponding evidence from verb morphology for the same categories" (section 7). Whether or not such findings can be construed as evidence for a genetically determined order of maturation of functional categories (Ouhalla 1991b, cited in Clahsen, Eisenbass, and Vainikka 1994: 87), hence "as evidence for some kind of Non-Continuity or Weak Continuity Hypothesis and, since the FCs seem to appear gradually, for a Structure Building Model" (Schlyter, *ibidem*), they do show that the emergence of adverbs in first language acquisition is closely tied to that of the functional heads they correspond to; another indication of the intrinsic functional character of adverbs.⁴

2. Semantic scope and the "adjunct" approach

As already mentioned, a number of works have recently appeared that purport to show the superiority of the traditional adjunct analysis of adverb (and adverbials) over the "functional specifier" analysis. Their basic claim is that if the relative order among adverbs is attributed to independent semantic scope principles (belonging to the conceptual-intentional interface), their syntax can be drastically simplified, by essentially allowing, as in the traditional approach, free adjunction to any category (see, e.g., Ernst 2002: 13).

Appealing though it is in its simplicity (actually tempered in analyses like Ernst's by the necessary addition of lexical specifications for individual adjuncts and of principles of Directionality and Weight—see Ernst 2002: 97 and 441), this approach falls short, I think, of accounting for certain crucial properties of adverbial syntax.⁵

As hinted at in Cinque (1999: 224, fn. 10 and related text), a purely semantic scope principle of the conceptual–intentional interface provides by itself no understanding of why we find in the languages of the world the specific classes of adverbs

(and corresponding functional heads) that we find, rather than some different assortment. Surely there are many more semantic notions in our conceptual–intentional world than those that receive grammatical expression (are grammaticalized) in the languages of the world. So, for example, one finds evidential adverbs and evidential mood morphology (expressing the speaker's source of information for his/her assertion), but as far as I know no language grammaticalizes, through verbal morphology, particles, or adverbs, the speaker's sentimental attitude toward his/her assertion (whether what he/she says is said with love or with hate: e.g., *John is lovingly a coward*= I am saying it with love that John is a coward), nor many other imaginable notions. Clearly, it is an "accident" of evolution if UG has come to look the way it looks, with certain functional distinctions (and related adverb classes) rather than others. This must be encoded in the functional portion of the UG lexicon, and it seems reasonable to require that there be a formal means to relate the functional head distinctions to the corresponding AdvP distinctions, irrespective of the possibility that the relative scope relations among such UG entities ultimately reflect a more general cognitive order of scope among them.

But there is a more fundamental property that a purely semantic scope approach falls short of accounting for. Although it is certainly reasonable to take the relative order between two adverbs to be related to their relative semantic scope (hardly anyone refutes this possibility in principle), the relative order between a single adverb and the verb, or a single adverb and one of the arguments of the clause, does not seem to lend itself to a similarly simple account in terms of semantic scope. Consider briefly the first case. As discussed in Cinque (1999: chap. 2 and appendix 1), lexical verbs in Romance appear to have a different distribution vis-à-vis the adverbs with which they occur, though invariably falling under their scope. This depends on their form (whether they are finite, infinitival, participial, etc.) and on the type of language considered. For example, French active past participles can precede fewer adverbs than French infinitival (and finite) verbs,⁶ and fewer adverbs than Italian active past participles.⁷ These generalizations, and many others similar to these, are all implicational in nature. This means that if a certain verbal form, in a certain language, can precede Adv, then it will necessarily be able to precede all Advs that, when co-occurring with Adv, follow Adv_i.

Such verb/adverb interactions cannot be directly, and naturally, expressed in terms of the relative semantic scope of adverbs, plainly because they involve each time a *single* adverb (and the verb). The relation, which is indirect, must be mediated by structure, it seems.

If adverbs are arranged hierarchically in a syntactic structure that contains verb and argument positions and if verbs raise to different verbal positions interspersed among the adverbs depending on the particular type of language and the particular verbal form involved, then such implications are easily and naturally expressed, as shown very schematically in (1):

(1)	Adv ₁ Adv ₂ Adv ₃ Adv ₄ Adv ₅ Adv ₆ Adv ₇ Adv ₈ Adv ₉ Adv ₁₀ Adv ₁₁ Adv ₁₂ Adv ₁₃ . . .	[vp V]
	French	
	finite V	
	Italian	
	active past part.	
	French	
	Infinitival V	
	French	
	active past part.	

The same implicational generalizations would also fail to be naturally captured, it seems, in a system that postulated just two projections, say TP and VP, and free multiple adjunction of adverbs to one or the other (with obligatory raising of V to the higher head to account for the necessary postverbal positioning of at least some classes of adverbs: *bene* 'well', *presto* 'early' in Italian, *tôt* 'early' in French, etc.).⁸ Eric Groat (personal communication, 1998), and Svenonius (2002) correctly pointed out that a system with just two adjunction sites would be able to accommodate the same basic facts as Cinque (1999) without postulating all the functional projections (and their empty heads) needed to host the adverbs, which in that system fill a separate (and unique) specifier; but, I add, it would do so at the cost of missing a natural account for the implicational generalizations just mentioned. Why, for example, should the number of AdvPs that can be adjoined to TP (with the effect of preceding the V) be dependent on the form of the V that raises to T? In French, for instance, most of the adverbs would be able to adjoin to TP if T contains a participial V, whereas fewer would be able to adjoin to TP if T contains a finite V (and the dialectal variation in this regard is quite formidable).⁹

In Cinque (1999: chap. 2) I proposed that the aforementioned implications could be captured by assuming V to raise to (progressively higher) head positions interspersed among the adverbs.¹⁰ Comparable remarks hold for the ordering restrictions between adverbs and arguments (and their interpretation). Once again the putative semantic principle that governs the scope relation between two adverbs would have nothing to say about the order of the subject, or the direct object, with respect to each single adverb in a language or the different orders among them found in different languages. For discussion, see Cinque (1999: chap. 5).

Frey (2000: 113, 132) makes a similar point. In German, existentially interpreted wh-phrases (which resist scrambling) show the existence of a rigid ordering between temporal adjuncts and the subject (2a–b), and between the subject and place adjuncts (3a–b):

- (2) a. daß **wann** **wer** das Zimmer aufräumen wird . . .

that sometimes someone the room tidy up will . . .
- b.*daß **wer** **wann** das Zimmer aufräumen wird . . .
- (3) a. weil **wer** **wo** das Buch verloren hat..

because someone somewhere the book lost has . . .
- b.*weil **wo** **wer** das Buch verloren hat . .

Again it seems that a semantic scope principle for adjuncts falls short of accounting for such restrictions, which can instead be naturally captured in a hierarchical structure where there are dedicated positions for arguments interspersed among the positions occupied by the adverbs.¹¹

The picture that is emerging from a rich line of "cartographic" research is that the structure of the clause (as well as that of the other major phrases) may be highly articulated and, perhaps more important, rigidly fixed across languages.¹² In such

structure, particular "zones" begin to be recognized: for example, a higher CP zone, which is currently being intensely investigated (see Rizzi 1997, 2001, 2004c, and references cited there, Beninch 1996, 2001, Poletto 2000; Beninch and Poletto 2004, Munaro 2002). Here distinctions in clause typing and informational structure are represented, among others. Immediately below is a zone where evaluative, evidential, and epistemic operators are present that imply the existence of a proposition represented in a still lower zone that comprises the tenses, and various aspect, modal, and voice phrases. The latter dominate the nucleus of the event represented by the lexical verb, its arguments, and additional participant adjuncts (Cinque 1999 and chapter 6 here).¹³ Even if such organization of the clause may ultimately prove to reflect the semantic necessity for certain notions to be in the scope of other notions, it does not follow that Narrow Syntax should be amorphous. Similarly, the fact that identical ordering conditions hold among adverbs in the clause (. . . probably quickly . . .), and the corresponding adjectives in the DP (. . . probable quick . . .) is no argument to impose the poorest structure possible (adjunction).¹⁴

For the reasons cited earlier, I will continue to assume that adverbs, when present in the numeration, are merged ("base generated) under a checking relation with the corresponding functional head of the clausal hierarchy, which I take to be obligatorily part of the numeration (like the prototypical T and C are for Chomsky 1995: 240). When no adverb is part of the numeration (hence merged), I take the corresponding functional head to receive the default interpretation (see Cinque 1999: sect. 6.1).

In addition to the semantic scope argument just reviewed, other arguments have been raised against the "functional specifier" approach. But they, too, lack cogence, in my opinion.

3. Some apparent problems of the "functional specifier" approach

3.1. Coordination of different classes of adverbs

Costa (2000: 21) claims that the apparent possibility of coordinating adverbs of different semantic classes, like the frequency and manner adverbs in (4), is at odds with the idea that they belong to distinct specifier positions:

- (4) O Paulo l6 frequentemente e simpaticamente o livro à avo

P. often and nicely reads the book to the grandmother

As already noted in Cinque (1999: 211, fn. 72) for similar examples in Italian, such cases may involve not coordination of AdvPs but of larger constituents, with a reduced second conjunct, and "Right Node Raising" in the case of (4) (which makes it more marginal in Italian). This appears confirmed by the fact that the two adverbs resist being coordinated (in Italian) in those "edge coordinations" (Bianchi and Zamparelli 2002) that appear to impose a stricter parallelism requirement on the paired focused constituents:

- (5) a.*?Gianni legge non frequentemente ma simpaticamente il libro alla nonna
 G. reads not frequently but nicely the book to the grandmother
- b.*?Gianni legge sia frequentemente che simpaticamente il libro alla nonna
 G. reads both frequently and (lit. 'that') nicely the book to the grandmother

Topicalized cases such as (6), for which a parenthetical reading of the second conjunct is difficult, also show that the two adverbs cannot be directly coordinated:

- (6)*?Frequentemente e simpaticamente, non glielo legge
 Frequently and nicely he does not read it to her

It thus seems that cases like (4) are not incompatible with the "functional specifier" approach.¹⁵

3.2. Adverbs as "complements"

In Cinque (1999: sects. 1.3–4 and chap. 2) I discussed some evidence for taking the postverbal position of adverbs in cases such as (7)a–b to be a consequence of the leftward movement of VP (or of a phrase larger than VP) across the adverb, itself merged in a specifier position above VP, modifying Larson's (1988: sect. 2.3, 1990: sect. 3.2)' original "Light Predicate Raising" analysis.¹⁶ If this is correct, the adverbs in (7), which McConnell-Ginet (1982), Larson (1988: fn. 11), Stroik (1990), and others take to be sisters of V, can actually be in specifier position, like all others, thus presenting no problem for the "functional specifier" approach:

- (7) a. John saw Mary *recently*
 b. He hasn't completely ruined it *yet*

But the very existence of cases such as (8), where the adverbs apparently function as obligatory complements of the verb (Alexiadou 1997: sect. 5.1.1), seems to be much more problematic for the "functional specifier" approach:¹⁷

- (8) a. Pat behaved "(rudely) to John
 b. Pat treated John *(badly)

Note, however, that even under a Larsonian analysis of the VP, complements can be merged in specifier positions. For example, this is true of a direct object in the presence of a PP: [I *treated_k*[John [t_k with respect]]]. So, nothing prevents an adverb in specifier position from being obligatorily selected by the verb, depending on the verb's semantics. Indirect evidence that this is correct for the manner adverb that co-occurs with the verb treat comes from the following facts:¹⁸

- (9) a. Everybody has treated them *badly*
 b.*Everybody has *badly* treated them
 c. (?)They have been *badly* treated by everybody

The relative well-formedness of (9c), versus the ill-formedness of (9b), can be made sense of if the adverb is merged in a specifier position to the left of the verb (its selected status notwithstanding) and if the passive participle can stop below it (possibly in VoiceP) while the active participle necessarily crosses it in its movement to a higher position (possibly Perfect AspectP). See Cinque (1999: 102f).

If so, adverbs apparently acting as obligatory complements of a verb provide no evidence against the merger of adverbs in specifier position.¹⁹

3.3. Apparent nonrigid ordering of adverbs

It has been claimed (e.g., Ernst 2002: sect. 3.5, among others) that the relative order between two adverbs is not always rigid and that this provides an argument for the "Scope theory" and against the "functional specifier" approach.

While he concedes that the relative order among speaker-oriented adverbs is rigid, he claims that the order between an adverb like *frequently* and such other adverbs as *wisely*, *suddenly*, *already*, and *willingly* is not (p. 120), because both orders are admitted. See, for example, (10):²⁰

- (10) a. She frequently was suddenly (being) rejected by publishers
 b. She suddenly was (being) frequently rejected by publishers

No such conclusion is, however, warranted, as independent evidence exists that *frequently/often/rarely/and so forth* occur in two distinct positions, one above and one below *wisely*, *suddenly*, *already*, *willingly* (and other adverbs). See Cinque (1999: 26ff, 92f), who cites the simultaneous occurrence of two such adverbs in the same sentence as one of the arguments for this conclusion:

- (11) a. Gianni raramente esce con la stessa persona spesso 'G. rarely dates the same person often'
 b. She rarely/often/frequently was suddenly (being)frequently rejected by the publishers

Selection, with *suddenly*, of only the higher, or only the lower, instance of *frequently* ([10a–b]) may give the mistaken impression that the two are freely ordered.²¹

These cases are not so different from the well-known cases of adverbs like *stupidly*, *rudely*, and *so forth*, which depending on interpretation (manner- or subject-oriented) come to occupy different positions in the structure of the clause (cf. Cinque 1999: 19f and references cited there). The fact that there is a systematic relation between these two usages may suggest (rather than ambiguity or, worse, homonymity) the existence of a common core between the two interpretations. If the lexical item only expresses this common core, it is underspecified with respect to the two positions, hence compatible with both.

Underspecification may also play a role in some differences among languages. For example, Italian *presto* renders English *soon* (*Presto* la sveglieranno 'Soon they will wake her up'), (certain usages of) *quickly* (*Fallo presto!* 'Do it quickly!'), and *early* (*La sveglieranno presto* 'They will wake her up early'), coming to occupy

different positions in the clause depending on its interpretation (see, in particular, the order of *presto* with respect to the verb when it means "soon" and when it means "early"). Again it is tempting to see this as a consequence of a common meaning component shared by *soon*, *early*, and *quickly*, which also have additional properties specific to each. Languages may differ according to whether they associate an underspecified word (*presto*) with just the common meaning component (which is thus compatible with the more specific interpretations) or associate two or three fully specified words, thus capitalizing on the specific differences among the three positions. See Vagnaduzzo (2000) for a similar idea concerning the various usages of *ancora* 'still, yet, more, again' in Italian.

Presto may also give the impression of being freely ordered with respect to other adverbs (see [12a–b]), but this is again illusory, as it shows different interpretations depending on the position it occupies (the 'soon' interpretation being higher than the 'early' interpretation):²²

- (12) a. *Maria sveglierà sempre presto i suoi bambini*
'M. will always wake up her children early/*soon'
- b. *Maria presto sveglierà sempre i suoi bambini*
'M. will soon/*early always wake up her children'

3.4. Stacked adverbials

Haider (2000: 104f) claims that the stacking of adverbials seen in (13a–d) is problematic for the "functional specifier" approach because, being in different specifiers, either they do not form a constituent or, if they do, the constituent is a remnant XP that contains the trace of V, which "is not in the c-command domain of the verb in the V2-position" (also see Haider 2004: sect. 2.3):

- (13) a. *Letzes Jahr im Juni an einem Sonntag kurz vor Mittag rief er alle an*
Last year in June on a Sunday shortly before noon he phoned all up
- b. *In der Küche neben den Tisch auf dem Boden unter einem Tuch fand er es*
In the kitchen besides the table on the floor under a cloth found he it
- c. *Abends wegen des Staus hat er diesen Platz gemieden*
(In the) evening because of the (traffic) congestions has he this place avoided
- d. *Gestern im Hörsaal als der Vortrag begann hustete er wie verrückt*
Yesterday, in the lecture room, when the lecture started, coughed he like mad

That such examples raise a problem for the "functional specifier" approach is not obvious. For one thing, these cases may not be of the same kind. (13a–b) seem to instantiate one (temporal or locative) phrase composed of progressively further specified PPs of the same type. (13c–d) instead involve PPs of different types (temporal and reason, or temporal and locative). In the first case, the PPs appear to be subject to tighter constraints (which possibly indicates that they are merged together as a constituent, though that remains to be ascertained).²³ They can be separated only by

fronting the PP that expresses the larger domain (I exemplify this with the locative case, in Italian):

- (14) a. *E' in cucina che lo tiene dentro un cassetto*
'It's in the kitchen that he keeps it inside a drawer'
- b. **E' dentro un cassetto che lo tiene in cucina*
'It's inside a drawer that he keeps it in the kitchen'

Very different is the second case, again exemplified with Italian. Besides moving together ([15a], either PP can be fronted stranding the other [15b–c]):

- (15) a. *E' di sera a causa del traffico che Gianni non esce di casa*
'It's in the evening because of the traffic that he doesn't go out'
- b. *E' di sera che non esce di casa a causa del traffico*
'It's in the evening that he doesn't go out because of the traffic'
- c. *E' a causa del traffico che non esce di casa di sera*
'It's because of the traffic that he doesn't go out in the evening'

The fact that the clefted PPs in (15) are necessarily outside the scope of negation suggests that they (and perhaps the two PPs in [13c–d]) form a constituent not because they are merged together but because they are fronted together as part of a remnant, after having been merged clause-initially (outside of the scope of negation):

- (16) a. *Di sera, a causa del traffico, Gianni non esce di casa* →
'In the evening, because of the traffic, G. does not go out'
- b. *[Gianni non esce di casa], di sera, a causa del traffico* →
'G. does not go out in the evening because of the traffic'
- c. *E' [di sera, a causa del traffico t], che Gianni non esce di casa t*
'It's in the evening, because of the traffic that G. does not go out'

If something along these lines is correct, there may be no trace of the finite V within the constituent in first position in (13) and consequently no incompatibility with the "functional specifier" approach.

3.5. "Edge effects" with preverbal adverbials in head-initial languages

Haider (2000) (see also Haider 2004: sect. 2.2) claims that the constraint against post-head material with preverbal adverbials in head-initial versus head-final languages exemplified in (17a) versus (17b) (what he calls edge effects) provides another problem for the "functional specifier" approach, since "[e]dge effects are unknown for phrases in spec-positions, as e.g., phrases in Spec-C or Spec-I" (p. 100) (cf. [18] and [19]), though he acknowledges that the effect "is caused by (not yet fully understood) properties of head-initial structures" (p. 99).²⁴

- (17) a. He has more carefully (*than anyone else) analyzed it
 b. Er hat es sorgfältiger (als jeder andere) analysiert
- (18) How many more people (than you thought) came to the party?
- (19) Many more people (than I thought) came to the party

I think the argument does not carry much force, as little is understood of this effect. I will nonetheless venture an analysis that is compatible with the generation in Spec of adverbs, one that capitalizes on the correlation with head-initiality and head-finality (assuming it to be basically correct).

Suppose, we follow Kayne (2002a), and previous work of his, in taking prepositions/complementizers like than and *als* not to be merged with their ultimate complement but higher up in the structure, as shown in the simplified (20a–b):

- (20) a. . . als . . . [sorgfältiger jeder andere] analysiert
 b. . . than . . . [more carefully anyone else] analyzed it

The impossibility of a pre-verbal positioning of than anyone else in English would then follow, in a Kaynean derivation, from the fact that than in (20b) attracts its complement (→ than anyone else . . . [more carefully *t*] analyzed it) and from the further movement of the remnant to the Spec of than: [more carefully *t*] analyzed it than anyone else *t* (He has analyzed it more carefully than anyone else would instead be derived if the VP [analyzed it] were to move past more carefully . . . before the other movements).

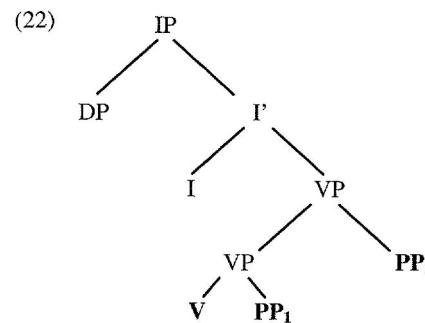
The different order in German follows if we analyze head-final(German) clauses as eventually derived by raising of the V to T/AGRs and then movement of the entire remnant past the V (cf. Kayne 1994: 52):

- (21) a. . . als . . . [sorgfältiger jeder andere] analysiert →
 b. . . als jeder andere . . . [sorgfältiger *t*] analysiert →
 c. . . [sorgfältiger *t*] analysiert als jeder andere →
 d. . . analysiert [sorgfältiger *t*] *t* i als jeder andere →
 e. . . [[sorgfältiger *t*] *t*] als jeder andere] analysiert *t*

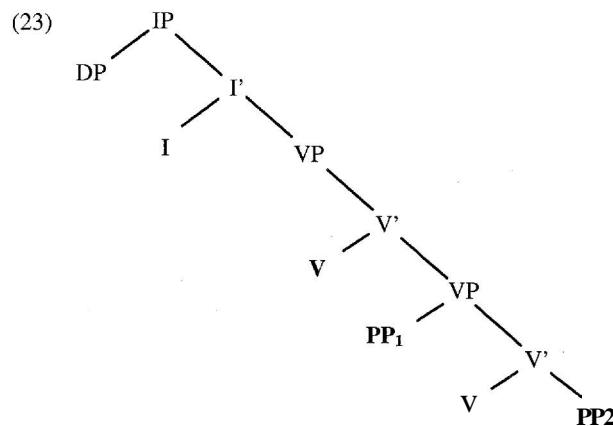
4. The syntax of adverbial PPs and Pesetsky's paradox

In Cinque (2002a) and chapter 6 I suggest that Kayne's analysis of prepositions, in combination with certain other ideas, can provide a novel approach to the syntax of adverbial PPs and to the specific paradox they give rise to (Pesetsky 1995). As Pesetsky shows, their syntax gives apparent evidence for two distinct and conflicting struc-

tural representations. On the one hand, movement diagnostics would seem to favor a structure like (22), in which the PP on the right is higher than, and c-commands, the PP to its left (in apparent contrast with antisymmetry):²⁵



On the other hand, the binding of anaphors, that of pronominals by quantifiers, and the licensing of Negative Polarity Items (NPI) would seem to favor a Larsonian structure such as (23), where the PP on the right is lower than and is c-commanded by the PP to its left:²⁶



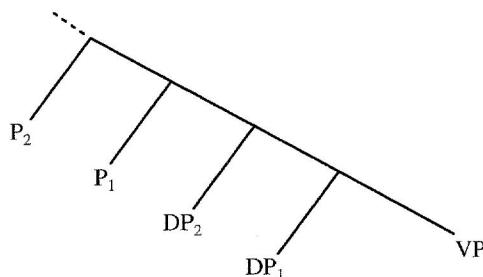
(Larson 1988: fn. 49, Kayne 1994: 69ff, Chomsky 1995: 333)

The paradox can be seen to dissolve if, as I argue in Cinque (2002a) and chapter 6, (22) is not a merge but a derived, structure, derived (in head-initial languages) from a structure essentially like . . . PP₂ . . . PP₁ . . . VP . . . by rolling up the VP around the lower PP, then taking the resulting structure [VP PP₁] and rolling it up around the next higher PP₂ ([[VP PP₁] PP₂] t]), and so on; in ways reminiscent of Barbiers's (1995) intraposition analysis of Dutch postverbal PPs. In fact, as Barbiers notes, this derivation can also account for the mirror image effect of the order of PPs in head-initial and head-final structures (and languages).²⁷

The c-command puzzle that led Pesetsky to propose "cascade structures" can instead be solved if the . . . PP₂ . . . PP₁ . . . VP structure to which the roll-up derivation

applies in head-initial languages is itself derived from a structure in which the DP complements of $P_2 P_1 \dots$ are merged without their respective prepositions, themselves merged higher up, above the respective Case Phrases to which each DP moves, as proposed in Kayne (2002a):

(24)



The attraction of DP₁ to the CaseP related to P₁ before the attraction of DP₂ to the CaseP related to P₂ (itself a consequence of Chomsky's 1995 Extension Condition) allows binding of a DP merged higher (say, a locative DP₂) by a DP merge lower (say, a goal DP₁). For more detailed discussion I refer to chapter 6.^{28,29}

5. The complementary distribution of adverbs and the corresponding XP adverbials

The merger of prepositions above the VP external CasePs to which argument and other adjunct DPs raise may afford an account for another puzzling fact: the general complementary distribution of adverbs (AdvPs) and the adverbialPPs that correspond to them.³⁰

It is well known that in head-initial languages adverbs can occur sentence-internally while the corresponding PPs cannot (Jackendoff 1972: 94, 1977: 73, Sportiche 1994, Ernst 2002: 462):³¹

- (25) a. *He has <ever since> stopped smoking <ever since>*
- b. *He has <*ever since he was thirteen> stopped smoking <ever since he was thirteen>*
- (26) a. *Marie a <très lentement> mangé sa soupe <très lentement>*
- b. *Marie a <*d'une manière lente> mangé sa soupe <d'une manière lente>*
- (27) a. *Gianni si è <brevemente> trattenuto <brevemente>*
- b. *Gianni si è <*per breve tempo> trattenuto <per breve tempo>*

In each of (25)–(27) there is a reading in which the a. sentence is synonymous with (the grammatical version of) the b. sentence. Yet the adverb, but not the corresponding adverbial PP, is possible sentence-internally. How can we account for this (quasi-)complementary distribution?

That the AdvP and the corresponding adverbial PP may be in competition for one and the same position of merge is suggested by the fact that they cannot occur together. See, for example:³²

- (28). a. **Gianni si è brevemente trattenuto per breve tempo* 'G. briefly stayed for a while'
- b. **He has (ever)since stopped smoking since he was thirteen*³³

Given this, it is tempting to take both the adverb (brevemente) and the corresponding DP (breve tempo) to be merged in the same specifier position (possibly that corresponding to Durative Aspect—see Cinque 1999: 98) and to account for their ultimate different location in the sentence as due to their different licensing conditions. AdvPs are licensed in situ, in a specifier associated with the corresponding functional head. But DPs also need Case, whence the insertion of a preposition, which in Kayne's system attracts (in head-initial languages) the VP to its Spec, with the consequence that the PP will necessarily end up in postverbal position (a sentence-final one if no other leftward movement obtains).³⁴

6. Clause-initial adverbs and adverbials

Most classes of AdvPs and adverbialPPs, CPs, DPs, and so on, can occur in clause-initial position.³⁵

This position, however, may not be unique but may rather disguise several structurally distinct positions.

So, for example, if an AdvP in its position of merge can show up clause-initially due to the fact that no other constituent (say, the subject DP and the V) crosses over it (see Cinque 1999: chap. 5), then the initial position can be one of a number of structurally different positions of merge, depending on the class of the AdvP.

It is, however, not entirely clear that this conjecture is correct.

We do know that verbs in many languages need not raise past (higher) AdvPs within IP. This is especially clear in a language like Paduan, where topicalized (clitic left dislocated) third person subjects obligatorily require a resumptive clitic:

- (29) *Mario i dize che *(l) ze partìo*
M. they say that he (clitic) has left ('M. they say has left')

Now, the fact, noted by Benincà (2001: 56), that no resumptive clitic is necessary in such cases as (30) clearly shows, as she observes, that the subject DP is not topicalized across the AdvP but fills the canonical subject position (one canonical subject position if there are more):

- (30) *Mario gerì ze partìo presto*
M. yesterday is left early ('Yesterday M. left early')

If so, we also have clear evidence that the (auxiliary) verb need not raise past the AdvP gerì (in fact, it cannot: **Mario ze geripartiopresto*). The same is generally

true of higher adverbs lower than *geri*, though they can also be crossed over by the verb, apparently (Mario <forse> *gavarà* <forse> dito *che* . . . 'M. perhaps will have said that . . .').

However, if we have positive evidence that verbs need not raise past higher AdvPs, we have no comparable evidence that subjects need not raise past them. Consequently, a sentence like (31) could have the AdvP not in its IP-internal position of merge but in a position within the CP field, reached by movement across the highest position of the subject in IP:

- (31) Geri Mario ze partio presto
Yesterday M. is left early ('Yesterday, M. left early')

If this were so, the number of distinct structural positions available to AdvPs at the beginning of the clause would reduce to positions in the CP field only.

We know that in addition to Topic and Focus positions, AdvPs access a third position in the CP field, one that is lower than the positions targeted by topicalized, focused, and wh- phrases. Rizzi (2004a) discusses various pieces of evidence for distinguishing such a position (which he labels "Modifier Phrase") from the more familiar positions occupied by topicalized, focalized and wh- phrases.

Preposing to such position does not require the special contextual conditions that characterize focalized and Topicalized AdvPs.

Among other properties, (32) differs from the corresponding topicalized and focalized versions (33)–(34):

- (32) Rapidamente, qualcuno farà sparire i documenti
Quickly, someone will make the documents vanish
- (33) Rapidamente, nessuno farà sparire i documenti
Quickly, nobody will make the documents vanish
- (34) RAPIDAMENTE, qualcuno farà sparire i documenti
Quickly (focus), someone will make the documents vanish

in that (1) it can occur in out-of-the-blue contexts:³⁶

- (Poi, cosa succedera? What will happen, then?)
- (35) a. Rapidamente, qualcuno farà sparire i documenti (= [32])
Quickly, someone will make the documents vanish
- b.*Rapidamente, nessuno farà sparire i documenti (= [33])
- c.*RAPIDAMENTE, qualcuno farà sparire i documenti (= [34])

(2) it displays Relativized Minimality effects:³⁷

- (36) *Rapidamente, qualcuno probabilmente farà sparire i documenti
Quickly, someone will probably make the documents vanish

- (37) Rapidamente, nessuno *probabilmente* farà sparire i documenti
Quickly, nobody will probably make the documents vanish

- (38) RAPIDAMENTE, qualcuno probabilmente farà sparire i documenti
Quickly (focus), someone will probably make the documents vanish

(3) it is clause-bound:³⁸

- (39) *Rapidamente, credo che qualcuno farà sparire i documenti
Quickly, I think that someone will make the documents vanish

- (40) Rapidamente, credo che nessuno farà sparire i documenti
Quickly, I think that nobody will make the documents vanish

- (41) RAPIDAMENTE, credo che qualcuno farà sparire i documenti
Quickly (focus), I think that someone will make the documents vanish

There is another property that supports Rizzi's discovery of a separate Modifier Phrase in the CP field that AdvPs can access in addition to accessing TopicP and FocusP: the existence of a whole class of AdvPs that can freely access the latter two positions but not the former. In Cinque (1999: sect. 5.1) it is noted that "lower adverbs" (from the negative AdvP *mica* downward) as opposed to all higher ones cannot precede the subject under normal conditions. See (42) (= [3] of Cinque 1999: chap. 5):³⁹

- (42) a. Maria *mica* prende il treno
M. not takes the train
- b.**Mica* Maria prende il treno
Not M. takes the train
- c.**Già* Maria è di ritorno, per le una
Already M. is back, at one o'clock
- d.**Più* Maria non mi pensa
No longer M. thinks of me
- e.**Ancora* Maria gli parla
Still M. speaks to him
- f.**Sempre* Maria ripete le stesse cose
Always M. repeats the same things
- g.**Appena* Maria si era coricata, quando squillò il telefono
Just M. had gone to bed, when the phone rang
- h.**Subito* Maria mi avvertiva (no focus intonation on *subito*)
Immediately M. would call me
- i.*?*Brevemente* Maria ci sta parlando della sua avventura
Briefly M. is telling us about her adventure

1.*Quasi Maria cadde dall'emozione

Almost M. fell for the emotion

m.*Completamente Maria distrusse tutto quello che aveva fatto fino ad allora

Completely M. destroyed all that she had done till then

n.*Bene Maria fece tutti i compiti

Well M. did her homework

o.*Presto Maria si alzava ogni mattina

Early M. would get up every morning

This can be made sense of if such AdvPs (as opposed to all higher ones) cannot be moved to ModifierP in the CP field. The fact that they can (with some exceptions) appear in front of the subject if topicalized or focalized is then further evidence that Topicalization and Focalization should be kept distinct, as Rizzi proposes, from Preposing to ModifierP.⁴⁰

In addition to AdvPs and adverbial PPs moved from within IP to the clause-initial CP field (to TopicP, FocusP, ModifierP), there appear to be adverbial XPs that are directly merged in the CP field. For discussion, see Cinque (1990b: 89–94), Bianchi (2000), Haegeman (2001), and, within a different analysis, Haumann (1997, 1999).⁴¹

7. Variable adverb positioning

After discussing clause-initial adverbs, let us consider the variable adverb positioning one finds in cases such as (43) and (44), which is at first sight also at odds with the "functional specifier" approach, according to which each adverb is licensed in the specifier of a unique functional projection:⁴²

- (43) a. Probably they could be working a bit harder

b. They probably could be working a bit harder

c. They could probably be working a bit harder

d.*They could be probably working a bit harder

- (44) a. Foolishly Howard may have been trying to impress you

b. Howard foolishly may have been trying to impress you

c. Howard may foolishly have been trying to impress you

d. Howard may have foolishly been trying to impress you

e. Howard may have been foolishly trying to impress you

Cinque (1999: sect. 5.1) suggested that assuming (as we must, for independent reasons) that Vs and DPs move upward to different landing sites, the apparent multiplicity of adverb positions seen in (43)–(44) reduces drastically.⁴³ Of course, given the

possibility of fronting an IP-internal AdvP to Rizzi's ModifierP, some of the cases in (43)–(44) are open to two analyses. Consider (43) first. (43a–c) could, for example, be analyzed as involving the IP-internal instance of the AdvP not crossed over by anything (the a. case), crossed over by just the subject (the b. case), or by both the subject and the first auxiliary (the c. case). Quite correctly the d. case is expected to be impossible as the raising of the second auxiliary across probably would also cross the trace left by the first auxiliary, in violation of (whatever derives) the Head Movement Constraint.⁴⁴

Alternatively, (43a–c) could have the AdvP in ModifierP, with nothing crossing over it (the a. cases), or with the subject crossing over it (the b. cases), but possibly without the auxiliary also crossing over it ([43c] would thus be derived as suggested under the first option). Although the evidence may not be enough to choose, I take the more special intonation contour of (43a–b) versus (c) (see Ernst 2002: 397) to indicate that they but not (43c) have the AdvP in ModifierP, though nothing hinges on this assumption.

Cases such as (44) appear at first sight to be more problematic. Ernst (2002: 116f) and Svenonius (2002: sect. 3.1) claim that in sentences with more auxiliaries the "functional specifier" approach leads to a violation of the Head Movement Constraint. Allegedly, this is so because all the auxiliaries would have to be merged lower than the AdvP in order to account for the a. and b. cases; yet, to account for the d. and e. cases, more than one auxiliary would have to raise past the AdvP, with the lower auxiliary crossing over the trace of the higher one.

This is, however, not necessary. First, (44a) and (b) could have the AdvP in Spec of ModifierP, in the CP field, moved from an IP-internal position, as discussed earlier. But even disregarding this possibility, the different orders in (44) can be derived without violating the Head Movement Constraint. The reason is that AdvPs like foolishly may be merged in more than one position. At least two can in fact co-occur in one and the same sentence. See (45) and the discussion in Cinque (1999: 19) from which (45) is adapted:

- (45) a. Stupidly John has been cleverly answering their questions

b. Stupidly John has been answering their questions cleverly

If two merge positions are available for adverbs like foolishly, the remaining cases of (44c, d, and e) can be accounted for by assuming the merge structure schematically shown in (46):

- (46) ... <foolishly>may have <foolishly>been trying ...

(44c) (Howard may foolishly have been trying to impress you) is derived from (46) if the higher instance of the AdvP is selected and if the modal crosses over it. (44d) (Howard may have foolishly been trying to impress you) is derived if the lower instance of the AdvP is selected and nothing moves. Finally, (44e) (Howard may have been foolishly trying to impress you) is derived if the lower instance of the AdvP is selected and the auxiliary been crosses over it, to a head between it and the higher auxiliary have.

If the AdvP in (44a) and (b) is in Spec,ModifierP, more options are available, which would have to be evaluated and compared on the basis of independent evidence that supports one or the other.

All in all, it seems to me that, when looked at more closely, the objections raised against the "functional specifier" approach are less convincing than they may at first appear, and that the approach still naturally expresses many important properties of adverbial syntax better than competing approaches.

Notes

I thank Richard Kayne for comments on a previous version of this chapter.

1. As is customary, I distinguish here between "adverbials" (XPs of any syntactic category, PP, DP, AP, QP, CP, . . . , functioning as clausal modifiers, and subject to partially different licensing conditions) and "adverbs", or, rather, AdvPs (a syntactic category with specific adverbial function).

2. So, for example, just as Habitual aspect morphemes are higher than Completive aspect morphemes, habitual adverbs are higher than completive adverbs (John *usually* completely ignores his guests vs. *John completely usually ignores his guests).

3. See, among others, Shaer (1998), Costa (2000, 2004), Haider (2000, 2004), Rosengren (2000), Williams (2000), Maienborn (2001), Ernst (2002, 2004), Svenonius (2002). Variants of the "functional specifier" approach are advanced in Laenzingler (1993, 1996, 1998, 2000) and Alexiadou (1994, 1997), among others (see Cinque 1999: chap. 2, fn. 1. and section 3.2 in this chapter, for certain differences).

4. In Cinque (1999: 213, fn. 79) I also reported that in some languages (in Eskimo-Aleut languages, in the Sino-Tibetan languages Boro and Garo, and in the Uto-Aztec language Chemehuevi) adverbs are for the most part expressed not as independent words but as bound morphemes, much as other functional morphemes are; another indication, I take it, of their functional character. In this connection, it is also significant that virtually every adverb class finds morphological expression as a suffix in some language (see Cinque 1999 for several such examples and Nilsen and Vinokurova 2000 for an interesting proposal that unifies adverbs, affixes, and auxiliaries as verb raisers).

5. It also begs the question in important ways. In the absence of a complete understanding of the semantics of each adverb class, from which its scope with respect to the other adverb classes can be made to follow, a claim such as Ernst's (2002: 130–133) that as a consequence of their *lexicosemantic* properties, speaker- and subject-oriented adverbs have a rigid ordering while quantificational and aspectual adverbs can have a variable ordering (with meaning differences) and participant PPs have a free ordering (with no meaning differences) essentially restates the question rather than explaining it. Some of these generalizations also appear to be factually wrong. See notes 13 and 21 and chapter 6). As noted in Cinque (1999: sect. 6.3) (see also Nilsen 2004), an approach that derives the order of adverbs from the different scope requirements of the lexical items involved must address the question why a sentence like E' probabile che sia per me una sfortuna che Gianni è stato licenziato 'It's probable that it is unfortunate for me that G. has been fired' is fine (*pace* Pittner 2000: 204), while *probabilmente Gianni è sfortunatamente stato licenziato 'Probably G has unfortunately been fired' is not. Richard Kayne (personal communication) points out that for him *It's* probable that Gianni has unfortunately been fired is also unacceptable.

6. See Pollock (1989: 413), Cinque (1999: 143), and Kampers-Manhe (2001: 40).

7. See Cinque (1999: 146).

8. To account for the attested variation in Romance, in part documented in Cinque (1999: chap. 1 and Appendix 1), adding a third projection would not do, nor adding a fourth (and so on). Many more would be needed, essentially one for each class of adverbs.

9. The same criticism applies to Bok-Bennema's (2001) analysis. According to this analysis, the verb targets one and the same head position (F_x), and the variable position of the verb with respect to different adverb classes is accounted for through a certain freedom in the merger of F_x with respect to the XPs that contain the different adverbs (a merger sensitive to the form of the verb): either before or after a certain XP. But, once again, in such a system, the implicational generalizations pointed out earlier could not be captured naturally, it seems. Why should F_x , say in Spanish, be able to be merged higher than the XP that contains a manner adverb, higher & lower than the XP that contains an aspectual adverb, but necessarily lower than the XP that contains an epistemic adverb, rather than vice versa? And how could this be related to the scope of these adverbs among each other? She also assumes F_x to be the same for French infinitivals and active past participles, but see the reference in note 7 for evidence that these verbal forms target in French different positions among the hierarchy of adverbs.

10. Concerning Bobaljik's (1999) claim that adverbs, DP positions, and verb positions should be seen as belonging to separate tiers, see the comments in note 43 later. If V raising (or remnant VP raising) is a PF phenomenon, as Chomsky (1995: 368) suggests, due to its apparent lack of influence on meaning, then such implications would have to be captured in some other way. But there is some evidence that V (or remnant VP) movement has semantic consequences, thus qualifying as a Narrow Syntax phenomenon. See Cinque (1999: 102f, 184, fn. 8). Also see Zwart (1997).

11. This idea, for example, directly leads one to expect wann > wo, from wann > wer and wer > wo, which is correct:

(i) a. Hans sollte wann wo dariiber vortragen (Frey 2000: 113).

H. should sometimes somewhere about that talk

'H. should talk about it somewhere sometimes'

b. *Hans sollte wo wann dariiber vortragen.

12. See Cinque (2002c), Belletti (2004b), and Rizzi (2004c).

13. Although bearing some resemblance to this model in the recognition of ordered zones whose scope relations may ultimately find a semantic correlate, Ernst's (2002: sects. 2.2.3, 3.2) Fact–Eventabject (FEO) partition of the clause differs in being coarser in the distinctions it makes (Speech-Act > Fact > Proposition > Event > Specified event). This means that certain rigid ordering among adverbs that belong to one and the same type (say, those that select a fact, like evaluative and evidential adverbs) are underdetermined, when not misrepresented. So, for example, if evaluative adverbs "must combine with a fact as their sisters, and they yield a fact" ([FACT ADV [FACT]]) (p. 100) and if evidential adverbs "take facts to form (stative) events" ([STATE ADV [FACT]]) (p. 104), then one should expect the possibility of an evidential adverb preceding and taking scope over an evaluative adverb (contrary to fact—Jackendoff 1972: 88ff, Siewierska 1992: 418, cited in Cinque 1999: 174, fn. 37):

(i) a. *Obviously John unfortunately finished all his money

b. Unfortunately John obviously finished all his money

Also, due to its loose relation to syntactic structure, the FEO model cannot explain why adverbs that belong to the same type distribute differently with respect to other elements of the clause. Ernst (2004), for example, assumes the lowest (specified event) zone to stretch (in English) from the position (adjoined to PredP) that precedes the lexical verb rightward (see his discussion of *deftly*). Yet an adverb like *early*, which must also belong to the same specified event zone as it follows *deftly* (He *deftly* left the room *early*), can never appear preceding the lexical verb (*He *early* left). To specify it as inherently [+heavy] and [+R] (linearized to the right), as Ernst analyzes

well, fast, etc., does not appear illuminating. Clearly, finer-grained distinctions are needed. Similar remarks hold for Frey and Pittner (1998), Frey (2000), Pittner (2000), and Tenny (2000), all of whom recognize different zones in the functional structure of the clause but take relative orders inside each zone to be regulated by semantic scope restrictions only.

14. In this connection, Haider (2000: 102) (see also Ernst, 2002: 129f) claims that cases like (i) are potentially problematic for the "functional specifier" approach, as it is not clear that "the functional projection structure of an attributive adjectival projection [as in (i)] is congruent with the architecture of a clause (especially w.r.t. features associated with tense, mood, aspect)" (also see Haider 2004: sect. 2.4). But they are not really so if such complex APs are actually derived from a small clause relative (as in Kayne 1994: 100f). In that case, the functional architecture is literally the same (modulo differences stemming from the presence of an AP rather than a VP predicate):

- (i) die [vielleicht tatsächlich jetzt hier noch nicht wirklich ganz reife] Banane
the maybe indeed now here yet not really fully ripe banana

Shaer (1998) claims that the same ordering restrictions hold for the corresponding nominalizations (the probability of the quickness . . . vs. *the quickness of the probability . . .); but this is much less clear. In fact, despite the strict ordering between oddly (in its evaluative sense) and possibly (cf. Oddly he has possibly lost vs. *?Possibly he has oddly lost), the oddness of the possibility (of his defeat) and the possibility of the oddness (of his defeat) both seem to be possible, suggesting that the parallelism may be more apparent than real. Williams (2000: 137) claims that the same ordering restrictions between two adverbs (say, probably > nearly) hold "even when the adverbs are not part of the same functional structure," but one is inside a PP (probably) and the other inside the main clause (nearly), and that this "radically undermines the notion that adverbs can be explicated in terms of clausal functional architecture." Quite apart from the possibility of analyzing probably inside a PP as a focusing adverb (hence merged as part of the clausal functional architecture, if Kayne 1998 is right), I find such cases as (ii) possible (in which a lower adverb has been moved across probabilmente within a larger phrase):

- (ii) Gianni ha quasi investito i bambini accanto probabilmente/verosimilmente alla fermata dell'autobus
G. has nearly run over the kids next to probably the bus stop

15. Costa's (2000) other arguments against the "functional specifier" approach bear even less force. The contrast between (the Italian equivalent of) (4) and (5) is also unexpected under the alternative explanation suggested in Ernst (2002: sect. 3.9).

16. Differently from Cardinaletti and Starke (1994) and Alexiadou (1997: sect. 5.2.3), I assumed no movement of the adverb from a postverbal to the preverbal position (*Il a bien cuisine*'t 'he has well cooked'). The postverbal position of the adverb (*Il a cuisine*'*très* bien 'he cooked very well') was rather analyzed as deriving from the "Light Predicate Raising" of the participle phrase around the specifier containing *bien* (whence the ban on weak adverbs in that position, which "Light Predicate Raising" turns into an information focus). That the preverbal position is not an intrinsically weak position is shown by the fact that it can contain modified and conjoined AdvPs (*Il a très bien cuisine*' 'he has very well cooked'; *Il a bien ou presque bien repondu* 'He has well or almost well answered'). Also see Abeillé and Godard (2001: 14).

The facts discussed in Kampers-Manhe (2001: 38ff) can also be accommodated without having to postulate raising of light *bien*, *mal*.

17. Goldberg and Ackerman (2001) show that many of the cases where an adverb appears to be obligatorily selected by a verb involve in fact pragmatic, rather than syntactic

(subcategorization), factors. But they admit that the verbs in (8) are "indeed subcategorized for by the verb" (p. 812).

18. See Blight (1997) and for similar cases in Italian Cinque (1992, 1999: 102). See also Ernst (2002: 274).

19. It seems that adverbials, whether subcategorized or not, occupy the same position. This can be seen in (ia–c), where the durative adverbial follows (in the unmarked case) the locative adverbial, irrespective of its selected status (in [ia] the durative, but not the locative, adverbial is selected; in [ib] it is the other way around; in [ic] both are selected):

- (i) a. Il maltempo è durato (in montagna) *(un mese intero) 'the bad weather lasted in the mountains a whole month'
b. E' vissuto *(in montagna) (un mese intero) 'he lived in the mountains a whole month'
c. Ha trascorso *(in montagna) *(un mese intero) 'he passed in the mountains a whole month'

This suggests that the position of merge of an adverb is independent from its "subcategorized" or "nonsubcategorized" status.

20. He further claims that given the order willingly > wisely > suddenly > already and given the free ordering between frequently and each of these, "*frequently* must be able to occur in each of at least five positions, among, before, and after [each of these adverbs]" (p. 122). This is, however, not necessary. Frequently need only occur in two positions, one above and one below the entire sequence (see the discussion immediately following in the text).

21. Ernst cites a similar case in French: the apparent free ordering between *fréquemment* 'frequently' and *habituellement* 'habitually'. See (ia–b) (= (3.108)a and (3.109) of Ernst 2002: 126):

- (i) a. Habituellement ils regardent fréquemment la télé 'they usually watch TV frequently'
b. Fréquemment ils ont regardé habituellement la télé 'Frequently they usually watched TV'

Here the illusion of free ordering is further compounded by the fact that habitual adverbs, too, can fill two distinct positions in French (see Cinque 1999: 92f and 204, fn. 36):

- (ii) D'habitude ils regardent habituellement la télé
(I assume that the alternative order D'habitude *ils* regardent la télé *habituellement* is derived by preposing both the verb and the object around the position occupied by *habituellement* in (ii).) Another indication that there are two separate positions for habitual adverbs is that certain adverbs are specialized for only one of the two positions. So, for example, d'habitude (like *di solito* in Italian, usually in English) can fill only the higher position. Compare (ii) with (iii):

- (iii) *Habituellement ils regardent d'habitude la télé/la télé d'habitude

22. Nilsen (2001, 2003: sects. 1.3, 1.5 2004) discusses some Norwegian facts that apparently suggest that adverb ordering is nonlinear (i.e., not transitive, antisymmetric, and connected). *Muligens* 'possibly' can only precede the negation *ikke*, and *alltid* 'always' can only follow *ikke*. Assigning them fixed positions in a linear sequence (i.e., *muligens* > *ikke* > *alltid*) would lead to the expectation that only *muligens* > *alltid* is possible. Yet, he points out, *alltid* > *muligens* is also allowed; from which he concludes that adverb ordering is nonlinear. However, assuming as he does that *muligens* is a positive polarity item, all the facts can be accommodated, and strict linear ordering of adverbs retained, if *muligens* can also occur in a position

lower than *alltid*. This in fact appears supported by the well-formedness of sequences like *Ståle har ikke alltid muligens spist noen andres hvetekaker* 'S. has not always possibly eaten someone else's Wheaties', where *muligens* can be found after negation because something else comes to be under its scope (see Cinque 1999: 168, fn. 6, on similar facts with positive polarity *già* 'already' in Italian). The partly similar case discussed by Nilsen (2004) of Italian *ancora* 'still', which appears to be able to precede *probabilmente* (as well as follow it) (see his example [81]) is, I think, spurious, as *probabilmente* continues to take scope over *ancora* even when it follows *ancora* (as in his example [81]), actually being used as a focusing adverb (see Cinque 1999: 31).

23. Rather than "stacking," some refer to this second kind of cases as cases of iterability of adverbials (possible only with a subset of them). Ernst (2002) suggests that iteration is possible with "adjuncts that can be conceived of as 'nested'" (p. 135), and he, too, takes it to be a problem for the "functional specifier" approach. In the absence of a deeper understanding of the phenomenon, however, I think that such cases can hardly be considered anyone's exclusive problem.

24. That it actually is "head-initial structures" rather than "head-initial languages" is shown, he claims (p. 100), by the fact that pre-head attributes in German DPs are head-initial and also show "edge effects":

- (i) eine viel größere (*als ich dachte) Summe 'a much bigger (than I thought) sum'

Note that the generalization in the text is not entirely accurate, as certain post-head constituents with preverbal adjuncts appear to be possible even in English, as Richard Kayne (personal communication) pointed out to me (e.g., *He more often than not makes mistakes*), especially if the VP is made heavier (compare [17a] with [ii], though heaviness in DPs does not seem to lead to a similar improvement (cf. [iii]):

- (ii) He has more carefully than anyone else analyzed the weak points of that argument

- (iii) *A much more expensive than I thought painting by my favorite painter.

25. This is because the V, in addition to forming a constituent with both PPs ([ib]), appears to form a constituent with the first PP, which strands the second ([ia]):

- (i) (He said he would talk with Joe on Monday . . .)

- a. . . . and *talk with Joe* he did on Monday

- b. . . . and *talk with Joe on Monday* he did

Moreover, as (ii) shows, the two PPs do not form a constituent by themselves (see Pesetsky 1995: 228):

- (ii) a.*It's [*with Joe on Monday*] that he said he talked.

26. The relevant facts that suggest c-command of the PP on the right by the PP to its left are given in (i–iii):

- (i) a. John spoke to Mary about *these people* in *each other's houses* on Tuesday (Pesetsky 1995: 172)

- b.*John spoke to Mary about *each other* in *these people's houses* on Tuesday

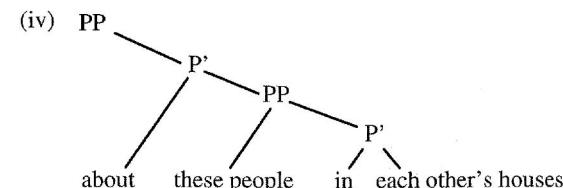
- (ii) a. G.K. performed in *every Baltic republic* on *its independence day* (Pesetsky 1995: 161)

- b.*G.K. performed on *its monument* on *every independence day*

- (iii) a. John spoke to Mary about *no linguist* in *any conference room* (Pesetsky 1995: 162)

- b.*John spoke to Mary about *any linguist* in *no conference room*

Pesetsky (1995) notes a further puzzle. The DP object of the higher PP in (i–iii) unexpectedly appears to c-command out of the PP, a property that leads him to propose a novel representation where such DP literally c-commands the object of the lower PP (what he calls cascade structure):



27. Like the postverbal position of high adverbs in VO languages (*John left, probably*), postverbal PPs in Dutch are typically deaccented (Zwart 1997: 96, Koster 1999). This may suggest that the roll-up is across an IP-initial positioning of the PPs, rather than across their lower positioning above VP, as is the case in ordinary VO languages. Phillips (1998) proposes a different solution to Pesetsky's paradox, one based on a top-down incremental merging of constituents. Though intriguing, his analysis appears to face some empirical problems. For example, it cannot cope, as far as I can tell, with those cases where a PP to the right takes scope over a preceding PP (and is thus right adjoined above it), and yet it is bound by the object of the preceding PP (as in [ia] of the previous note). Also, it is not clear how it can express the typological generalization relating VO and OV languages discussed in Cinque (2002a and chapter 6), as it generates the two mirror orders independently of each other. The proposals by Haider (2000, 2004) are open to similar criticism.

28. In that chapter, I also provide evidence that, contrary to what is claimed in Cinque (1999: sect. 1.5) and Ernst (2002: sect. 6.4), "circumstantial" (or "participant") PPs are also rigidly ordered, as already suggested in Nilsen (1998). This is visible only when scrambling of the PPs is blocked (e.g., when they are part of an idiom chunk, when they are proforms that resist scrambling, like *wann*, *wo* in German, *der*, *da* in Norwegian, etc.).

29. Haider (2000: sect. 3.2004: sect. 2.1) also considers the extraction out of postverbal PPs in English (*The car that he left his coat in t . . . if [in t] is in a specifier crossed over by the VP*), and the extraction out of preverbal phrases that precede an adverb in German (*Wen hat er [t damit zu konfrontieren] leider noch nicht versucht?* 'Who has he unfortunately not yet tried to confront with it?') as problematic for the "functional specifier" approach, as extraction out of specifiers is quite generally known to be impossible (whereas the mentioned extractions are unexceptionable). Matters, however, are again far from clear. Even if the postverbal PP in the English example earlier is in a specifier, no ungrammaticality is necessarily to be expected. In the essentially Larsonian VP structure that Haider himself assumes, the first of two PPs sits in a specifier. Yet extraction out of (many) such PPs is possible (suggesting, if anything, that it is the position with respect to the V that matters):

- (i) Who did John talk to t about Harry yesterday? (Hornstein and Weinberg 1981: 71).

Furthermore, extraction out of preverbal specifiers in German is known to be possible (*Was hat [PRO t zu beanstanden] sich nicht gehört* 'what has to object to not been proper'—Haider 1983: 92ff), making the German extraction case mentioned earlier unsurprising.

All in all, pending a better understanding of the matters, Haider's cases provide no evidence against the "functional specifier" (nor any other) approach.

30. Actually, as (25)–(27) show, the distribution is only partially complementary (in ways that do not affect the ensuing argument). While PPs can appear sentence-finally but never sentence-internally, the corresponding adverbs can appear both sentence-internally and sentence-finally (as noted in section 3.2 earlier, Cinque 1999: sect. 1.4, analyzed the postverbal position of the adverb in the a. cases as deriving from a leftward movement of the VP around the sentence-internal merge position of the same adverb).

31. The restriction appears, however, to be suspended for some adverbial PPs (mostly temporal, frequency, and durative) in more careful styles. See Ernst (2002: sect. 4.3.5).

32. The ungrammaticality of (28) can hardly be due to the fact that it contains redundant information. A sentence like *In futuro, Gianni avrà più fortuna* 'in the future, G. will be luckier,' where both the verbal form and the adverbial PP refer to a period of time in the future, though redundant, is perfectly grammatical. The same is true of cases of clitic doubling.

Another indication that the AdvP and the corresponding PP are merged in the same position may be given by scope considerations. The adverbial PP, though invariably in sentence-final position, appears to have the same scope properties with respect to other elements in the clause as the corresponding AdvP. Just as *ever since* in (i) takes scope over *no longer*, so does *ever since he was thirteen*, even from a sentence-final position ([ii]):

- (i) John has ever since no longer eaten meat
- (ii) John has no longer eaten meat ever since he was thirteen.

33. Other, apparently similar, cases are Wne. See, for example, (i):

- (i) Gianni ha rapidamente alzato il braccio con (grande) rapidità 'G. has rapidly raised his hand with (great) rapidity'

But here there is evidence for two independent positions of merge of the adverb (on such cases as *John has quickly raised his hand quickly*, see Travis 1988: 292 and Cinque 1999: 93).

34. These considerations may carry over to DP adverbials, which also cannot appear sentence-internally (in head-initial languages) (though some can in more careful styles—Haegeman [2001]; also see n. 31 earlier). As Richard Kayne pointed out to me, such contrasts as *Only John has been badly/*that way treated by everybody* may support the distinction between unpronounced preposition (with *that way*) and complete absence of preposition (with *badly*). If the *-ly* (and *-mente*) that attaches to adjectives (possibly to APs) is nominal in nature (Kayne 2002b: fn. 2), it apparently does not need a P to satisfy its Case requirements. The same would have to be true for invariable adverbs like *spesso* 'often' if, as Kayne (2002a: fn. 46) suggests, they are also hidden DPs. Also see Manninen (1999) for a uniform analysis of manner DPs, APs, CPs and AdvPs as KasePs.

35. Though some cannot. See following text for discussion.

36. The topicalized version (33) and the focalized version (34) require contexts such as the ones indicated:

(Si pensava che qualcuno potesse far sparire i documenti rapidamente, ma . . .)

One would think that someone could make the documents vanish quickly, but .

- (i) Rapidamente, nessuno farà sparire i documenti
Quickly, nobody will make the documents vanish

(Qualcuno farà sparire i documenti troppo piano . . .)
Someone will make the documents vanish too slowly . . .
- (ii) Forse, TROPPO RAPIDAMENTE, qualcuno farà sparire i documenti (non troppo piano)
Perhaps, too quickly (focus), someone will make the documents vanish (not too slowly)

For some reason that remains to be understood, AdvPs (and other nonreferential XPs) are typically (some exclusively—see later) topicalized (clitic left dislocated) from positions under the scope of negation (like the context in (33), (37), (40), and [i] earlier). See Cinque (1990b: 89–94).

37. Rizzi (2004a) amves at a refinement of his notion of Relativized Minimality (Rizzi 1990) based on the typology of features *argumental*, *quantificational*, *modificational*, *topic*, showing that a system based on a simple A/A-bar distinction is too liberal and one based on Chomsky's (1995: 311) Minimal Link Condition (which presupposes sameness of features) is too selective.

38. The clause-boundedness of the preposing of AdvPs to sentence-initial position is also noted in Nakajima (1991: 339, 343) and carries over to such cases as **Probably they say that t he will not make it*. See also Ernst (2002: sect. 8.3.2.4). Chomsky and Lasnik (1993) also note that "[i] is not given the interpretation of [ii], as it would be if *carefully* in [i] had been moved from the D-structure position of *carefully* in [ii]" (Chomsky 1995: 48):

- (i) Carefully, John told me to fix the car
- (ii) John told me to [fix the car carefully]

Likewise, in Italian (iii) does not have the same interpretation as (iv), suggesting that *domani* 'tomorrow' cannot have moved from the position occupied by *domani* in (iv), but interestingly it can have the same interpretation as (v), suggesting that movement is possible from a clause-initial position (see Cinque 1990b: 89–94):

- (iii) Domani Gianni mi ha detto che verrà 'Tomorrow G. told me that he will come'
- (iv) Gianni mi ha detto che verrà domani 'G. told me that he will come tomorrow'
- (v) Gianni mi ha detto che domani verrà 'G. told me that tomorrow he will come'

Postal and Ross (1970) claim that the latter possibility is unavailable in English when the matrix clause is in the past, but this does not seem to be true in general, to judge from Haegeman (2002: sect. 2.3.1).

39. The ungrammaticality of the lower cases (1. to o.) is actually sharper, as Paola Beninca (personal communication) observed, than that of the higher ones. For the impossibility of a presubject positioning of the same adverbs in English, see Jackendoff (1972: 50) and Cinque (1999: 112).

40. The rough generalization appears to be the following: negation *mica* and all AdvPs that follow *mica* cannot be fronted to ModifierP. This might be related to Rizzi's (2004a) observation that "Negation blocks both simple adverb preposing and preposing to a focus position" ([42d]).

41. The problem that Ernst (2002: sect. 3.10.2) takes the "functional specifier" approach to encounter with topicalized AdvPs and adverbial PPs seems superable if one takes into account the different movement possibilities (to TopicP, FocusP, ModifierP), as well as the "base-generation" option.

42. (43) is adapted from Ernst (2002: 380) and (44) from Svenonius (2002: sect. 3.1).

43. If we take into consideration the proneness to displacement of Vs and DPs and, after Pollock (1989), the essential immobility of AdvPs (except for limited and recognizable cases of movement to CP positions, as in wh-, Topic and Focus and V/2 structures), the otherwise ingenious argument given in Bobaljik (1999) for taking auxiliaries, participles, and floating quantifiers to be immobile, with adverbs moving around them, loses much of its force, as does his further conclusion that adverbs and DP arguments belong to separate tiers, ultimately merged together like two decks of cards. The argument rests on questionable premises: for

example, that auxiliaries have a fixed position of merge. If auxiliaries are inserted to bear affixes that would otherwise remain stranded (Cinque 1999: 57 and references cited there), there is no reason to take them to be merged in a fixed position. If so, Bobaljik's conclusion that when an auxiliary can follow Adv_i , there is a violation of the Head Movement Constraint whenever both it and the participle precedes Adv_i , is no longer necessary. The auxiliary can be merged in one case below Adv_i , in the other above it.

44. Here *could* could not be merged above *probably* (see the previous note), as it is inflected for Past, which is lower than epistemic modality (see Cinque 1999: 135). Jackendoff (1972: 81) and Ernst (2002: 380), among others, note that *probably* can marginally follow two auxiliaries when the second is *have*:

- (i) a. John will have probably been beaten by Bill
- b. They could have probably worked a bit harder

This fact is not problematic for the idea that *probably* fills a unique position (in the Spec of Mood[epistemic]P, crossed over by the subject and just one auxiliary, the first), if as suggested by both Jackendoff and Ernst *have* in such cases incorporates, or adjoins, to the position of the modal. A more promising alternative might relate (i) to the special cases of inversion documented in Johnson (1988) (*Should've the kids left?*), which Kayne (2000: 215) analyzes as involving not *have but* a complementizer (*of*), thus opening up the possibility that the modal left-adjoins to it when raising.

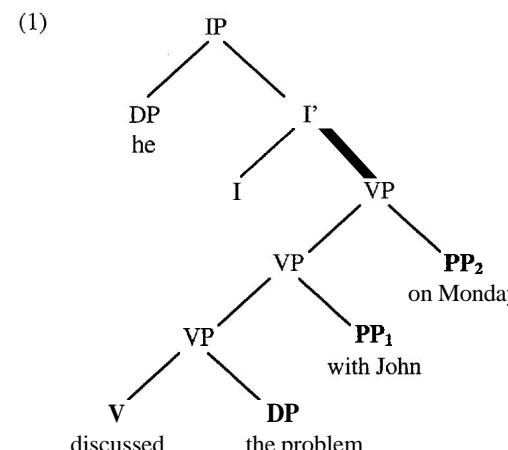
Complement and Adverbial PPs: Implications for Clause Structure

1. Introduction

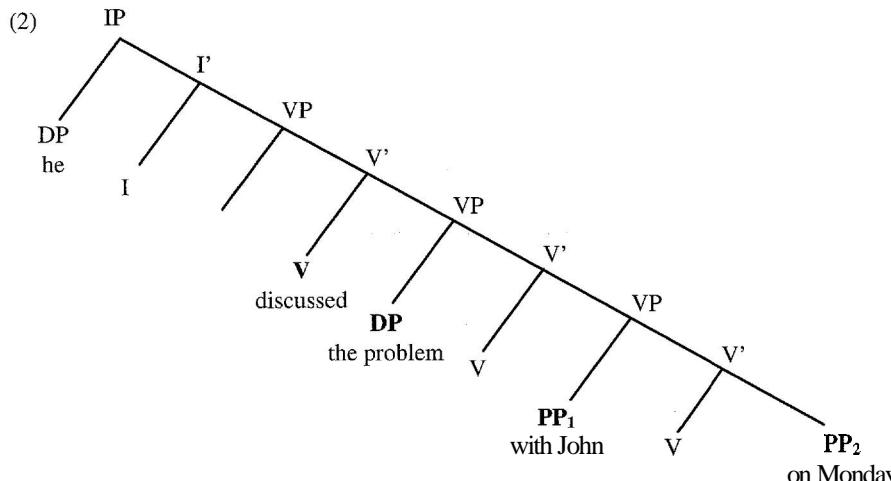
In what follows I will consider certain aspects of the syntax of prepositional phrases. In particular I will discuss some evidence from my own work and from that of Schweikert (2004) that suggests that PPs, despite appearances, are rigidly ordered among each other, this order being concealed in certain cases by the application of focus sensitive movements.'

Although the order of PPs in *postverbal* position (typical of VO languages) is in general the mirror image of the order of the same PPs in *preverbal* position (typical of OV languages), their relative height (and scope) turns out to be the same, a property that I will take to suggest a universal order of merge of the different PP types.

If we start by asking what structure postverbal PPs enter in a VO language like English we immediately run into a curious paradox (Pesetsky 1995). Some of their properties would seem to favor the traditional, pre-antisymmetry, analysis of Chomsky (1981), according to which the PPs are right-adjoined to VP (those on the right being higher than and c-commanding those on the left):



Other properties would instead seem to favor a Larsonian structure, in which a PP on the left is higher than and c-commands the PPs to its right:²



Among the phenomena that apparently favor the left-branching structure (1) are:

A. *Lack of Principle C effects*. The direct object can be coreferential with an R-expression contained in an adverbial PP to its right. Cf. (3):³

- (3) a. They killed him, [on the very same day John, was being released from prison]
 b. They hit him, [without John_k being able to defend himself]

This is expected under (1), where the object does not c-command the PP (at least under a definition of c-command that makes reference to "first branching node," as in Reinhart 1983), but not under (2), where the object necessarily c-commands all of the PPs to its right.⁴

B. Constituency diagnostics. If movement is a reliable constituency test, as standardly assumed (Pesetsky 1996),⁵ then the VP-Preposing cases in (4) provide evidence that the V and its object ([4a]), the V, the object, and the first PP ([4b]), the V, the object, and the two PPs ([4c]), are all constituents (see Pesetsky 1995: 227ff and Nilsen 2000: chapter 3). Conversely, the ungrammaticality of (5a–b) seems to suggest that neither the two PPs alone ([5a]) nor the object plus the two PPs ([5b]), are constituents (although, in principle, some factor other than lack of constituency might be responsible for the impossibility of their fronting). All this is expected under (1) but not under (2), where the two PPs and the object plus the two PPs are constituents, while neither the verb and the object nor the verb, the object, and the first PP are:

- (4) He promised he would discuss the problem with John on Monday . . .
 a. . . . and [discuss the problem] he did with John on Monday
 b. . . . and [discuss the problem with John] he did on Monday
 c. . . . and [discuss the problem with John on Monday] he did

- (5) a.*It's [with John on Monday] that he discussed the problem
 b.*It's [the problem with John on Monday] that he discussed

C. Relative scope of *VP-final PPs*. In postverbal position, PPs on the right typically take scope over the PPs to their left. See (6) (see Aoun and Li 1993: 160, Manzini 1995, Pesetsky 1995: 233, and Ernst 2002):⁶

- (6) a. John didn't smoke in the car because of the rain
 b. Mary has been in the hospital for over a month
 c. John depends on royalties for his livelihood

Under the usual assumption that scope is structurally coded in terms of c-command, this is expected under (1) but not under (2), where a PP to the right is c-commanded by (is under the scope of) every PP to its left.⁷

In spite of this evidence for structure (1), other phenomena exist that appear to go in the opposite direction, favoring (2) over (1), among them the binding of anaphors ([7]), the binding of pronouns (by quantifiers) ([8]), and the licensing of negative polarity items ([9]):

A'. Anaphor binding.

- (7) a. John spoke to Mary about *these people* in *each other's* houses on Tuesday (Pesetsky 1995: 172)
 b.*John spoke to Mary about *each other* in *these people's* houses on Tuesday

B'. Pronominal binding (by a quantifier).

- (8) a. Gidon Kremer performed in *every Baltic republic* on *its* independence day (Pesetsky 1995: 161)
 b.*He used to spend many hours in *its* memorial on *every independence day*

C'. Licensing of Negative Polarity Items (*NPIs*).

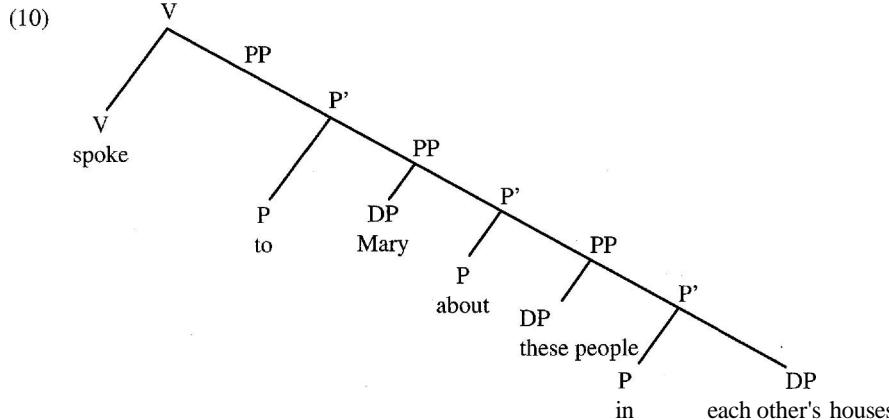
- (9) a. John spoke to Mary about *no linguist* in any *conference room* (Pesetsky 1995: 162)
 b.*John spoke to Mary about *any linguist* in *no conference room*

Under the standard assumption that anaphor binding, pronominal binding, and NPI licensing require the binder to c-command the binee, the contrasts in (7)/(8)/(9) are expected under (2) but not under (1).

We thus seem to have reached a paradox. Properties (A)–(C) provide evidence for (1) and against (2); properties (A')–(C') provide evidence for (2) and against (1).

Adding further to the paradox is Pesetsky's (1995: 172ff) observation that the objects of the Ps in (7)/(8)/(9) unexpectedly appear to c-command out of the PPs.

Pesetsky's own solution to the paradox (and to the c-command puzzle) was to assign sentences with adverbial PPs two parallel structures: one like (1) (which he called layered structure), which was meant to account for the first set of phenomena; and one similar to (2) (except that the Ps are heads on the main projection line and do not form a constituent with their "objects"—what he called cascade structure—cf. [lo]), which was meant to account for the second set of phenomena:



Sharing with him the idea that neither set of phenomena can be easily disposed of as spurious, I would like to propose a "serial" rather than "parallel" solution to the paradox, one that may capture the two sets of phenomena at different levels of one and the same derivation.

As a preliminary to that, I will take up the question of what is the order of merge of (complement and adverbial) PPs.

2. On the order of merge of complement and adverbial PPs

Based in part on facts like those in (11) and (12), complement and adverbial PPs are often assumed not to enter the derivation in a strict order (see, for example, Jackendoff 1990: fn. 2, Cinque 1999: 28ff, and Ernst 2002: sect. 6.4):⁸

- (11) a. John talked to Mary about Bill
- b. John talked about Bill to Mary

- (12) a. I met John in the park on Friday
- b. I met John on Friday in the park

Baker's (1988) Uniformity of Theta Assignment Hypothesis (UTAH) should make this assumption suspicious for complement PPs, which uncontroversially bear a theta-role, but perhaps also for circumstantial PPs, if they, too, bear a theta-role (see Frawley

1992: chap. 5 on participant, or argumental, and nonparticipant, or circumstantial, theta-roles).⁹

Apart from this conceptual consideration, empirical evidence exists that complement and adverbial PPs are merged in a rigid hierarchical order.

One first clue comes from the fact that, under certain circumstances, the apparently free ordering of PPs seen in (11) and (12) disappears, leaving a clear asymmetry between the two orders.

2.1. Evidence against free ordering of complement and adverbial PPs

2.1.1. Asymmetry in idioms

Belletti and Shlonsky (1995: 495f) observe that in double complement idioms of the form V NP PP, if both the NP and the PP contribute to it, the idiomatic reading is only available with the order NP PP (and is lost with the opposite order). See, for example, (13) (adapted from their [14]):

- (13) a. Lui mette sempre i puntini sulle 'i'
He always puts the dots on top of the 'i's
'He is always meticulously precise'
- b. %Lui mette sempre sulle 'i' i puntini
he always puts on top of the i's the dots
('*He is always meticulously precise')

If we consider the case of double PP idioms, we find exactly the same situation. The idiomatic reading is possible in one of the two orders of the PPs only. With the other it is lost. See (14) (where the idiomatic reading is only possible with the order Subject Matter¹⁰ PP > Locative PP):

- (14) a. Gianni parla sempre *di corda in casa dell'impiccato*
G. always talks about rope in the house of the hanged man ('G. always makes blunders')
- b. %Gianni parla sempre *in casa dell'impiccato di corda*
G. always talks about rope in the house of the hanged man ('*G. always makes blunders')

2.1.2. Asymmetry in phonological reduction

Another asymmetry, cited by Larson (1990: 608) and Pesetsky (1995: 255), who attribute the original observation to John Frampton, concerns the possibility of phonologically reducing the pronominal object of a preposition in the second of two PPs. With Goal and Subject Matter PPs, such phonological reduction is only possible with the order Goal PP > Subject Matter PP. See the contrast between (15a) and (b):

- (15) a. John talked to Mary about 'm
- b. *John talked about Mary to 'm

This asymmetry appears related to the preceding one (and to Larson's observation mentioned in note 8). What ties (11), (14), and (15) together is the fact, we suggest, that only one of the two orders is the "canonical" one (to DP > about DP; and di 'about' DP > in DP), the other being derived through an additional focus sensitive operation that has the contrastively focalized PP (the to PP in [11b], [15b], and the di PP in [14b]) end up to the right of the other PP. After Kayne (1994) we take the movement of the focalized PP not to be directly to the right but rather to the left, into the Spec of a (possibly low) FocusP (see Jayaseelan 1990 and Belletti 2001, 2004a), followed by leftward movement of the remnant (see Nilsen 2000: 72). We exemplify this with the derivation of (11b) (which may also provide an account for Larson's judgment mentioned in note 8):

- (16) a. . . . talked to Mary about Bill →
- b. . . . [_{FocP} to Mary F [_{VP} talked t about Bill]] →
- c. . . . [_{XP} [_{VP} talked t about Bill] X [_{FocP} to Mary [t]]]

When, for independent reasons, a phrase cannot move into Spec,FocusP, either because, being part of an idiom, it cannot be contrasted (as in [14])¹¹ or because it is phonologically weak, hence again noncontrastable (as in [15]), the result is ungrammatical.

We take the next two asymmetries also involving to DP about DP to be again a consequence of the fact that only to DP about DP is the canonical order, deferring until later the discussion of how exactly the two contrasts can be made to follow. (It is interesting that all the asymmetries consistently single out the to DP about DP order as the nonspecial one.)

2.1.3. Asymmetry in anaphor binding possibilities

Considering such examples as (17a) and (b), Chomsky (1981: 225, fn. 37)¹² notes that while the "order of the two PPs is free, with a preference for the to-phrase preceding, [. . .] only in [(17)a] can the NP of the first PP be the antecedent of the anaphor."¹³

- (17) a. John talked to the men about each other
- b.*John talked about the men to each other

2.1.4. Asymmetries in preposition stranding

Hornstein and Weinberg (1981: 71) observe a similar contrast between the two orders concerning preposition stranding possibilities. See (18a)–(19b):

- (18) a. Who, did John talk to t_i about Harry yesterday?
- b.?Who_i did John talk about t_i to Harry yesterday?
- (19) a. Who, did John talk to Harry about t_i yesterday?
- b.?Who_i did John talk about Harry to t_i yesterday

2.1.5. Asymmetries with adverbial PP pro-forms

Another circumstance in which the rigid ordering of PPs reappears is with certain adverbial PP pro-forms, in certain languages. As Nilsen (2000: 72f) notes for Norwegian, a Temporal PP, in the unmarked case, follows a Locative PP, although the other order is also possible if the Locative PP is focalized. See his examples (16a–b), given here as (20a–b) (following him, as earlier, we take [20a] to be the canonical order and [20b] to be derived by movement of the Locative PP into Spec,FocusP followed by remnant movement). When the corresponding pro-forms are used, however, only the canonical order V LocPP TempPP is possible. See his examples (19a–b), given here as (20c–d).¹⁴

- (20) a. Jeg møtte ham i parken på fredag
I met him in the park on Friday
- b. Jeg møtte ham på fredag I PARKEN/*i parken
- c. Jeg matte ham **der** **da**
I met him there then
- d.*Jeg møtte ham **da** **der**

As observed in Frey (2000: 113), German displays a similar rigidity with wh-adverbial pro-forms used as indefinites, though the German order (TempPP > LocPP) is the mirror image of the Norwegian one, a point we return to later:

- (21) a. Hans sollte **wann** **wo** darüber vortragen
H. should sometimes somewhere about that talk
'Hans should talk about it somewhere sometimes'
- b.*Hans sollte **wo** **wann** darüber vortragen

Another case of rigidity of adverbial pro-forms is found in Bulgarian with interrogative wh-phrases in multiple wh-fronting. The TempPP wh-phrase has to precede the LocPP wh-phrase, which in turn has to precede the MannerPP wh-phrase. See (22)–(24), from Krapova and Cinque (2004) (this may be related to the previous cases if the relative height of the wh-phrases in the COMP space reflects the pre-wh-movement relative height of the same phrases; see the discussion in Krapova and Cinque 2004):

- (22) a. **Koga** **kăde** šte hodiš tova ljato?
when where will go-you this summer 'When will you go where, this summer'
- b.***Kăde** **koga** šte hodiš tova ljato?
where when will go-you this summer 'Where will you go when, this summer'
- (23) a. Iskam da znam **kăde** **kak** si se dăržal.
I-want to know where how are-you behaved 'I want to know where you behaved how'
- b.*Iskam da znam **kak** **kăde** si se dăržal.
I-want to know how where are-you behaved

- (24) a. Iskam da znam **koga kak** si se dāržal.
I-want to know when how are-you behaved 'I want to know when you behaved how'

- b.*Iskam da znam **kak koga** si se dāržal.
I-want to know how when are-you behaved 'I want to know how you behaved when'

Whether or not these asymmetries involving pro-forms can be reduced to the same cause (resistance to movement into Spec, FocusP), they provide further evidence that the order among the different PPs is not free.

In sum, the evidence so far reviewed seems to indicate that focus sensitive operations may conceal the existence of a strict order among the different complement and adverbial PPs, an order that becomes visible whenever some factor makes the focus sensitive operations unavailable. What remains to be determined is the status of what we have called the "canonical" order of PPs and, more important, whether or not it reflects the order of merge (assuming there to be a universal one).

2.2. Evidence for a hierarchical organization of complement and adverbial PPs

Earlier we took the rigid order of PPs that becomes visible under certain conditions to be the "canonical" order, with alternative orders (when possible) derived through additional focus sensitive operations. We also noted, however, that the canonical order of Temporal and Locative PPs in German appears to be the mirror image of that of Norwegian (TempPP > LocPP, for the former, vs. LocPP > TempPP, for the latter). We submit that the mirror-image relation between German and Norwegian (or English, for that matter) is: (1) entirely systematic across the various PP classes;¹⁵ (2) related to the OV versus VO character of the two languages;¹⁶ and (3) just a special case of a much wider left-right asymmetry found across languages.¹⁷

2.2.1. The canonical order of adverbial PPs: An apparent cross-linguistic generalization

To judge from the cross-linguistic study of Boisson (1981), Temporal, Locative, and Manner PPs when to the left of the verb (as is ordinarily the case in OV languages) are only found in that order; while after the verb they are found to occur either in the same or (more frequently) in the mirror-image order Manner > Locative > Temporal. What is conspicuously missing is the order Manner > Locative > Temporal before the V (cf. [25]):¹⁸

- (25) a. Temp > Loc > Manner V¹⁹
b.*Manner > Loc > Temp > V²⁰
c. V > Manner > Loc > Temp²¹
d. V > Temp > Loc > Manner²²

- e. Dutch: Temp > Loc > Manner V & V > Manner > Loc > Temp (Koster 1974, 2000, Barbiers 1995)

This cross-linguistic generalization concerning Temporal, Locative, and Manner PPs (and the other circumstantial PPs—see Schweikert 2004) appears to be a special case of a much wider cross-linguistic generalization.

2.2.2. An aside on left-right asymmetries

Quite generally, what one finds across languages is that to the left of a head (N, V, etc.) the (unmarked) order of complements, adjuncts, auxiliaries, and modifiers is unique, while to the right of the head (at least) two possibilities are found; either the same order as that found to the left of the head or its mirror image. Greenberg's (1963) Universal 20 exemplifies this state of affairs for head = N. Cf. (26), which can also be expressed as (27):

- (26) When any or all of the items (demonstrative, numeral, and descriptive adjective) precede the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite.²³
- (27) a. Dem > Num > A > N
b.*A > Num > Dem > N
c. N > Dem > Num > A
d. N > A > Num > Dem

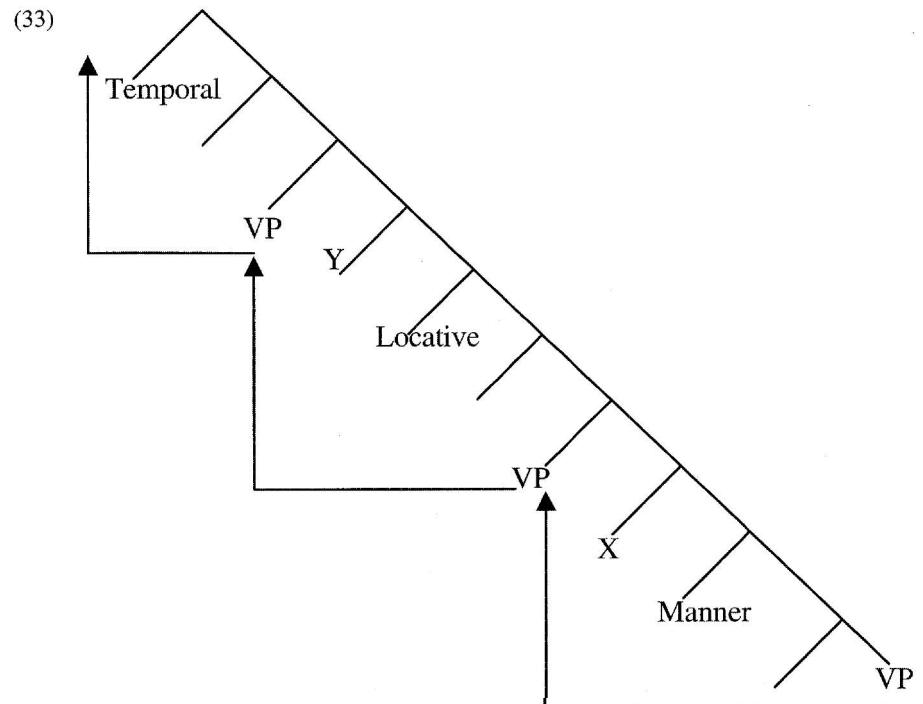
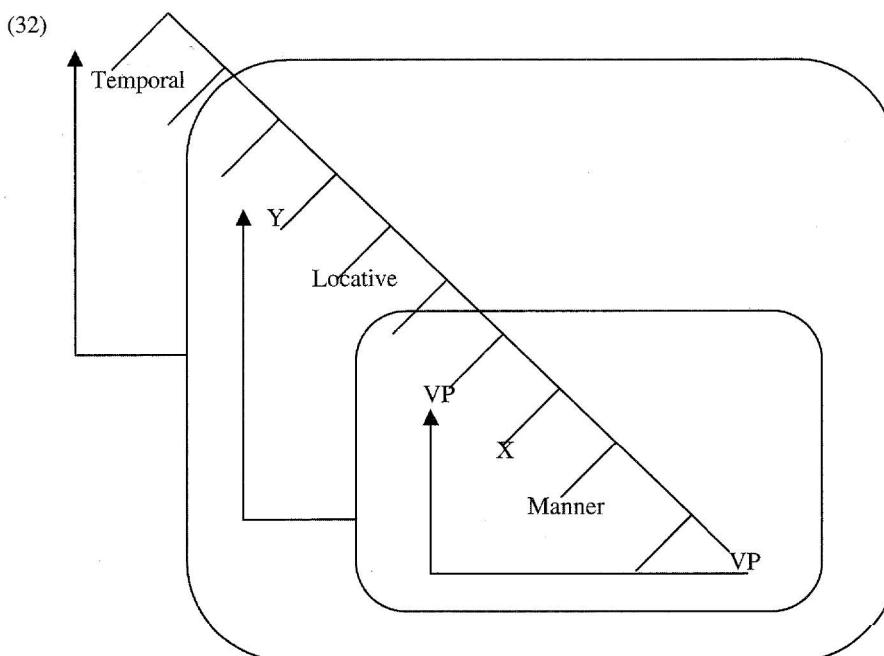
Exactly the same pattern is found with attributive adjectives (cf. [28], based on Hetzron 1978, Sproat and Shih 1988, 1991, and Cinque 1994, 2000a)²⁴; with adverbs (cf. [29], based on Rackowski 1998, Pearson 2000, Cinque 1999: 42f, Rackowski and Travis 2000); with auxiliary verbs (cf. [30], based on Koopman and Szabolcsi 2000 and Nilsen 2003); and, possibly, with (bare) direct and indirect objects (cf. [31], based on Blansitt 1973, Sedlak 1975, Lu 1998: chap. 7,²⁵ and Primus 1998):²⁶

- (28) a. Adj₁ > Adj₂ > Adj₃ > N English, German, Bulgarian .
b.*Adj₃ > Adj₂ > Adj₁ > N 0
c. N > Adj₁ > Adj₂ > Adj₃ Irish, Welsh, Nawdm . .²⁷
d. N > Adj₃ > Adj₂ > Adj₁ Arabic, Indonesian, Yoruba, . .
- (29) a. Adv₁ > Adv₂ > Adv₃ > V English, Chinese . .
b.*Adv₃ > Adv₂ > Adv₁ > V 0
c. V > Adv₁ > Adv₂ > Adv₃ (Main clause) German .
d. V > Adv₃ > Adv₂ > Adv₁ Malagasy, Niuean . .

- (30) a. Aux₁ Aux, Aux₃ V Italian, English . . .
 b.*Aux₃ Aux₂ Aux₁ V 0
 c. V Aux, Aux, Aux₃ Hungarian
 d. V Aux₃ Aux₂ Aux₁ Hungarian, German . . .

- (31) a. IO > DO > V (Eseejja, Kapau, Kewa, Maranungku, Mundari, Telefol . . .)
 b.*DO > IO > V²⁸ (0)
 c. V > DO > IO (Birom, Cambodian, Diola Fogny, Iquito, Mapuche, Totonac . . .)
 d. V > IO > DO (Bimoba, Fulani, Igbo, Luganda, Papiamentu, Vietnamese, Xhosa . . .)

Extending to the order of PPs what is proposed in Cinque (1996, 2000a, 2004a) to account for the pattern shown by DP modifiers, the asymmetry in (25) appears derivable, in Kayne's (1994) antisymmetric framework, from a unique (universal) order of merge (Temp > Loc > Mann > complements > VP) and the two possible ways in which the VP may successively raise: in essence, either pied-piping the phrase immediately dominating the Spec to which it has moved (cf. [32]) (with the effect of reversing the order of merge, to give VP > complements > Mann > Loc > Temp) or not pied-piping it (cf. [33]) (thus hopping around the adverbial PPs and preserving their order of merge).²⁹



This implies that in both types of languages Temporal PPs are merged higher than Locative PPs (which in turn are merged higher than Manner and complement PPs).³⁰

This hierarchical order is supported, as Nilsen (2000: 68ff) notes, by such contrasts in VP-Preposing as those in (34)–(37), which are independent of the canonical order instantiated by the language (LocPP > TempPP for Norwegian and English; TempPP > LocPP for German and Czech). This is because it is possible to front the smaller constituent formed by the verb and a lower PP, stranding a higher one, but it is not possible to front the verb and a higher PP without also fronting a lower one.³¹

- (34) a. Møtte Jon i parken gjorde jeg p i fredag
 met J in the park did I on Friday
 b.?Møtte Jon p i fredag gjorde jeg i parken
 met J on Friday did I in the park
- (35) a. . . . and meet John in the park I did only on Friday
 b.? . . . and meet John on Friday I did only in the park
- (36) a. Johann im Park getroffen habe ich nur am Freitag³²
 J. in the park met have I only on Friday
 b.?Johann am Freitag getroffen habe ich nur im Park
 J. on Friday met have I only in the park

- (37) a. [Operovat v sobotu v garazi] ho bude Petr³³
operate on Saturday in the garage him will P.
b. [Operovat v garazi] ho bude Petr v sobotu
operate in the garage him will P. on Saturday
c.*[Operovat v sobotu] ho bude Petr v garazi⁺
operate on Saturday him will P. in the garage

It is also supported, as Schweikert (2004) shows, by a number of other tests. So, for example, the scope interaction of wh-phrases and universal quantifiers appears to confirm the idea that Temporal PPs are higher than Locative ones, again independently of the canonical relative order of the two PPs in the language (TempPP>LocPP, as in German, or LocPP > TempPP, as in English):

- (38) a. Wo hat Hermann an jedem Tag gespielt?
b. Where did Hermann play every day?
(39) a. Wann hat Hermann in jeder Stadt gespielt?
b. When did Hermann play in every town?

(38a) and (b) are ambiguous, depending on whether wh- takes scope over or under every. Corresponding to the first reading (wh- > every) there is only a single answer (Hermann played every day in Cambridge). Corresponding to the second reading (every > wh-) there is a pair list answer: On Monday Hermann played in Cambridge, on Tuesday in *Basingstoke* . . .

(39a) and (b) are not similarly ambiguous (at least under the normal intonation without pauses). Their only (or highly preferred) reading is the (wh- > every) one, which gives rise to the single answer: On Monday (Hermann played in every town).

Assuming Wh/Q interactions to be regulated by a general scope principle like (40) later (see Aoun and Li 1993: chaps. 2 and 6), the ambiguity of (38a) and (b) and the nonambiguity of (39a) and (b) follow if Temporal PPs are higher than Locative PPs. In (38a) and (b), but not in (39a) and (b), the universal quantifier c-commands the trace of the wh-phrase (hence can take scope over it in the former, though not the latter, cases):

- (40) A universal quantifier A may have scope over a wh-quantifier B in case the merge position of A c-commands the merge position of B.³⁴

Following Schweikert (2004), I will take interpretive contrasts such as those in (38) and (39) to provide (confirming) evidence that Temporal PPs are merged higher than Locative PPs.

2.3. Reconciling "layered" and "cascade" structures

A structure like (1), which captures the properties listed in A, B, and C earlier (and is representative of the canonical order of PPs in English, Scandinavian, Romance, etc.),

is thus a derived structure, obtained by successively moving into higher Spec's larger and larger constituents that contain VP (a derivation compatible with antisymmetry):³⁵

- (41) [I . . . [YP [XP [ZP [VP discussed] the problem] with John] on Monday]]

What about properties A', B', and C' (the binding of anaphors, and pronominals, and the licensing of NPIs, in English), which appeared to be incompatible with (1)? I submit that they can be captured on a structure intermediate between the structure of merge and the derived structure (1)/(41), if we assume, following Kayne (2002a, 2004), that prepositions are not merged with their (ultimate) complement but are merged higher up, immediately above the projections of Case to which each DP moves. As we will see, this makes it possible, before the roll-up derivation (i.e., the attraction of remnants), for the bare complement of a P to come to properly c-command the complement of another P after moving to the Spec of its own CaseP (in a structure that is essentially a [reverse] cascade structure).

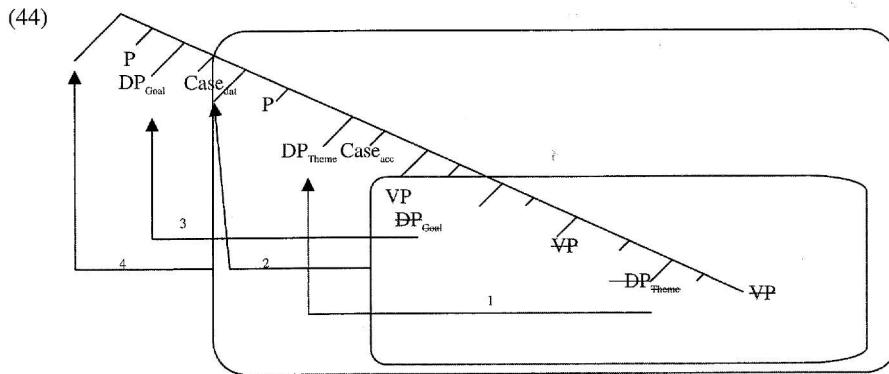
Let us briefly review the relevant steps (for an English-type language). Assume a bottom-up derivation that starts with VP (containing just the V),³⁶ followed by merge of the innermost argument (the one that bears the Theme theta-role), followed by movement of VP, followed by merge of the next higher argument, followed by movement of the VP, followed by merge of a "circumstantial" DP, and so on:

- (42) VP → merge of a head
[X VP] → merge of the Theme DP
[DP [X VP]] → merge of a head
[Y [DP [X VP]]] → movement of VP
[VP [Y [DP, [X VP]]] → merge of a head
[Z [VP [Y [DP₁ [X VP]]]] → merge of the Goal DP
[DP₂ [Z [VP [Y [DP, [X VP]]]]] → . . .

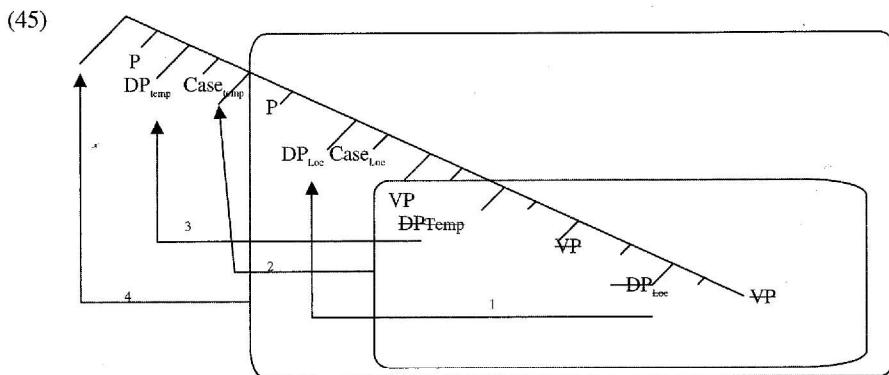
Once the merge of argument and circumstantial DPs is completed, the corresponding CasePs are merged, followed by attraction of the corresponding DPs, followed by merge of the appropriate prepositions, followed by remnant movement:³⁷

See (43) and, in tree representation, (44):³⁸

- (43) . . . [VP H [DP₂ [Z [VP [Y [DP₁ [X VP]]]]] → merge of Case_{acc}[°]
[Case,_” [VP [H [DP₂ [Z [VP [Y [DP₁ [X VP]]]]]]] → attraction of DP₁
[DP₁[Case_{acc}[°]] [VP [H [DP₂ [Z [VP [Y [DP₄ [X VP]]]]]]] → merge of (abstract) P
[0 [DP₁[Case_{acc}[°]] [VP [H [DP₂ [Z [VP [Y [DP₄ [X VP]]]]]]] → attraction of remnant
[VP [H [DP₂ [Z [VP [Y [DP₁ [X VP]]]]]]] [0 [DP₄ [Case_{acc}[°] []]]] -+merge of Case_{dat}[°]
[Case,_” [VP [H [DP₂ [Z [VP [Y [DP₄ [X VP]]]]]]] [0 [DP₁[Case_{acc}[°] []]]] → attraction of DP₂
[DP₂[Case_{dat}[°]] [VP [H [DP₂ [Z [VP [Y [DP₄ [X VP]]]]]]]] [0 [DP₁[Case_{acc}[°] []]]] → merge of P
[P [DP₂[Case_{dat}[°]] [VP [H [DP₂ [Z [VP [Y [DP₄ [X VP]]]]]]]] [0 [DP₁[Case_{acc}[°] []]]] → attraction of remnant
[VP [H [DP₂ [Z [VP [Y [DP₄ [X VP]]]]]]] [0 [DP₁[Case_{acc}[°] []]]] [P [DP₂[Case_{dat}[°] []]]]



If instead of Theme and Goal, we had Locative and Temporal DPs, the derivation would have proceeded in a similar way, giving:



This derivation has a step (the one with the DP_{Loc} raised to its Case position) in which the object of the locative preposition literally c-commands the temporal DP. We take this step to license the anaphor in (7a), the bound pronominal in (8a), and the NPI in (9a), before the "roll-up" derivation (the repeated attraction of remnants) disrupts the relevant c-command relations.

Even though in the final derived structure the object of the locative P does not c-command the object of the temporal P, it did at an earlier (intermediate) stage,³⁹ a situation non-dissimilar from that found in (46a–c), where the relevant relations are licensed at an earlier stage of the derivation (alternatively, under reconstruction):

- (46) a. Which pictures of *each other*, did *they*, bring to the party?
- b. Which of *his*; friends would *everyone*, like to see in such circumstances?
- c. A doctor with *any* knowledge of acupuncture, I did *not* meet

The binding of anaphors that are not embedded in another DP is subject to more stringent conditions than the binding of anaphors embedded in another DP. Consider (17a–b), repeated here as (47), and (48)–(52):⁴⁰

- (47) a. John talked to the men about each other

b.*John talked about the men to each other

- (48) a. I introduced the students only to each other

b.*I introduced to the students only each other⁴¹

- (49) a. I introduced the students to each other's supervisors only

b. I introduced to the students each other's supervisors only

- (50) a. John talked to the men about each other's supervisors

b. John talked about the men on Tuesday to each other's supervisors (Pesetsky 1995: 271)

- (51) a. John spoke about these countries in each other's capital cities

b.*John spoke about these countries in each other

- (52) a. John spoke in these countries about each other's capital cities

b.*John spoke in these countries about each other

It seems that only direct and indirect objects qualify as possible antecedents of an unembedded anaphor (cf. [47a]/[48a] vs. [51b]/[52b]). Moreover, it seems that the antecedent has to be merged lower than the (unembedded) anaphor (as is the direct object in [48], and the indirect object in [47]). If we take Spec,Case_{Acc} and Spec,Case_{Dat} to differ from all other Spec,Case (in that they qualify perhaps as derived A-positions), then the condition on (unembedded) anaphor binding could be given as in (53):

- (53) An unembedded anaphor has to be bound in its merge A-position from a derived A-position⁴²

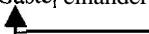
This appears to correctly distinguish (48a) and (47a), which satisfy (53) at the intermediate stages (54) and (55), respectively, from all the impossible cases (48b)/(47b)/(51b)/(52b) (which do not satisfy it):⁴³

- (54) ... [0 [Case_{AccP} the students [Case_{Acc} [Goal_P each other [Theme_P t [VP 11111]

- (55) ... [to [Case_{DatP} the men [Case_{..} [Subj_{MattP} each other [Goal_P t [VP 11111]

If an (unembedded) anaphor could be bound in its merge A-position from another (higher) merge A-position, in contrast to (53), then *I introduced only each other to the students (or *I introduced to the students only each other) would be well formed.

A possible independent argument for (53) and against allowing binding into a merge A-position from a (higher) merge A-position is provided by the following contrast in German (from Frank, Lee, and Rambow 1996: 89):⁴⁴

- (56) a. *Gestern habe ich den Gästen einander vorgestellt
 yesterday have I the guests-Dat each other introduced
 'Yesterday I introduced the guests to each other'
 b. Gestern habe ich die Gäste_i einander t_i vorgestellt

 yesterday have I the guests-Acc each other introduced
 'Yesterday I introduced the guests to each other'

Anaphors embedded in another DP seem to pattern with pronominals bound by quantifiers and NPIs in allowing the antecedent to be other than a direct or indirect object (compare [51a] with [59a]/[60a]) and even to be merged in a (possibly non-A) position higher than that hosting the anaphor (compare [49b]/[50b] with [57b]/[58b]/[59b]/[60b]):

- (57) a. I talked to no man_i about his_i son
 b. I talked about no man, to his_i son

 (58) a. I talked to no one in the room about any one of the candidates
 b. I talked about no one in the room to any one of the candidates

 (59) a. John spoke about no man_i in his, hometown
 b. John spoke in no town_i about its, citizens

 (60) a. John spoke about no city in any country that he had visited
 b. John spoke in no country about any city that he had visited

A serious analysis of these facts (whose grammatical status, incidentally, is sometimes a matter of disagreement⁴⁵) goes well beyond the limits of this work.⁴⁶ I will rather conclude by mentioning Schweikert's (2004) finding that not only (complement and) Time and Place PPs are hierarchically ordered with respect to each other, but also the same holds of the remaining circumstantial PPs. On the basis of a number of syntactic tests (which appear to give converging results), he arrives at the following hierarchy of circumstantial PPs: Evidential > Temporal > Locative > Comitative > Benefactive > Reason > Source > Goal > Instrumental/Means > Matter > Manner. As stated in note 1, this hierarchy shows an interesting overlap with the one arrived at by Damonte (2004) on the basis of the corresponding verbal "extensions" of Fulfulde and Quechua (Benefactive > Reason/Source/ Goal > Locative/Instrumental/Manner > Comitative). Such a convergence can hardly be accidental, and the few discrepancies that are found should be examined more closely to see whether they

could be due to one circumstantial PP or affix occupying two or more (related) functional projections.⁴⁷

Should these conclusions be confirmed by further research, we will have a partially new picture of the lower portion of the clause, one that is hierarchically structured more rigidly than it is generally assumed.

Notes

This chapter represents a version, written in 2004, of a paper presented at the 25th annual GLOW Colloquium in Amsterdam (April 9–11, 2002). I wish to thank Adriana Belletti, Paola Benincà, and Richard Kayne for their useful comments on a previous draft.

1. The order suggested by Schweikert (2004) (see later) shows a significant overlap with the one arrived at by Damonte (2004) on the basis of the corresponding verbal "extensions" of Fulfulde and Quechua, two languages with particularly rich verbal morphology encoding "circumstantial" roles that appear as adverbial PPs in other languages.

2. See Larson (1988, 1990), Kayne (1994: 69ff), and Chomsky (1995: 333), among others.

3. See Lakoff (1968: 11) and Reinhart (1983: 60).

4. Example (3) contrasts with (i), in which the pronoun c-commands the R-expression from the subject position (see Manzini 1995):

- (i) a. *He_i was killed [on the very same day John_i was being released from prison]
 b. *He_i was hit [without John, being able to defend himself]

If the structure in (1) is not one of adjunction, as I will argue later, the relevant definition of c-command can be as in Kayne (1994: 16).

5. Coordination and ellipsis phenomena are usually taken (*pace* Phillips 2003) not to be as reliable, as the possibility exists that more structure is involved than is actually visible.

6. This scope property is also typical of VP-final adverbs (Andrews 1982), although the reverse is also possible (Cinque 1999: sect. 1.4, Koster 2000: sect. 2.5, Phillips 2003: 71f).

7. Larson (2003) contains a potential way to reconcile the leftward scope seen in (6) with a rightward descending structure. Concerning VP-final adverbs he suggests that they appear to take scope over what precedes them not because they c-command it but by virtue of being (event, quantity, etc.) predicates corresponding directly with a right descending syntax for adverbial attachment under the Mapping Hypothesis of Diesing (1992) (John knocked on the door intentionally twice would, for example, correspond to "John's intentional knockings were two"). The same could be proposed for VP-final PPs. Though interesting, it is, however, not clear how such a solution can express the typological generalization relating VO and OV languages discussed here (see note 29 below and related text). Furthermore, as Larson himself noted in his presentation at NELS, it is also not clear how such predication approach can be extended to the leftward scope of such adverbs as yet, no longer, already, etc., in VP-final position.

8. But see Larson's (1990: 607) observation that Mary in (11b) bears "relatively greater stress" than Bill in (11a), suggesting the presence in the former of a heaviness effect of some sort.

9. It is generally assumed that the former (Theme, Experiencer, Goal, Agent, . . .), being borne by the arguments of a predicate, are selected and obligatory, while the latter (Manner, Place, Time, Duration, Instrument, Purpose, etc.) are nonselected and optional. The distinction, however, is not as clear-cut, as the latter, too, depending on the predicate, can be selected

and obligatory. See, for example: (Manner) *Pat behaved *(in a rude manner) to practically everybody* (see Fillmore 1994: 159; Cinque 2004b (chapter 5, here): fn. 17 and relative text); (Place) *All powers reside *(in the emperor)*; (Time) *The show used to begin *(at 9)*; (Duration) *The concert lasted *(for two hours)*; etc. For further relevant discussion, see Dowty (2000).

10. I borrow the term from Pesetsky (1995: chap. 3), generalizing it beyond his Subject Matter of Emotion (as in *John worried about the television set*).

11. Note that idiom chunks (depending on the idiom) can be found displaced in non-focus constructions (see Cinque 1977: § 1.4). This is also the case with the present idiom: *Di corda, non devi parlarne in casa dell'impiccato!* I thank Paola Benincà for discussion on this point.

12. See also Jackendoff (1990: 430ff), Larson (1990: 608), and Pesetsky (1995: 270).

13. As (7)/(8)/(9) show, the contrast in (17) cannot be due to lack of c-command in (17b) vs. (17a), where *to* could be argued to be a Case marker rather than a genuine preposition. In (7), (8), and (9) the object of *about* can bind an anaphor (provided it is within a larger phrase). See later for further discussion.

14. Richard Kayne informs me that David Perlmutter noted, in personal communication with him, a similar contrast in English: *He went there then* vs. **He went then there*, although the contrast is not as clear when *there* is a Locative rather than a Directional pro-form. See *He got his first job there then* vs. *?He got his first job then there*. Perhaps movement to Spec, Focus is, for some reason, more difficult for a selected Directional pro-PP than it is for a Locative pro-PP (in fact, Richard Kayne, personal communication, finds *It was there that he saw them* more natural than *?It was there that he sent them*).

15. Suggestive evidence to this effect in German vis-à-vis English is contained in Rosengren (2000) and Haider (2004).

16. See Haider (2000, 2004), Hinterholzl (2001, 2002), and Cinque (2002a).

17. See Cinque (1996, 2000a, 2002a, 2004a), where such left-right asymmetry is shown to follow from antisymmetry.

18. Hawkins (2000: 231f) expresses reservations about the solidity of Boisson's generalization owing the fact that it does not find "empirical support in a corpus of written [English] data." However, as noted earlier, failing to tease apart alternative orders produced by focus sensitive movements (as may be difficult to do in a written corpus) can obscure the picture.

19. "Les langues suivants ont un ordre Tmp—Loc—Man—Vrb : chinois mandarin, gujarati, lamani, penjabi, zuni. Le lamani a, plus prkciskment, Tmp—Loc—Ins—Man—Vrb" (Boisson 1981: 80). Other (OV) languages reported to have this order are German (Haider 2000, Hinterholzl 2001, 2002), Turkish (Jaklin Kornfilt, personal communication), Nenets (Vilkuna 1998: 203), and Konda (Krishnamurti and Benham 1998: 266), among others.

20. "Man—Loc—Tmp—Vrb n'est pas attesté, mais son image en miroir Vrb—Tmp—Loc—Man serait valable pour l'bgyptien ancien" (Boisson 1981: 80). (The same order is also found in Middle Egyptian—Boisson 1981: 75.)

21. Many (most?) VO languages instantiate this order; among them English, Norwegian (Nilsen 2000: chap. 3); Ixil, Mixtec de Jacaltepec, Tzotzil (Boisson 1981: 80), Romance languages, etc.

22. The languages instantiating this order are not many. Apparently, Old and Middle Egyptian (as noted in note 20 earlier), Otomi (Boisson 1981: 76), Czech (as given in Nilsen 2000: 73f), and German (in V2 clauses).

23. This is, in fact, a simplification, which, however, does not affect the thrust of the argument. While the prenominal order is Dem > Num > Adj without exceptions (or virtually so), more possibilities than the two Dem > Num > Adj and Adj > Num > Dem are actually

attested postnominally (see Cinque 2004a for a review and for an illustration of how they can be derived through different leftward movements).

24. For concreteness, let us take *Adj*, to stand for size adjectives, *Adj₂* for color adjectives, and *Adj₃* for provenance adjectives.

25. "The orders of direct and indirect objects (hence DO and IO respectively) also demonstrate some left-right asymmetry. If both DO (direct object) and IO (indirect object) follow V, IO frequently stays nearer to V than DO does, as exemplified in English and Chinese 'dative shift.' In Mandarin Chinese, the order [V IO DO] is in fact used much more frequently than the order V DO IO and is hence viewed by some grammarians as canonical, basic order. By contrast, if both DO and IO precede V, the corresponding mirror-image order [DO IO V] is never taken as a canonical order" (Lu 1998: 207).

26. As Arhonto Terzi pointed out to me (personal communication), another phenomenon that apparently shows the same pattern is the order of clitics in Modern Greek. See Terzi (1999). To the left of the V only the order Dat-Acc is possible, while to the right of the V both Dat-Acc and the opposite order, Acc-Dat, are possible.

27. Willis (2003) points out that while the postnominal order of size, color, and provenance adjectives in Welsh indeed is as in English, the language shows mirror-image order effects with other adjectives. For example, the relative order of quality (evaluative), age, and comparative/superlative adjectives and of the adjective *other* and the demonstrative is the mirror image of the English order: N (size > color > provenance >) age > quality > comparativesuperlative > *other* > demonstrative. We take this to suggest (differently from Cinque 1994) that Welsh, too, involves NP- rather than N-raising. What needs to be assumed (pace Willis 2003) is that the NP raises from Spec to Spec around size, color, and provenance adjectives, with subsequent movements pied-piping the node dominating the Specifier targeted by the movement, thus systematically reversing the order of all higher adjectives and modifiers (except numerals).

28. Blansitt (1973) notes that "of the eight languages for which SODV [Subj DO IO V] is the only bitransitive order shown, all except WESTERN DESERT [APACHE] and SOMALI have only a relator-marked indirect object and in SOMALI the indirect object appears marked in some verbs" (p. 13f). He then goes on to say: "This fact is interesting, in spite of the small number of languages of this type in the survey, because approximately half of the languages examined have an unmarked indirect object. This observation appears even more important in view of the fact that MUNDARI is SDOV with unmarked indirect object and SODV when the indirect object is marked" (p. 14). In view of this, I conjecture that the generalization in (31) (namely, that, to the left of the V, *bare* (Blansitt's *unmarked*) IO invariably precede *bare* DO) is essentially confirmed and that Somali has a (sometimes covert) IO marker (and so perhaps does Western Desert Apache).

29. This is a simplification, to be qualified later. On the more general validity of the pied-piping/non-pied-piping parameter, see Koopman and Szabolcsi (2000). Note that a Larsonian type of merge of postverbal complements, adverbials (V PP, PP₂ PP₃) (and adverbs—see Larson 2003) cannot naturally express a unique UG order of merge (and scope) of these elements, as it would have to derive the mirror-image order (PP, PP, PP₁V) found preverbally independently of the other (V PP, PP₂ PP₃), either via merge or through "nested" movements of the PPs. For similar criticism, see Hinterholzl (2001, 2002), whose analysis shares with ours the idea that the "English" order essentially derives from the "German" order via successive XP "intrapositions." Also see Baltin's (2003) evidence from British English *do* for locating adverbial PPs higher than complement PPs (the former, though not the latter, can co-occur with *do*, which has the behavior of a "deep anaphor" for V plus its complements, which leaves out adverbial PPs).

30. Josefsson and Platzack (1998: 33ff) also argue that adverbial PPs are in Spec positions of VP-shells above the lexical VP, with Temporals above Locatives.

31. The contrasts in (34)–(37) are not as sharp as one should expect, perhaps due to the (marked) possibility for the focus sensitive operation that reverses the order of the two PPs to feed VP-Preposing. Richard Kayne (personal communication) finds a comparable contrast in the (focus) fronting of the two PPs: *Only on Friday did I meet John in the park vs. ?Only in the park did I meet John on Friday*.

As Nilsen (2000: 76) notes, in an approach that assumed "scrambling" of one or the other PP followed by remnant movement to COMP of what is left, such contrasts as (34) (and [35], [37]) would not be immediately understandable. This may be a general difficulty for any "remnant movement" solution to Pesetsky's paradox (such as Lechner's 2003 and Baltin's 2003). Phillips (2003) presents a different solution to Pesetsky's paradox, based on a top-down incremental merge of the PPs. For difficulties encountered by such a solution, see Lechner (2003) and Cinque (2004b, fn. 27).

32. I thank Walter Schweikert for the judgments in question.

33. Czech being a "clitic second" language, whatever precedes the second position clitic will have to be a constituent (see Nilsen 2000: 74).

34. This also carries over to the classical contrasts in (i) (May 1985: 37ff and references cited there) and those in (ii) and (iii) (Aoun and Li 1993: chap. 6):

- (i) a. What did everyone buy (for Max)? (ambiguous)
- b. Who bought everything (for Max)? (unambiguous)
- (ii) a. Where did everyone hit him? (ambiguous)
- b. Where did he hit everyone? (unambiguous)
- (iii) a. When did everyone hit him? (ambiguous)
- b. When did he hit everyone (unambiguous)

For the case of *why* and *how* and the variation in speakers' judgment, see the discussion in Aoun and Li (1993).

35. As noted earlier (cf. [16] and relative text), we take such marked orders as *I talked on Monday with John* to derive from the (already-derived) "canonical" structure *I [[talked] with John] on Monday]* through movement to Spec,FocusP of the constituent that eventually becomes rightmost, followed by merge of a head and attraction of the remnant. For a proper constituent to move, the VP will need first to extract (as it presumably does in such cases as: *I [talked] briefly [[t with John] on Monday]*).

36. This amounts to saying that only functional projections are fully recursive Spec-Head-Complement structures, recursion stopping with the lexical projection, or that arguments are necessarily merged as specifiers of the extended projection of a lexical X°/XP. More radical approaches are also conceivable (see Starke 2004 and Manzini and Savoia 2004). Recall that in a Larsonian VP-shell structure the direct object can be either in complement or in specifier position, depending on the presence of other (lower) complements and adjuncts, with an apparent weakening of the UTAH, which is to be taken in a relative rather than absolute sense (see Larson 1990: §2.3).

37. See Kayne (2002a). As in Kayne (2005: §5.6), I take "attraction of the remnant" to Spec,P to involve not the complement of the P itself but the complement of the next head down. OV languages may be taken to differ from VO languages in not moving the remnant to Spec,P. If the VP has to raise to Spec,T, as is plausibly the case in German and other languages, it does so by pied-piping all intermediate nodes (as in *picture of who* pied-piping).

38. As Nicola Munaro observed (personal communication), there is an apparent redundancy. The hierarchical order of the argument and other participant PPs is duplicated by the order of the corresponding Case positions (and related Ps), to the effect that the lowest argument raises to the lowest Spec,CaseP, the lowest minus one argument raises to the lowest minus one Spec,CaseP, and so on. In a (relativized) minimality approach, this pattern could follow in the same way Krapova and Cinque (2004) propose to derive the hierarchical order preservation of wh-phrases. In a "closeness-driven" movement approach (Kayne 2005), this might suggest that the merge of the related Case and P takes place immediately after the merge of the corresponding DP (before the next argument/participant DP is merged).

For the idea in (43)/(44) of an abstract P merging above Case,, see perhaps Spanish *a*, Romanian *pe*, etc., which precede (certain) objects.

39. Alternatively, it continues to under a copy theory of reconstruction (Chomsky 1995: chap. 3).

40. (50)–(52) are from Pesetsky (1995), who attributes (51b) to Peter Svenonius.

41. Richard Kayne (personal communication), however, thinks that (48b) becomes better in contexts such as the following:

- (i) a. ?John is planning to introduce to the advisees he has this year neither each other nor any of his colleagues
- b. ?(?) John is planning to introduce to the advisees he has this year only each other
- 42. It may be that (53) is not general enough. Richard Kayne (personal communication) notes a similar contrast between *John and Mary were letting the honey drip on each other's feet* vs. *? . . . on each other. Also see the contrast mentioned in Kayne (2003: fn. 23):
- (i) a.?Each other's friends have insulted John and Bill once again
- b.*Each other have/has insulted John and Bill once again

43. Adriana Belletti suggests that that the more stringent condition on unembedded anaphors vis-à-vis embedded anaphors could follow in this analysis from Principle C of the Binding Theory. [each other], would come: to c-command and bind *the men* from a derived A-position in the derivation of (47b) and *the students* in that of (48b), but not in (49b), nor in (50b), as in the latter it is embedded in a larger phrase ([[each other]_j's . . .]_k). If so, (53) could perhaps be simplified to: An anaphor has to be bound in its merge A-position from a derived A-position. The ungrammaticality of such cases as **Hanno abbandonato se stessa a Maria/a Maria se stessa* 'they abandoned herself to Mary', *?*Questa terapia ha restituito se stessa a Maria/a Maria se stessa* 'this therapy restituted herself to Mary' would similarly follow.

44. As Richard Kayne points out (personal communication), the point about (56) is actually complicated by the fact that *vorstellen* is one of the verbs for which Hubert Haider argued that the canonical order is Acc-Dat. This conclusion also requires a separate treatment for Bars and Lasnik's (1986) sentences like *I showed John himself (in the mirror)*, perhaps in terms of a small clause analysis.

45. (57) and (58) reflect the judgments given in Jackendoff (1990: 432), but Larson (1990: 608) gives (57b) as "*?", and an example comparable to (58b) as "?".

46. Cases (ib)/(ivb) can perhaps be distinguished from (57b)/(60b) in terms of Weak Crossover, although the more severe ungrammaticality of (iib)–(ivb) (vs. the simple marginality of (ib) suggests that other factors are involved:

- (i) a. John talked to no man_i about his_i son
- b.?John talked about his_i son to no man,

- (ii) a. John talked about no man_i to his_i son
- b.*John talked to his_i son about no man_i
- (iii) a. I talked to no one in the room about any one of the candidates
- b.*I talked about any one of the candidates to no one in the room
- (iv) a. I talked about no one in the room to any one of the candidates
- b.*I talked to any one of the candidates about no one in the room

47. For clues concerning the possible existence of different Comitative and Locative projections, see the discussion in Damonte (2004: 39ff) and Maienborn (2001), respectively. As Tom Roeper pointed out to me (personal communication), the hierarchical order of participant PPs may also be at the basis of certain restrictions in nominal compounds. He notes that while compounding of an N with an instrument role (*hand made* 'made by hand') and one with a locative role (*factory made* 'made in a factory') are equally possible, there are certain combinatorial restrictions. While the instrument can be compounded in the presence of a locative PP (*hand made in a factory*), a Locative cannot if an instrument PP is also present (**factory made by hand*). This might suggest that compounding has to proceed bottom-up from the N that bears the lowest participant role (in this case, instrument), without skipping positions, a conclusion apparently corroborated by word order contrasts like the following (also noted by him): ?*factory hand made* vs. **hand factory made*.

The Status of "Mobile" Suffixes

Verbal suffixes that encode grammatical notions of mood, modality, tense, aspect, and voice have been found to obey a relative order that is largely consistent across languages (Bybee 1985).¹

This order appears to reflect, in a mirror fashion, that of the corresponding free morphemes (auxiliaries and particles), in VO languages, suggesting the existence of a layered constitution of the clause (Foley/Van Valin 1984, Dik 1989).²

In Cinque (1999), I have proposed that the layered structure of the clause is much richer than previously thought. Each of the ordered categories of mood, modality, tense, aspect, and voice break down into a number of distinct grammatical markers, which are also ordered among one another. If we put together these different orders, we reach some forty or so grammatical layers for the clause.³

Within this picture of a rigid and invariant universal structure for clauses, "mobile" suffixes constitute a particularly severe challenge, as they seem to point to an at least partially undetermined layered structure.

On the basis of a number of representative cases, however, I will conclude that it is rational not to abandon the stronger assumption that the grammatical markers of mood, modality, tense, aspect, and voice enter an invariant and rigid universal order.

Consider first the case of variable ordering of a suffix in one and the same language.

In Turkish, the -(y)*Abil*- suffix that expresses ability/permission or possibility is found to either precede or follow the negative suffix -*mA*- (the -(y)*Abil*- suffix is truncated to -[y]a- before the negative suffix -*mA*- —see Kornfilt 1997: 375 and Kornfilt 1998, from where [1] is taken):

- (1) a. *oku-ya-ma-nz*
read-ABIL-NEG-lsg
'I am unable to/ am not permitted to read'
- b. *oku-ma-yabil-ir-im*
read-NEG-ABIL-AOR-1sg
'I might not read; it is possible that I not read'

It could thus be thought that the -(y)Abil- suffix is unordered with respect to negation (hence that the corresponding modal layer has no rigidly fixed position). Yet the -(y)Abil-suffix receives two different interpretations depending on whether it precedes or follows the negative suffix: that of a root modal ('be able to/ be permitted to') when it precedes and that of an alethic modal ('it is possible/might') when it follows.

This suggests that the -(y)Abil- suffix can occupy two distinct slots, corresponding to two distinct modal layers, a higher, alethic, layer and a lower, root, one. This conjecture is consistent with what we know of English (and other languages) double modal varieties (see, for example, 'He'll might could do it' and similar cases, in Hawick Scots, Brown 1992: 75), where alethic modality indeed appears to be distinct from, and more distant from the lexical verb than root modality (Cinque 1999: chap. 4). So, the conclusion that the modal suffix of Turkish is mobile is not really warranted.

Evidence internal to Turkish confirms this interpretation, as the two modal suffixes can be simultaneously present (see [2], also from Kornfilt 1998), with -(y)Abil both preceding and following the negative suffix.⁴

- (2) *oku-ya-ma-yabil-ir-im*
read-ABIL-NEG-ABIL-AOR-lsg
'I might be unable to read; it is possible that I shall be unable to read'

More generally, whenever one and the same suffix can encode two different (presumably related) grammatical notions that occupy two different positions, the illusion can be created that one and the same marker can occur in two different positions in the hierarchy of grammatical layers.⁵

This is no different from what is found with adverbs that occupy two distinct positions (see Cinque 1999 for more discussion). Honestly, for example, can occur either before or after an adverb like always. When it precedes ([3]), it is interpreted as a speech act modifying adverb (I'm honest in saying that. . .):

- (3) *Honestly, I always pay my taxes*

When it follows ([4]), it is interpreted as a manner adverb (I pay them in an honest way):

- (4) *I always pay my taxes honestly*

That one and the same morpheme can occur in two distinct positions (with two different functions) is shown, once again, by the possibility of its occupying the two positions simultaneously. See (5):

- (5) *Honestly, I always pay my taxes honestly*

The systematic parallelism between the apparently variable order of suffixes and that of adverbs is shown in a particularly clear way by the following variable ordering of the repetitive aspect suffix (-cōqo-) in Tepehua (Watters 1988: 237). This suffix may either precede or follow the desiderative suffix -putun (cf. [6a–b]), but, as Watters notes, the two possible orders receive two different interpretations, parallel to the two different interpretations that the corresponding adverb again takes in the English glosses of (6a–b):

- (6) a. *k-wayn-Cooqo-putun*
1SUB-eat-REP-DESID (IMPF)
'I want to eat again'
- b. *k-wayn-putun-Cooqo-y*
1SUB-eat-DESID-REP-IMPF
'Again I want to eat'

Watters does not give examples with -cōqo- both preceding and following the desiderative suffix but does not say that it is impossible, either. It could of course be that in certain cases, due to some independent factor, the two identical suffixes cannot appear simultaneously, a matter of some consequence, as it may lead to wrong conclusions. A clear case of this sort is provided by Japanese.

In Japanese, the Inceptive aspect suffix -hajime- 'begin' can appear either preceding or following the passive suffix -rare-:⁶

- (7) a. *Ie-wa tate-hajime-rare-ta 1950-ni*
house-TOP build-begin-PASS-PAST in 1950
'the house was begun to build in 1950'
- b. *Ie-wa tate-rare-hajime-ta 1950-ni*
house-TOP build-PASS-begin-PAST in 1950
'the house began to be built in 1950'

The two -hajime- suffixes, however, cannot easily occur simultaneously (?**Ie-wa tate-hajime-rare-hajime-ta 1950-ni*)—Asako Honya, personal communication). Nonetheless, it would be rash to conclude from that that the Inceptive aspect layer is freely ordered with respect to the voice layer.

There is some evidence from Romance that two Inceptive aspect verbs (and layers) should be distinguished (one higher, and one lower, than voice). See chapter 2. The higher one marks the beginning of a bounded or unbounded process at a point that is not the "natural beginning point" (cominciare 'start', in Italian); the lower one marks instead the beginning of a (bounded) process at its "natural beginning point" (iniziare 'begin', in Italian).

Given their specialization, the two cannot easily co-occur, although if one forces them to co-occur, in Italian, one of the two orders is definitely preferable (??*Le case cominciarono ad esser iniziate a costruire molto in ritardo* 'the houses started to be

begun to build very late' vs. **Le case iniziarono ad esser cominciate a costruire molto in ritardo* 'the houses began to be started to build very late').⁷

Now, some indirect evidence exists that the same distinction holds in Japanese.

As opposed to *-hajime-* (which appears to correspond to either type of Inceptive aspect), the Inceptive aspect suffix *-das-* appears to mark only the starting point of a process at a "nonnatural beginning point" (often with the added nuance of a sudden or unexpected start). It is thus a form specialized for the higher Inceptive aspect head. Interestingly, as Mamoru Saito pointed out to me, *-das-* (differently from *-hajime-*) can be found following but not preceding the passive suffix *-rare-*; an expected fact if it only corresponds to the Inceptive aspect head higher than voice. See (8a–b):⁸

- (8) a. *?*Ie-wa tate-das-are-ta*
house-TOP build-start-PASS-PAST
'the house was started to build'
- b. *Ie-wa tate-rare-dasi-ta*
house-TOP build-PASS-start-PAST
'the house started to be built'

The two orders of the suffix in (7) can thus be taken to correspond to two distinct (and specialized) Inceptive aspect layers. The illusion of a variable ordering of *-hajime-* with respect to the voice suffix only arises, then, as a consequence of the fact that the same morpheme can express both the higher and the lower Inceptive aspect head just as the morpheme -(y)Abil- in Turkish (or, for that matter, the modal "can" in English) can express both the higher alethic possibility modal layer and the lower root ability/permission layer.

Cases of this sort, where a certain suffix expresses either of two (related) grammatical notions, coming to fill two different positions, are found language after language. I believe that many of the cases of variable morpheme ordering considered in Nedjalkov (1992) are amenable to such a reinterpretation. For example, it is tempting to take the variable ordering of the inceptive aspect suffix in Evenki ([9] = [3] of Nedjalkov 1992), and Aleut ([10] = [26] of Nedjalkov 1992) with respect to the desiderative modal suffix to arise from the double possibility open to the Inceptive aspect heads seen earlier:⁹

- (9) a. *Nuŋan hereket in-mu-l-che-n*
she separately live-desid-INCEPT-PAST
'she began to want to live separately/on her own'
- b. *Nuŋan kete-li sa-l-mu-d'a-cha-n*
he much-PROLATIVE know-INCEPT-desid-IMPERF-PAST-3SG
'he wanted to begin to know (about) many things'
- (10) a. *Ka-Kali-tu-ku-H*
eat-INCEPT.desid-nonfut-3SG
'he wants to begin to eat'

- b. *Ka-tu-Kali-ku-H*
eat-desid-INCEPT-nonfut-3SG
'he began to want to eat'

Although one cannot be certain that all cases of variable ordering of mood, modality, tense, aspect, and voice suffixes are due to the same suffix filling different, specialized head positions in an invariant hierarchy, the preceding discussion of some such cases at least renders this eventuality plausible. If so, many inconsistencies in the relative order of grammatical heads among languages might turn out to be apparent only. One language could, for example, have an inceptive morpheme corresponding only to the higher Inceptive aspect head, while another could have one corresponding only to the lower Inceptive aspect head, thus giving the impression of ordering its Inceptive aspect marker differently from the other language.

I want to conclude by mentioning one possible case of this sort: that involving the position of sentential negation.

Negation stands out as rather special among the various grammatical heads. For reasons of scope relative to other operators it can occur in numerous positions (filled, in some languages, simultaneously).

In Tuyuca, for example, the negative suffix *-ri-*, "which negates only the information which occurs to its left" (Barnes 1994: 331), can appear either before or after certain other suffixes (acquiring different scopes):

- (11) a. *Bué-ruku -ri-wi*
study-constantly-NEG-EVIDENTIAL
'I did not study constantly (i.e., I studied but not constantly)'
- b. *Bué-ri-ruku-wi*
study-NEG-constantly-EVIDENTIAL
'I constantly did not study (i.e., I was constant in not studying)'

This suggests the existence of many potential positions for negation within the universal hierarchy of grammatical markers. And this, in turn, opens up the possibility that a language may differ from another as to the position that it selects as the canonical position for sentential negation. Indeed, sentential negation is higher than past tense in some languages (Malayalam, Mongolian), lower than past tense in other languages (Bangwa, Nigerian Pidgin), and lower still in others (Turkish, Piedmontese). See Cinque (1999: chap. 5).¹⁰

The facts reviewed here, even if they do not show conclusively that all "mobile" suffixes are only apparently mobile, at least invite some caution in drawing conclusions from them that are against the assumption that grammatical markers come in a rigidly fixed order.

Notes

This chapter re-elaborates material presented in a plenary lecture at the 6th Summer School of the Deutsche Gesellschaft für Sprachwissenschaft on Language Typology (Universität Mainz,

3/9/1998), in part appearing in the electronic volume *Chomsky Celebration Project*, MIT Press Web site <http://mitpress.mit.edu/celebration>, in 1998.

1. Bybee (1985) found that aspect suffixes are invariably closer to the verbal stem than tense suffixes, which are, in turn, closer to the verbal stem than mood suffixes. As pointed out by Johanna Nichols (see Foley Van Valin 1984: 223) Tesnière (1939) proposed a similar universal order of such suffixes: voice, aspect, tense of aspect, mode, tense of mode.

2. Apparent inconsistencies between Bybee's and Foley/Van Valin's findings arguably stem from differences in what the authors take to fall under the notion "mood" in their respective systems (see Cinque 1999: 55f).

3. A related suggestion of Cinque's (1999) is that the relative order of grammatical markers of mood, modality, tense, aspect, and voice corresponds to the relative order of the different classes of adverbs occurring in a clause, where each adverb is analyzed as a specifier (phrasal modifier) of one grammatical (head) marker in a basic X-bar format.

Of course, no language displays all of the grammatical markers or allows all of the different adverb classes to co-occur in a single sentence. Yet the relative orders among them, across languages and clauses, can be obtained by transitivity and appear to be consistent with the overall order of the forty or so layers suggested in Cinque (1999).

That adverbs ("satellites") belong to different layers of the clause is also proposed in Dik's functionalist model (see Dik, Hengeveld, Vester, and Vet 1990).

4. In (2), the outer suffix necessarily expresses alethic possibility and the inner one ability/permission, in a way consistent, as noted, with the facts of double modal varieties.

5. The same picture, modulo the insertion of an auxiliary to bear the outer -(y)Abil- suffix, is found in the co-occurrence of -(y)Abil- with the Progressive aspect suffix -iyor- or the Perfect aspect suffix -mIṣ-. See (ia–c), and (iia–c), which were provided by Jaklin Kornfilt (personal communication):

- (i) a. *oku-yabil-iyor*
read-ABIL-PROG
'he is being able to read'
 - b. *oku-yor ol-abil-ir*
read-PROG BE-ABIL-AOR
'he might be reading'
 - c. *oku-yabil-iyor ol-abil-ir*
read-ABIL-PROG BE-ABIL-AOR
'he might be being able to read'
- (ii) a. *oku-yabil-miy ol-ur*
read-ABIL-PERF BE-AOR
'he has been able to read'
 - b. *oku-mug ol-abil-ir*
read-PERF BE-ABIL-AOR
'he might have read'
 - c. *oku-yabil-mig ol-abil-ir*
read-ABIL-PERF BE-ABIL-AOR
'he might have been able to read'

In addition to -(y)Abil-, other suffixes in Turkish appear to occupy different positions depending on the particular interpretation they take. Among these: -sa (counterfactual or conditional);

-mIṣ (Perfect aspect, or evidential/inferential past); -Acak (future tense or Prospective aspect). See chapter 8 for further discussion.

6. In the Japanese linguistic literature, morphemes like *-hajime-* are generally treated as aspectual verbs entering complex predicate formations with other verbs and suffixes. From the present perspective, there is no reason to treat them differently from other aspectual or tense suffixes. The sentences in (7) were provided by Shigeru Miyagawa (personal communication).

7. The specialization of the two inceptive aspect verbs, and layers, appears to parallel the specialization of Terminative aspect verbs, and layers, (like *smettere* 'stop'), which mark a "nonnatural end point" of a bounded or unbounded process, and Completive aspect verbs (like *finire* 'finish'), which instead mark the "natural end point" of a bounded process. The former are also higher than voice, while the latter can be lower (see chapter 2).

8. Once again, the same pattern is found with adverbs. Whereas the adverb *abitualmente* 'habitually' can be interpreted either as a habitual adverb, higher than the modal adverb *volentieri* 'willingly' ([ia]) or as a manner adverb, lower than *volentieri* ([ib]) (also see [ic]), where both adverbs occur simultaneously, the adverb *di solito* is specialized for the higher habitual adverb slot ([iia]) and cannot be used in the lower manner adverb position ([iib]):

- (i) a. *Gianni vedeva abitualmente volentieri le stesse persone*
G. used to habitually willingly see the same persons
- b. *Gianni vedeva volentieri le stesse persone abitualmente*
G. used to willingly see the same persons habitually
- c.? *Gianni vedeva abitualmente volentieri le stesse persone abitualmente*
G. habitually used to willingly see the same persons habitually
- (ii) a. *Gianni vedeva di solito volentieri le stesse persone*
G. used to normally willingly see the same persons
- b. **Gianni vedeva volentieri le stesse persone di solito*
G. used to willingly see the same persons normally

9. In fact, as Nedjalkov (1992: 38–39) notes, Evenki allows a double occurrence of the Inceptive aspect suffix. See (i) (I have glossed as INCEPT[ive] what Nedjalkov calls inchoative as the form is translated with 'begin'):

- (i) *Asa-l degi-li-chi-l-le-∅*
woman-pl fly-INCEPT-PROCESSIVE-INCEPT-nonfut-3p1
'women began to fly up'

'Begin' and 'want' are also (almost) freely ordered among each other with preverb climbing in Hungarian. See Koopman and Szabolcsi (2000: 124f). All this evidence may suggest the presence of a higher inceptive head (above *Mod_{volition}*—see chapter 3: §3) or, more plausibly, a desiderative head lower than *Mod_{volition}* in between the two inceptive heads (see Lo vorrebbe desiderare di avere 'He would want to desire to have it').

10. Similar conclusions appear to hold of agreement suffixes (see again, Cinque 1999: chap. 5).

A Note on Mood, Modality, Tense, and Aspect Affixes in Turkish

The limited goal of this chapter is to analyze the order of the mood, modality, tense and aspect, verbal suffixes of Turkish in the light of my (1999) proposal on the functional structure of the clause. My hope is that the exercise, besides explaining away certain apparent counterexamples to a rigid hierarchy of functional projections, may shed a partly new light on this area of the grammar of Turkish.

In Cinque (1999), I examined the relative order of free (particles) and bound (suffixes) grammatical morphemes corresponding to mood, modality, tense, aspect, and voice distinctions in the languages of the world. The recurrent picture that one finds in this domain is that they not only are rigidly ordered with respect to one another (as partly anticipated in such works as Bybee 1985, Foley and Van Valin 1984, and Dik 1989), but also each of the mood, modality, tense, aspect, and voice categories is made up, at a finer level, of a number of distinct heads, which also appear to be rigidly ordered.

The striking match between the order of these grammatical heads and the order of the corresponding adverbs was further taken there to suggest a rich and articulated functional structure above the lexical VP of the clause, where each adverb class corresponds to a mood, modality, tense, aspect, or voice head in a one-to-one fashion (as does the specifier to a head in a classical X-bar structure—Chomsky 1970, Kayne 1994).

The order of such X-bar projections is approximately that shown in (1):¹

- (1) $\text{MoodP}_{\text{speech act}} > \text{MoodP}_{\text{evaluative}} > \text{MoodP}_{\text{evidential}} > \text{ModP}_{\text{epistemic}} > \text{TP}_{\text{Past}}$
 $> \text{TP}_{\text{future}} > \text{MoodP}_{\text{irrealis}} > \text{TP}_{\text{anterior}} > \text{ModP}_{\text{alethic}} > \text{AspP}_{\text{habitual}} >$

$\text{AspP}_{\text{repetitive(I)}} > \text{AspP}_{\text{frequentative(I)}} > \text{ModP}_{\text{volition}} > \text{AspP}_{\text{elerative(I)}} >$
 $\text{AspP}_{\text{terminative}} > \text{AspP}_{\text{continutive}} > \text{AspP}_{\text{perfect}} > \text{AspP}_{\text{retrospective}} >$
 $\text{AspP}_{\text{proximative}} > \text{AspP}_{\text{durative}} > \text{AspP}_{\text{progressive}} > \text{AspP}_{\text{prospective}} >$
 $\text{AspP}_{\text{inceptive(I)}} > \text{ModP}_{\text{obligation}} > \text{ModP}_{\text{ability}} > \text{AspP}_{\text{frustrative/success}} >$
 $\text{ModP}_{\text{permission}} > \text{AspP}_{\text{conative}} > \text{AspP}_{\text{completive(I)}} > \text{VoiceP} >$
 $\text{AspP}_{\text{repetitive(II)}} > \text{AspP}_{\text{frequentative(II)}} > \text{AspP}_{\text{elerative(II)}} > \text{AspP}_{\text{inceptive(II)}} >$
 $\text{AspP}_{\text{completive(II)}} > V$

Turkish is particularly interesting from this perspective in that it would seem to provide a number of striking counterexamples to the claim that functional heads (and their corresponding morphemes) are rigidly ordered with respect to each other. So, for example, the modal suffix -(y)Abil- appears at first sight to be freely ordered with respect to the negative morpheme -mA. Cf. (2):²

- (2) a. oku-ya-ma-m (Kornfilt 1997: 375)
read-ABIL-NEG- 1SG
'I am unable to/not permitted to read.'
- b. oku-ma-yabil-ir-im (Kornfilt 1997: 375)
read-NEG-ABIL-AOR- 1SG
'I might not read; it is possible that I do not read.'

At a closer look, however, the modal suffix in (2a) and that in (2b) differ not only in scope with respect to negation but also in meaning. When it is to the left of the negative morpheme, -(y)Abil- is interpreted as a "root" modal, with the meaning of "ability" or "permission." When it is to the right, it is instead interpreted as an alethic modal, referring to "possibility." This suggests that the same suffix can occur in two different functional heads, one higher than the (-mA) negation, corresponding to the ModP_{Alethic} of (1), and one lower, corresponding to either the ModP_{ability} or ModP_{permission} of (1).

This is confirmed by the fact, noted in Kornfilt (1997: 375), that the two -(y)Abil- suffixes can occur simultaneously, separated by the suffix -mA:³

- (3) Oku-ya-ma-yabil-ir-im
read-ABIL-NEG-ABIL-AOR- 1SG
'I might be unable to read.'; 'It is possible that I shall be unable to read.'

So far, then, Turkish gives evidence for the order of functional heads shown in (4):

- (4) Mod_{Alethic} > Neg > Mod_{Ability} (> V)

The possibility for a morpheme to fill two different slots (functional heads), with partly different meanings (here -[y]Abil-, with the meaning of "possibility" and "ability/permission," respectively), is not unprecedented (see chapter 7) for other cases with suffixes and adverbs).

Before seeing other such cases in Turkish itself, let us proceed and try to establish the relative ordering of a number of other suffixes in this language. Granting the essential correctness of Baker's (1985, 1988) Mirror Principle, I will assume that an outer suffix corresponds to a functional head higher than that corresponding to an inner suffix, disregarding the insertion of auxiliary verbs to bear (outer) suffixes that for morphological reasons cannot stack onto some inner suffixes, as is the case with POSSIBILITY -(y)Abil- and PERFECT -miş in (5):⁴

- (5) Mary John-un evlen-miş ol-abil-eceğ-in -i soyl-iyor
M. J.-GEN get married -PERF be-may/can -FUT -POSS-ACC SAYPROG
'Mary says that John may have gotten married (by now).'
(Yavaş 1980: 77)

Here -(y)Abil- cannot be stacked onto -miş, for reasons that remain to be understood; hence the insertion of the auxiliary to support the outer suffix, which otherwise would remain stranded. Ignoring the complication introduced by the insertion of auxiliaries, (5) provides evidence for the order V-PERFECT-POSSIBILITY-FUTURE which in turn suggests that Future Tense is higher than alethic modality (which is higher than Perfect aspect).⁵ Adding this relative order to (4), we get the order in (6) (I return later to the position of Perfect aspect):

- (6) Fut > Mod_{Alethic} > Neg > Mod_{Ability} (> V)

Like the -mA- negation suffix, also the Progressive aspect suffix -(I)yor-, appears to intervene between POSSIBILITY -(y)Abil- and ABILITY/PERMISSION -(y)Abil-, for it follows ABILITY/PERMISSION -(y)Abil- (cf. ([7a])), but it precedes POSSIBILITY -(y)Abil- (cf. [7b]), and is found between the two, when these co-occur (cf. [7c]):

- (7) a. Oku-yabil-iyor-um (Kornfilt 1997: 374)
read-ABIL-PROG- 1SG
'I am being able to read.'
- b. Oku-yor ol-abil-ir (Kornfilt, personal communication)
read-PROG be-ABIL-AOR
'He might be reading.'
- c. Oku-yabil-iyor ol-abil-ir (Kornfilt, personal communication)
read-ABIL-PROG be-ABIL-AOR
'He might be being able to read.'

As shown by (8), -(I)yor- follows the -mA- negation suffix (which, by the Mirror Principle, indicates that it is located in a head higher than the negative head):

- (8) Koş-mu-yor (van Schaik 1994: 40)
run-NEG-PROG
'He isn't running.'

The relative orders of Turkish suffixes seen so far are thus evidence for the order of heads shown in (9):

- (9) Fut > Mod_{Alethic} > Asp_{Progressive} > Neg > Mod_{Ability} (> V)

Similarly, the Perfect aspect suffix *-mış* appears to be outside ABILITY/PERMISSION -(y)Abil- (10a) and inside POSSIBILITY -(y)Abil- (10b) and is found to separate them when they co-occur (10c):

- (10) a. Oku-yabil-mış ol-ur (Kornfilt, personal communication)
read-ABIL-PERF be-AOR
'He has been able to read.'
- b. Oku-muş ol-abil-ir (Kornfilt, personal communication)
read-PERfbe-ABIL-AOR
'He might have read.'
- c. Oku-yabil-mış ol-abil-ir (Kornfilt, personal communication)
read-ABIL-PERF be-ABIL-AOR
'He might have been able to read.'

The Perfect aspect suffix *-mış*, like the Progressive aspect suffix *-(I)yor-*, occurs outside the negative suffix *-mA-*. See (11):

- (11) Türk-leş-tir-il-me-mış-ler-den-siniz (van Schaaik 1994: 39)
turk-become-CAUS-PASS-NEG-PERF-pl-abl-2PL
'You are of those who didn't have themselves been turkified.'

It thus seems to fall, like *-(I)yor-*, between the modal of alethic possibility and negation:

- (12) Fut > Mod_{Alethic} > Asp_{Progressive} > Neg > Mod_{Ability} (> V)
Asp_{Perfect}

We can ask what the relative order is between Perfect aspect and Progressive aspect. Quite generally Perfect aspect appears to be higher than Progressive aspect. This is shown directly by English ([13a]) and Temne ([13b]), among other languages, and (in the reverse order) by the serialization of the corresponding suffixes in Imbabura Quechua ([13c]):

- (13) a. John has been winning (English)
J. PRES PERF PROG
- b. i tè po yirè ke-ko (Temne—see Cinque 1999: 193)
I FUT PERF PROG go
'I will have been going.'
- c. shamu-ju-shka-ni (Imbabura Quechua—see Cinque 1999: 163)
come-PROG-PERF-1SG
'I have been coming.'

Turkish in this respect appears problematic. For one thing, the location of Perfect aspect *-mış* after Progressive aspect *-(I)yor* is given as rather marginal by Yavaş (1980: 63) (see [14a]); second, the opposite order between the two is judged as perfectly acceptable by Kornfilt (1997: 363) (see [14b]):

- (14) a. ??John diin çalış-iyor 01-mug 01-mall
J. yesterday work-PROGbe-PERfbe-must
'J. must have been working yesterday.' (Yavag 1980: 63)
- b. Hasan boylelikle yarış-ı kazan-mış ol-uyor-du
H. thus competition-ACC win-PERF be-PROG-PAST
'Hasan was thus being the winner of the competition.'
(Kornfilt 1997: 363)

Whatever the reasons for the marginality of (14a), it appears that the order V-*mış* Aux- *-(I)yor* of (14b) receives an interpretation that is rather different from the one expected. Kornfilt (1997: 363) glosses (14b) as "... was being the winner," rather than "... was having won . . .," with what looks like a resulting state reading.

I would like to propose that *-mış* is actually ambiguous between a (marginal) Perfect aspect interpretation, when it is located higher than Progressive aspect (as in [14a]), and a pure Resultative aspect interpretation, which is lower than Progressive aspect (in fact, one of the lowest heads, perhaps). In (15), a sentence given by Kornfilt (1997: 363), the two (PERFECT-*mış* and RESULTATIVE-*mış*) are found to (marginally) co-occur:⁶

- (15) ??Hasan boylelilde yarış kazan-mış ol-muş-tu
H. thus competition-ACC win-RES(?)be-PERF-PAST
'H. had thus become the winner of the competition.' (Kornfilt 1997: 363)

If correct, then, the order of heads displayed by Turkish so far is:

- (16) Fut > Mod_{Alethic} > ASP_{Perfect} > Asp_{Progressive} > Neg > Mod_{Ability} (> V)
Asp_{Resultive}

-Mış has another well-known interpretation in Turkish; that of a reportive PAST:⁸

- (17) a. Hasan diin opera-ya git-mış
H. yesterday opera-DAT go-REP.PAST
'H. reportedly went to the opera yesterday.'

There is some evidence that under this interpretation it occupies a functional head that is higher than that occupied when it has the Perfect (and, a fortiori, the Resultative) aspect interpretation.

In its "reportive (PAST) tense" interpretation it follows the FUTURE tense suffix ([18a]);⁹ in its Perfect aspect interpretation, it precedes it ([18b]):

- (18) a. John Tiirkiye-ye gid-ecek-mig
 J. T.-DAT go-PUT-REP
 'Reportedly, John will go to Turkey.' (Yavaş 1980: 41) (reported)
- b. John hafta-ya tez-in-i bitir-miş ol-acak
 J. week-DATthesis-POSS-ACC finish-PERFbe-PUT
 'J. will have finished his thesis (by) next week (*Apparently/reportedly J. will finish. . .)' (Yavaş 1980: 74)

More generally, as Kornfilt (1997) notes, when “-*mış* for the reported past is the first suffix in a morphological sequence including the conditional form [and other tense markers (p. 546, fn 59)], its function is that of perfective aspect rather than that of a tense marker” (p. 344). Each usage, then, is apparently possible only relatively to a specific position in the sequence of suffixes. A case in point is (19), from Yavag (1980: 62):

- (19) John çalış-mış-tı
 J. work-PEW-PAST
 'J. had worked (*Apparently/reportedly J. worked)'

In sqm, -*mış* can either encode Resultative aspect, Perfect aspect, or reportive/inferential/evaluative PAST. For the latter usage, it is tempting to propose that -*mış* is generated in T_{Past} and then raised to either Mod_{Epistemic} (inferential), Mood_{Evidential} (reportive), or Mood_{Evaluative} (surprise/unexpectedness). If so, Turkish would give evidence for the higher functional heads of (1) shown in (20), which combined with (16) gives (21):

- (20) . . . Mood_{Evaluative} > Mood_{Evidential} > Mod_{Epistemic} > T_{past} .

- (21) Mood_{Evaluative} > Mood_{Evidential} > Mod_{Epistemic} T_{Past} > T_{Future} > Mod_{Alethic}
 > Asp_{Perfect} > Asp_{Progressive} > Neg > Mod_{Ability}/Asp_{Resultative} (> V).

To recapitulate, both the -(y)*Abil* and the -*mış* suffixes can apparently occupy, even simultaneously, different slots (heads), each corresponding to a distinct function:¹⁰

- (22) Oku-yabil-mış ol-abil-ir
 read-ABIL-PERF be-POSSIB-AOR
 'He might have been able to read.' (Kornfilt, personal communication)

- (23) Rejim yap-mış-mış
 diet make-PERF-REP.PAST
 'Reportedly, he dieted.' (Yavaş 1980: 68)

- (24)?Hasan böylelikle yarış-ı kazan-mış ol-muş-tu
 H. thus competition-ACC win-RESULTbe-PERF-PAST
 'H. had thus become the winner of the competition.' (Kornfilt 1997: 363)

Other suffixes of Turkish appear to occupy different positions, depending on the function they perform.

One of these is the (nonreportive) PAST suffix -*DI*, which in addition to this usage apparently has (pace Yavaş 1980: chap. 2) a usage as an Anterior Tense marker (Aksu-Koç 1988: 20, Kornfilt 1997: 349).¹¹ The two can, in fact, co-occur, yielding the Pluperfect interpretation:¹²

- (25) a. Hasan dün saat beg-te odev-in-i
 H. yesterday o'clock five-LOC assignment-3SG-ACC
 bit-ir-di-y-di
 finish-CAUS-ANT-y-PAST
 'H. had finished his assignment yesterday at five o'clock.'
 (Kornfilt 1998)

Some indications exist that -(y)*AcAK*, too, may be ambiguous between two functions: a pure Future Tense interpretation ('will') and a Prospective aspect interpretation ('be about to/almost'), with, as a consequence, a different location in the hierarchy of (1). Indications to this effect may be (A) the double translations that are often assigned to the morpheme (cf. [26]); (B) the unequivocal Prospective aspect rendering of -(y)*AcAK* when it is used as a participle not allowing stacking of -*DI* (cf. [27b]), versus the Future Tense reading when it allows stacking of -*DZ* ([27a]); and (C) the sequences "ecek ol-muş-tu" and "ecek ol-uyor" found by Gerjan van Schaik in his corpus (and pointed out by him in his talk—van Schaik 1999).¹³

- (26) Yarın yağmur yak-acak
 tomorrow rain fall-FUT or PROSP
 'Tomorrow it will/is going to rain.' (see Yavag 1980: 89)

- (27) a. Dün gel-ecek-tı
 yesterday come-FUT-PAST
 'He was going to come yesterday.' (Yavaş 1980: 23)
- b. Hasan kapı-yı aç-acak ol-du
 H. door-ACC open-FUT/PROSP be/become-PAST
 'Hasan was about to open/almost opened the door.'
 (Kornfilt 1997: 341)

Similarly (if not more clearly), the suffix -(y)-*sA* appears to be ambiguous between two functions: one as a conditional complementizer and one as an *irrealis* marker. An indication that, depending on interpretation, it fills different positions in the hierarchy of (1) is given by the order of -(y)-*sA* with respect to other suffixes whose position can be determined unambiguously. So, for example, Conditional -(y)-*sA* follows the Reportive Past suffix (cf. [28]), which follows, among others, the Aspect suffixes and the absolute Future Tense suffix. This suggests that the corresponding functional head is higher than at least T_{past} :

- (28) oku-yor-mug-sa-m
 read-PROG-REP.PAST-COND-1SG
 'If I am/was said to be reading' (Kornfilt 1997: 367)

When, on the other hand, -(y)-*sA* precedes T_{Past} (as in [29]), its interpretation is that of a counterfactual conditional or a wish referring to the past (see Kornfilt 1997: 368), which leads me to conjecture that it occupies the lower Mood_{irrealis} head:¹⁴

- (29) a. Oku-sa-y-mış
 read-COND-cop-REP.PAST
 'They say that if he were to read.' or 'They say "If only he would read!"'
 (Kornfilt 1997: 368)
- b. Oku-sa-y-dl-n
 read-COND-y-PAST-2SG
 'Had you read/if only you had read!' (Kornfilt 1997: 368)

Another suffix that appears to have various (related) usages is *-mall*, which ranges from a meaning of obligation ([30a]), to a meaning of alethic necessity ([30b]), to an epistemic meaning ([30c]):¹⁵

- (30) a. Oku-mall-yim
 read-OBLIG-1SG
 'I have to read.'
- b. John hafta-ya evlen-mış 01-mall
 J. week-DAT marry-PERF be-NECESS
 'John must have gotten married (by) next week.' (Yavag 1980: 76)
- c. Hasan orada 01-mall
 H. there be-EPISTEM
 'Hasan must be there.' (Kornfilt 1997: 376)

What remains to be seen is whether it occupies one or more positions, depending on interpretation. The position of the suffix in its alethic reading of necessity appears to fall in between Mood_{irrealis} and Asp_{irrealis} as expected from (1). See the contrast between (31a) and (b):¹⁶

- (31) a.?Git-mış 01-mall ol-sa-ydı
 go-PERF be-NECESSe-IRR-PAST
 'Had s/he had to have gone.' (Kornfilt, personal communication)
- b.*Git-mış ol-sa ol-malı-ydı (Komfilt, personal communication)

If the preceding interpretation of the facts is correct, there may be no real reason to conclude from the apparent variable ordering of certain suffixes in Turkish that "the order among inflectional suffixes is slightly flexible [while] grammatical function

changing affixes are rigidly fixed" (in the partial order: V-RECIPROCAL-CAUSATIVE-PASSIVE) (Goksel 1993: 18). Functional heads *are* rigidly fixed, though one and the same morpheme, by filling different heads (with concomitantly different functions), may give the impression of changing places.

Notes

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1. Although no language (with the possible partial exception of Eskimo-Aleut languages) displays the entire array of functional heads, languages do display the entire array of functional specifiers (AdverbPhrases), even if not together, thus pointing to the universality of such structure.

2. The *bil* part of the suffix deletes in front of negation. See Kornfilt (1997: 374f) for discussion.

3. This order is interestingly matched (in the expected mirror-image form) by the order of alethic possibility modals and root (ability/permission) modals in such double modal varieties as Hawick Scots:

- i. He'll might could do it (Brown 1992: 75)
 FUT POSSIB ABIL V

In both cases, the ability (/permission) modal head appears to be closer to the verb (stem) than the possibility modal head.

4. See Kornfilt (1996b) for arguments that, even in the case of certain suffixes apparently stacked onto another suffix, there is an overt, -y-, or abstract, -0-, copula, separating them and supporting the outer suffix.

5. Note that the order FUTURE > ALETHIC POSSIBILITY is also overtly displayed in the Hawick Scots example (i) in note 3.

6. The marginality of (15) is perhaps related to that of (14a). Yavag and Kornfilt appear to give to these sentences the same grammaticality judgment (?? rather than *).

7. The fact that the progressive form of a resulting state is possible in Turkish but not in English is perhaps to be related to the fact that in Turkish the -(*I*)yor form is possible with stative verbs as well (cf. (i)); a fact which may indicate that it is more likely a Continuous aspect rather than a Progressive aspect suffix, as Kornfilt (1997: 357) conjectures.

- i. Hasan fazla çabuk konuş-tuğ-un-u bil-iyor-du
 H. too fast talk-FNOM-3SG-ACC know-PROG-PAST
 'H. knew that he was speaking too fast.' (Komfilt 1997: 357)

8. As in other languages, the same form can be used to denote the inferential character of the assertion or surprise/unexpectedness (its "admirative," i.e. evaluative, usage). See (i):

- i. a. John bugiin çalış-iyor-muş
 J. today work-PROG-INFER
 'Apparently, John is working today.' (Yavag 1980: 44) (inferential, or reportive)

- b. Ne de çok elbise-m var-mış!
what also a lot dress-my exist-unexp
'How many dresses I have!' (Yavag 1980: 47) (surprise)

9. The future in the past (or "conditional") form is also used in Italian to convey a report:

- i. Gianni sarebbe morto ieri
G. would have died (future in the past) yesterday
'They say that G. died yesterday.'

10. From (23) and (24), one should expect the marginal possibility of something like (i), where the three *-mIş* occur simultaneously. Jaklin Kornfilt (personal communication) tells me that for her (i) is indeed possible with the same grammaticality status as (24):

- i. ??Hasan böylelikle yarış-i kazan-mış ol-mu\$-mug
H. thus competition-ACC win-RES(?) be-PERF-REP.PAST
'H. had reportedly thus become the winner of the competition.'

11. "Examples like [*Hasan balığı ye-di* 'H. ate the fish/has eaten the fish'] are systematically ambiguous between a simple past reading (the first translation) and a present perfect reading (the second translation)" (Kornfilt 1997: 349, who also refers in this connection to Lewis 1975: 127 and Johanson 1971: 67).

12. The 'distant past' interpretation that can be imposed to -DI + -DI sequences, as in (i) (Yavag 1980: 16) is not incompatible with taking *-DI* to be both a Past Tense and an Anterior Tense morpheme. The Italian Pluperfect has a similar occasional 'distant past' interpretation (*Avevo pensato tifacesse piacere* 'I thought it would please you'). Other cases where the same morpheme expresses both Past Tense and Anterior Tense are found in Korean (Cinque 1999: 53) and in Sranan and Haitian Creole (Cinque 1999: 61ff). Cf. also English *-ed*.

- i. Bir zaman-lar John ile tanış-tı-y-dı-m
one time-pl J. with meet-DI-COP-DI-1SG
'I once met John.'

13. In "ecek ol-muş-tu" and "ecek ol-uyor," -(y)AcAK appears lower than Perfect aspect and Progressive aspect, respectively. These are positions inaccessible to a pure (or absolute) Future Tense. The second (of which he found four examples) is particularly telling as Cinque (1999: 75) documents the order Progressive aspect > Prospective aspect (and their adjacency) in many languages. Also see Cinque (1999: 209, n. 63) for languages in which the Future Tense morpheme is identical to the Prospective aspect morpheme. It could turn out, judging from (B) and (C) in the text, that participial -(y)AcAK, which does not allow stacking of other suffixes, is the form specialized for Prospective aspect.

14. Alternating with -(y)-sA in the position preceding T_{Past} is the optative suffix -(y)A, another irrealis suffix:

- i. Oku-ya-y-dı-m
read-OPT-y-PAST- 1SG
'Would that I had read.' (Kornfilt 1997: 372)

As Komfilt notes (p. 372), (i) can be used also in place of (29b) and with the same interpretation as (29b). Eser Erguvanlı-Taylan (personal communication) informs me that the structuralist tradition also recognized two separate uses of -(y)-sA. -sA, for what I called irrealis, and -(y)-sA, for what I called Conditional.

15. In (30b), it can also have an epistemic interpretation.

16. The "aorist" suffix -(A)r, which expresses the generic (and habitual) present, was not discussed here, as it is unclear to me which head it can fill. From (ia-b), it would seem it can occupy a head between T_{Past} and Mod_{Modality} of Possibility (but it could be that it can occupy more than one):

- i. a. Hasan piyano çal-ar-dı
H. piano play-AOR-PAST
'Hasan used to play the piano.'
b. John evlen-mış ol-abil-ir
J. get married-PERF be-POSSIB-AOR
'John may have gotten married (by now).' (Yavag 1980: 76)

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