A CARTOGRAPHIC APPROACH
TO THE ROMANCE MITTELFELD*

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1. Introduction

The aim of this paper is to show that the placement of adverbs is a crucial criterion for identifying the positions of arguments and verb(s) in the domain of the clause referred to as the Mittelfeld. This domain is situated between the complementizer system (CP) and the VP-shell. We propose that the Mittelfeld be constituted of Cinque's (1999) adverb-related projections in addition to argument and verb-related projections. More precisely, recursive chunks of A-positions are potentially available between the adverb-related functional projections. It will be assumed that the chunks are recursive SVO structures, as required by the Strict Cyclicity on the basis of Kayne's (1994) antisymmetry theory (SVO order within the VP-shell).

A comparative study of word order variations involving the subject, object, verb and the adverbs will be undertaken within the Romance languages with reference to English. Three configurations are relevant: (i) SVO, (ii) VSO and (iii) VOS. In function of the Information Structure they realize (in question-answer contexts), such word orders will be analysed in declarative clauses. Movement operates separately on the subject, the object and the verb and can target various positions among the adverb-related projections depending on the placement possibility of adverbs of different classes. The hypothesis running throughout the paper is that all arguments must leave the VP-shell in order to have their A-features (Case, phi) and I-features (top, foc, etc.) matched/checked. According to this hypothesis, scrambling applies not only to OV languages (German, Japanese), but also to VO languages

(English, Romance). Variations in the Information Structure between French, Italian, Spanish and Romanian are responsible for the different configurations found in these languages, notably with respect to the intervention of adverbs.

2. The framework

2.1. Phrase and clause structure

The operation *Merge*, which combines categories, forms [$_{XP}$ Spec-X°-Compl] configurations following a strict application of Kayne's (1994) phrase structure theory. There is no further merge, neither of multiple specifiers (strong minimalism) nor of adjoined elements. In this framework, adverbs are merged as unique specifiers of semantic-functional projections, as advocated in Cinque (1999, 2002) and Laenzlinger (2000, 2004). The clause structure is built from the thematic VP domain, which contains only the lexical verb and its arguments, up to the discourse-related CP-domain. Following the cartographic approach to clause structure (Belletti 2002, Cinque 2002, Rizzi 1997, 2004a), the intermediate inflectional space is a domain rich in functional projections.

Adverbs, and adjuncts in general, differ from arguments in that they are not thematically selected (with the exception of a restricted class of selecting verbs). Nevertheless, they must be semantically licensed in their syntactic position. They must be part of narrow syntax since they are LF-dependent. A "late merger" approach is unable to express the syntax-semantics interface required for adverb interpretation. We assume that adverbs are merged before Spell-Out. From a phrase structure point of view, they could merge either as adjoined elements (pair-Merge) or as specifiers (root-Merge). The former analysis fits in with a scope-based theory of adverbs, in which adverbs are free elements that can only merge with a node from where they can satisfy/express their scope requirement (Ernst 2002). The analysis of adverbs as specifiers is intimately linked to Cinque's (1999) proposal that adverbs be associated with semantic projections (Moods, Modes, TPs, Asps, etc.) provided by UG. Simply put, the semantics of adverbs matches that of the clause, which is innately expressed in syntax. Leaving aside the psycholinguistic question, both approaches must account for the variations in the respective placement of verb(s), arguments and adverbs within the Mittelfeld. We aim at showing that the specifier-based approach to adverb distribution is able to capture the data across Romance.

2.2. A-positions within the Mittelfeld

As shown by the set of French data in (1), there must be floating positions for the verb and its object among the three adverbs considered, which according to the assumption hinted at above, have a fixed position within the clause architecture.
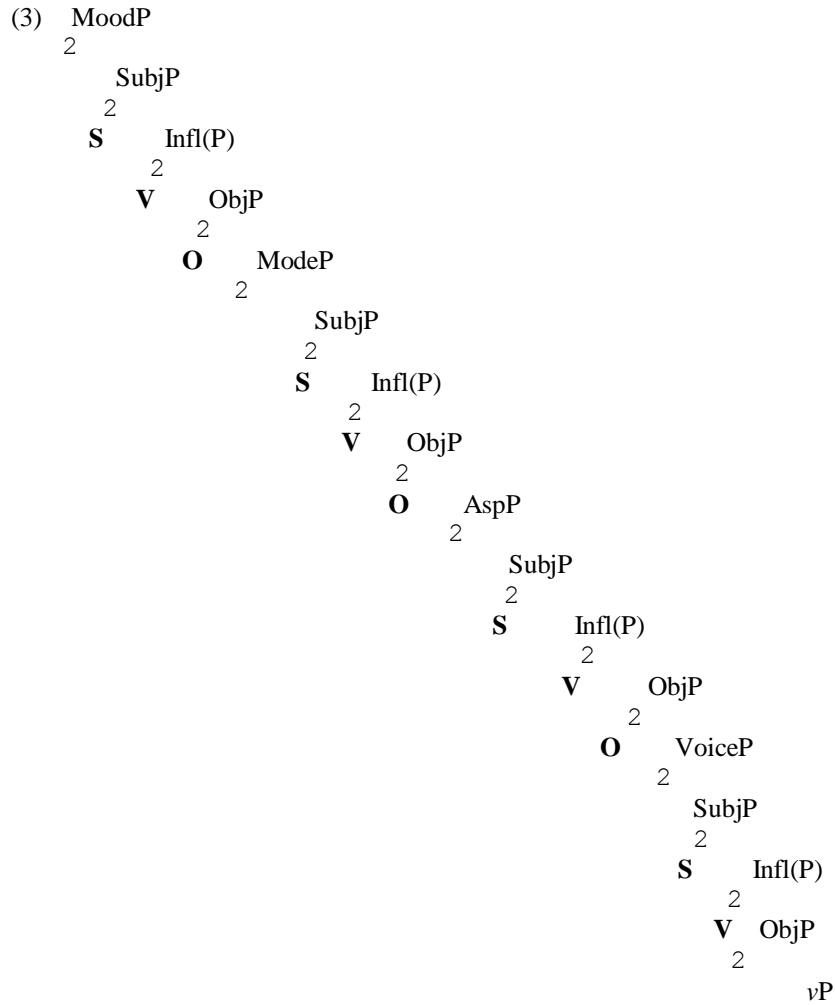
(1) a. Jean a   probablement lu   souvent la Bible attentivement
         Jean has probably   read often   the Bible carefully
     b. Jean a   probablement souvent lu   attentivement la Bible
         Jean has probably   often   read carefully   the Bible
     c. Jean a   lu   probablement la Bible souvent attentivement
         Jean has read probably   the Bible often   carefully
     d. Jean a probablement lu souvent attentivement la Bible
         'John probably often read the Bible carefully'

As already mentioned, the Mittelfeld represents the domain of adverb licensing, being made up of the functional projections hosting the adverbs (*probablement* 'probably', *souvent* 'often', *attentivement* 'carefully') and the projections hosting the moved arguments (the DP object *la Bible* 'the Bible') and verb (*lu* 'read'). In order to identify these positions, the following hypothesis is made (2). This proposal goes against Alexiadou & Anagnostopoulou (2001) who assume that only one argument must leave or remain in the VP-shell.[1]

(2) Full VP evacuation principle
     "All arguments must leave the vP domain in order to have their A-features
     (i.e. Case and phi-features) and I-features (i.e. informational features such as
      top, foc) checked/matched/assigned a value in the overt syntax."

The Mittelfeld structure contains not only the adverb-related semantic-functional projections, but also verb-related and DP-related positions. In order to deal with the crosslinguistic facts ranging from Romance to Hungarian, a so-called non-configurational or discourse-configurational language, a system of recursive SVO chunks among the adverb-related projections is proposed. Considering the core semantic projections of the clause (Mood >> Mode >> TP >> $Aspect_{TP}$ >> $Aspect_{VP}$ >> Voice), the SVO chunks can potentially merge between each semantic-functional projection, as represented in (3).

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[1] Recall that no adverb merges in the VP-domain, contra Alexiadou & Anagnostopoulou (2001: 206).

(3) MoodP
    2
      SubjP
      2
    S   Infl(P)
        2
      V   ObjP
         2
        O   ModeP
          2
            SubjP
            2
           S   Infl(P)
              2
           V   ObjP
              2
            O   AspP
               2
                 SubjP
                 2
               S   Infl(P)
                   2
                V   ObjP
                   2
                O   VoiceP
                   2
                     SubjP
                     2
                   S   Infl(P)
                      2
                   V ObjP
                     2
                       *v*P

    Derivationally, after having merged within the VP-shell, the verb and its arguments are attracted to the relevant positions between the adverb-related projections. The subject targets the specifier position of SubjP, which corresponds to what was formerly called AgrsP or to the minimalist TP, that is, the position where the subject phi- and Case(NOM)-features coupled with the EPP-feature can be matched. As for the object, it is attracted to Spec-ObjP, corresponding to the former AgroP (Belletti 1990) or to Chomsky's (1995) AspP, responsible for Case(ACC)-

feature checking. Since a specifier can be projected, the Obj is also associated with abstract phi-features and an EPP-feature.

As regards the lexical verb, it targets an inflectional projection where the V-related phi-features are matched. Verb movement can be implemented either as head-movement (Pollock 1989) or as remnant VP-movement in the sense of Majahan (2000) (see also Laenzlinger (2004) for a detailed analysis). The latter approach will be tentatively adopted in the present work. Verbal elements are assumed to have a strong selectional V feature as well as uninterpretable phi features which need to be checked. The phi-V features are checked on the head Subj which attracts the conjugated auxiliary/lexical verb, thus realizing a Spec-head configuration with the DP subject, if present in the structure. Alternatively, V-phi-features are checked via downward Agree with a lower subject.

In the A-feature system we propose here, the phi features can be checked/erased in the local relation [Spec-SubjP]-Subj° in the word order SVO. If the word order is VS(O) or V(O)S, the phi features are checked via downward Agree (Chomsky 2001), thus an equally local relation is established between the head Subject and its specifier which is lexically realized lower in the structure. An expletive *pro* is assumed to be required in Spec-SubjP in order to satisfy Rizzi's (2004b) Subj(ect)-Criterion. The Nominative Case feature is checked/erased in a Spec-head relation of a SubjP projection in a high (SV) or low (VS) "chunk". Insofar as the Accusative case is concerned, little is said in the Minimalist Programme (1995, 2001) and, in a manner similar to Nominative, we assume that besides the Spec-head relation obtained between [Spec-ObjP] and the head Obj°, the checking/erasure of the uninterpretable Accusative Case can be realized by the mechanism Agree in the word order VS(O). The head Obj also contains phi-features such as number and gender which are activated in a configuration where the object DP raises above the participial verb (Kayne 1989). As known, only French and Italian display overt agreement, while Spanish and Romanian do not. This issue will be taken over in section 3.4.

As already mentioned, besides the set of A-features, moved arguments must also check features related to Information Structure, such as Topic and Focus features, thus playing a central role in determining the various positions of the Mittelfeld constituents (see Vallduvi's 1992 Information Packaging, Lambrecht 1994, Choi 1999, Büring 2003). A few remarks about IS may be in order here: The Information Structure as we envisage here is organised function of the chunks. More precisely, in the Lexial (Sub)array, the major constituents of the sentence are assigned a certain value of informational prominence. The chunks are therefore marked for different values of the Focus and Topic features, or remain unmarked for either feature. The IS contains several kinds of Topic and Focus features, such as a Mittelfeld-internal low presentational Foc or a Topic-aboutness feature, while the CP contains a contrastive Focus feature and a Topic-comment feature. The idea to stress out is that such features of information prominence are assigned among the chunks so as to

express the appropriate I-structure, such units of I-structure being mapped onto the syntactic constituents. Argument realisation in the chunks is thus dependent not only on the positions available for phi and Case feature checking but also on (different) value assignment of informational features. Mention must be made that in the system proposed here no informational structure is associated with the vP.

Insofar as the EPP feature is concerned, it has a special status, in the sense that, along minimalist lines (Chomsky 2000), it is responsible for movement and, at the same time, it seems to be intimately connected to IS. For instance, its presence on the head Subj attracts movement of the DP in the specifier position and, in the light of the above discussion, a certain value of informational prominence is assigned to the moved argument.

2.3 SVO chunks and the computational system

Each SVO chunk in (3) marks a phase from one adverb-related projection to another. Chomsky (2001) proposes that vP and CP be phases, showing "propositional" content, marking a cycle/barrier, and being movable (DP and PP are also phases). vP and CP are sent separately to Spell-Out in order to be interpreted. In the system proposed here, there are as many phases as there are SVO chunks. In other words, the A-positions constituting a chunk which is delimited by two adverb-related projections constitutes a phase. Insofar as the "movability" property of a phase is concerned, German remnant VP-topicalisation shows that a participle (possibly together with its object) and an adverb of time, aspect and manner can move together to a CP position, as illustrated in (4a). However, a mood and mode adverb cannot be fronted with the (remnant) VP, as shown in (4b). This means that MoodP and ModeP cannot be considered "strong" phases.

(4) a. [$_{CP}$ [$_{FP}$ Schnell/ gern/ oft/ gestern/ kürzlich die Sonate gespielt] [$_C$ hat]
Quickly/willingly/often/yesterday/recently the sonata played   has
Hans]
Hans
'Quickly/willingly/often/yesterday/recently play the sonata Hans did'
  b. *[$_{CP}$ [$_{FP}$ Leider/glücklicherweise/vielleicht die Sonate gespielt] [$_C$ hat] Hans]
      Un-/fortunately   maybe   the sonata played   has Hans

Interestingly, VP-fronting in English shows a similar contrast. Adverbs of time, aspect and manner can marginally occur with the fronted verbal projection, whereas adverbs of mood and mode cannot. This is illustrated in (5).

(5) a. ?… and [recently/often/carefully read a paper] Susan did/has too
  b. *… and [fortunately/probably read a paper] Susan did/has too

In the system proposed here, the "cycle" property of phases cannot be equated with the strict interpretation of cyclicity in Chomsky (2001) in which a phase is a

barrier domain from which a constituent escapes by moving to and from its left-edge. Since the phrase structure we propose does not allow multiple (i.e. outer) specifiers, a phase cannot act as a strong barrier. The notion of barrierhood relevant to our system of multiple phases marked by the adverb-related projections reminds one of the "old" subjacency framework in that a constituent may cross one bounding node (= a phase), but not two. Thus, the intermediate chunks between the semantico-functional projections serve as escape-hatches to movement, as represented in (6).[2]

(6)   [MoodP SVO [ModeP SVO [TP SVO [AspP SVO [VoiceP SVO [vP ….]]]]]]

In addition, the notion of strict cyclicity, as defined in Chomsky (1973), accounts for the order SVO within the chunks. This order is merged in the VP-shell with a transitive verb, as shown in (6). Movement operates from the most to the least embedded constituent. First, the object is moved, then the verb and finally the subject resulting in the SVO within a chunk, as indicated in (7).

(7)
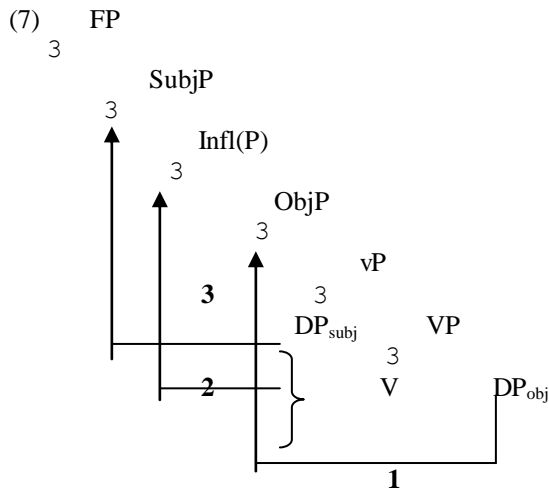
Following a multiple Spell-Out approach[3] (Uriagereka 1999, Platzack 2001, Grohmann 2003), at the end of each phase, the derived substructure is sent to the

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[2] For instance, a moved direct object wh phrase must move cyclically through each O position in the chunks in order to reach the CP-domain.

[3] The multiple Spell-Out approach raises the question of multiple access to LF, which leads to the compositional semantics of the clause (which is not adequate for a full interpretation of the propositional content of the clause).

interfaces (PF/Morph and IS/LF) for interpretation. The grammar system has the representation in (8). Information Structure is also considered an interface interacting with PF (i.e. stress in focalisation) and LF (i.e. covert movement of Focus).

(8)
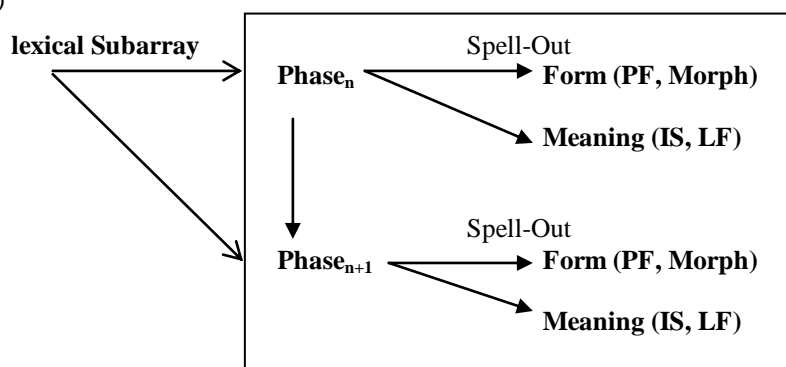
On the basis of these theoretical assumptions, we turn to the distribution of adverbs in the SVO order, first in English and French and then in the other Romance languages.

3 Verb-argument-adverb orders in the Mittelfeld

3.1 Unmarked SVO: English and French

The word order SV(O) represents the underlying word order for English and French, non-null subject languages. We will start this section by considering the case of high adverbs. Mood adverbs are perfectly acceptable in sentence-initial position, which, barred the existence of a Topic, represents their merge position. Thus, when immediately preceding the subject DP merged in [Spec-SubjP], such high adverbs (*heureusement* or *fortunately*) fill [Spec-MoodP]. The relevant examples are provided below.

(9) a.   [MoodP Fortunately   [SubjP John read the book]]
     b.   [MoodP Heureusement [SubjP Jean a lu le livre]]
          'Fortunately Jean read the book.'

In English, the subject can float to a very high position in the upper Mittelfeld, i.e. above such adverbs, where it can check the EPP, phi and Case features. This is a parametric property of English which distinguishes it from French, where no adverb can occur in between the subject and the auxiliary in the head Subj.

(10) a.   John fortunately read this book.
     b.   *Jean heureusement/probablement/souvent/récemment a lu ce livre.
            'Jean fortunately/probably/often/recently has read the book.'

In other terms, French exhibits the adjacency subject-auxiliary/lexical verb in the configuration Spec-head, with the subject in [Spec-SubjP] where it can check the EPP, Case and phi features, and the auxiliary or the lexical verb in the head of this projection, checking its V-phi features.

When it immediately precedes the subject DP, the epistemic adverb *probably* in English fills its root-merged position, as in (11a) below, such a position being therefore at the boundary between the Mittelfeld and the Vorfeld. As was the case above, a subject position may be available to the moved DP above the adverb, as in (11b). Conversely, in French, the epistemic adverb cannot occur between the subject position and the auxiliary or the lexical verb, a violation of the adjacency subject-auxiliary/verb leading to ungrammatical results (11c), it can only precede the subject as in (11d). Besides, as (11e-f) indicate, a chunk made up of the subject and the auxiliary can target the appropriate position in the upper Mittelfeld, above the adverb-related position. In English and French, the sentence-final position of the adverb results in a parenthetical reading, as illustrated in (11g-h). This paper does not tackle the issue of parenthetical phrases. However, French displays one more alternative in which this high adverb may intervene between the participial verb and the object DP, this being obvious in (11i).[4]

(11) a.   Probably John has read the book.
     b.   John probably has read the book.
     c.   *Jean probablement a lu le livre.
            Jean probably has read the book.
     d.   Probablement, Jean a lu le livre.
     e.   John has probably read the book.
     f.   Jean a probablement lu le livre.
     g.   *John has read the book probably/([ok], probably).
     h.   *Jean a lu le livre probablement/([ok], probablement)
     i.   ?Jean a lu probablement le livre.

Let us further consider the following examples containing a $TP_{anterior}$ adverb like *recently* or an $AspP_{frequencyI}$ adverb like *often*.

(12) a.   Mary has (often/recently) read (*often/*recently) the book (often/recently).
     b.   Marie a (souvent/récemment) lu (souvent/récemment) ce livre (souvent/récemment).

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[4] The function of *probably* as a phrasal modifier is not considered here.

In (12a) the adjacent constituents, the verb and the direct object, are in a position higher than both the AspP$_{frequency}$ licensing the adverb *often* and the TP licensing the adverb *recently*. In French (12b), the time and aspect adverbs can appear below the participial verb in a position preceding or following the object. In order to account for the verb always preceding the direct object in the Mittelfeld in English as well as in Romance (only as far as the SVO word order is concerned), the condition must be observed that the verb c-commands the direct object DP.[5]

To sum up, the moved arguments and verbs' positions among the functional projections of the mode, time and aspect adverbs considered thus far are provided in (13) below.

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[5] In OV languages (German, etc.) the direct object DO must c-command the verb. This is a restatement of the VO vs. OV parameter, previously applying to the order [X° Compl] vs. [Compl X°] within X'.

(13) CP
```
       y
        SubjP
       2
   DP        Subj'
    |       2
    |   Aux     InflP
    |    |     2
    |    |   VP_PP^6    ObjP
    |    |    |       2
    |    |    |    DP      ModP
    |    |    |     |     2
    |    |    |     |   AdvP      InflP
    |    |    |     |    |       2
    |    |    |     .    |    VP_PP     ObjP
    |    |    |          |     |       2
    |    |    |          |     |    DP      TP_ant
    |    |    |          |     |     |     2
    |    |    |          .     |     |  AdvP      InflP
    |    |    |                |     |   |       2
    |    |    |                |     |   |    VP_PP     ObjP
    |    |    |                |     |   |     |       2
    |    |    |                |     |   |     |    DP      AspP_freq.
    |    |    |                |     |   |     |     |     2
    |    |    |                |     |   |     |     |  AdvP      InflP
    |    |    |                |     |   |     |     |   |       2
    |    |    |                |     |   |     |     |   |    VP_PP     ObjP
    |    |    |                |     |   |     |     |   |     |       2
    |    |    |                |     |   |     |     |   |     |    DP      vP
```
John has *read *the book   ^ok read ^ok the book   ^ok read ^ok the book   ^ok read ^ok the book
                         probably   recently   often

Jean   a   ^ok lu   ^ok le livre   ^ok lu   ^ok le livre   ^ok lu   ^ok le livre   ^ok lu   ^ok le livre
   probablement   récemment   souvent
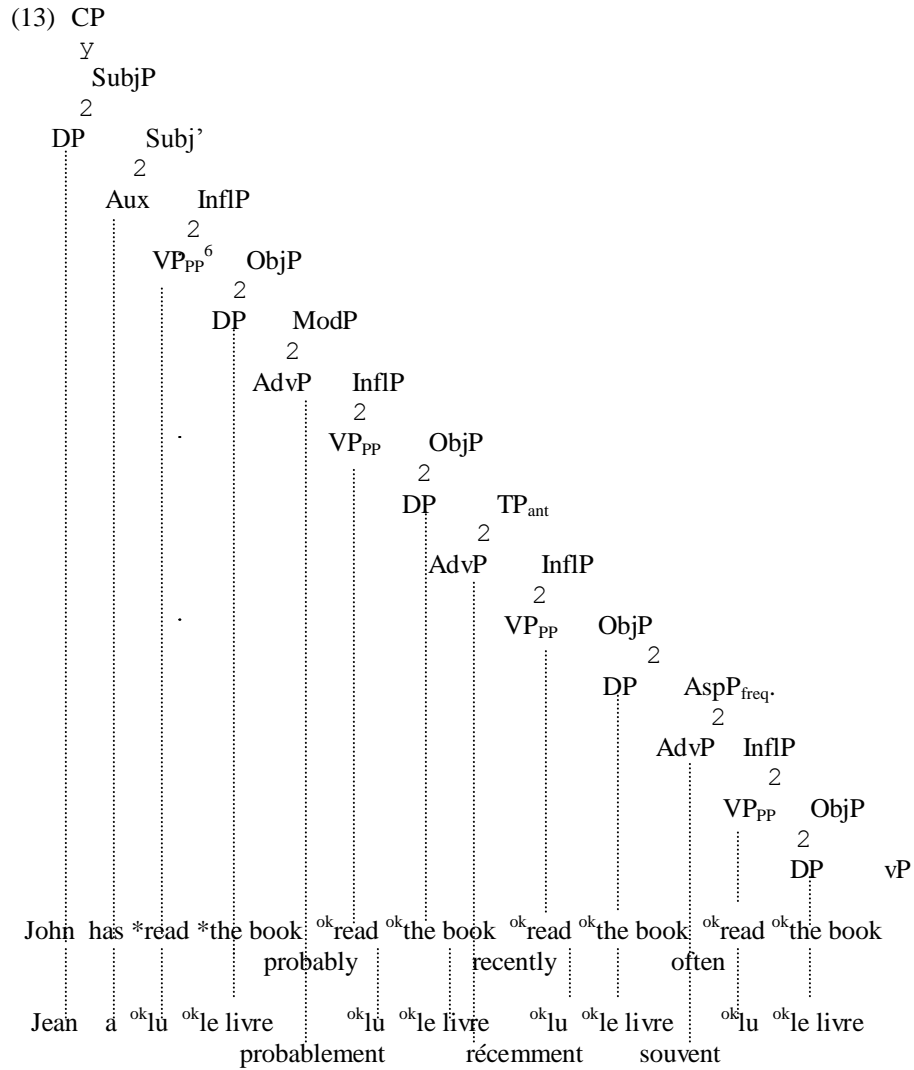
As the structure above shows, the auxiliary in French must move very high i.e. to a head Subj in the upper Mittelfeld in order for the Spec-head configuration to obtain.

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[6] VP_PP stands for participial verb projection.

A low aspectual adverb such as *extensively*, *intensivement* has quite a restrained distribution in both English and French, in the sense that, in the former, it can either follow a chunk made up of the subject and the auxiliary (14a) or follow a whole chunk containing a lexical DP object (14b). As for the latter, the quantificational adverb has a somewhat freer distribution in the sense that the participial verb can move to a position above the quantificational adverb (14c,e), the object DP targeting [Spec-ObjP] in the same chunk i.e. above the adverb (14e) or remaining in the chunk below the adverb (14c). Alternatively, the participial verb in French may remain in the same chunk below the aspectual adverb (14d). The representation of the sentences below is provided in (15).

(14)   a.   John has extensively read this book.
         b.   John has read this book extensively.
         c.   Jean a lu intensivement ce livre.
               Jean has read this book extensively.'
         d.   Jean a intensivement lu ce livre.
         e.   Jean a lu ce livre intensivement.
         f.   *Intensivement, Jean a lu ce livre.
         g.   *Extensively, John (has) read this book.

(15)

```
        …SubjP
       3
    DP       Subj'
            3
         Subj     …InflP
               3
            VP_PP      ObjP
                  3
               DP      AspP
                    3
                 AdvP      InflP
                        3
                     VP_PP      ObjP
                           3
                        DP      …vP
```

John   has   read this book extensively read this book
Jean   a   lu   ce livre intensivement lu   ce livre
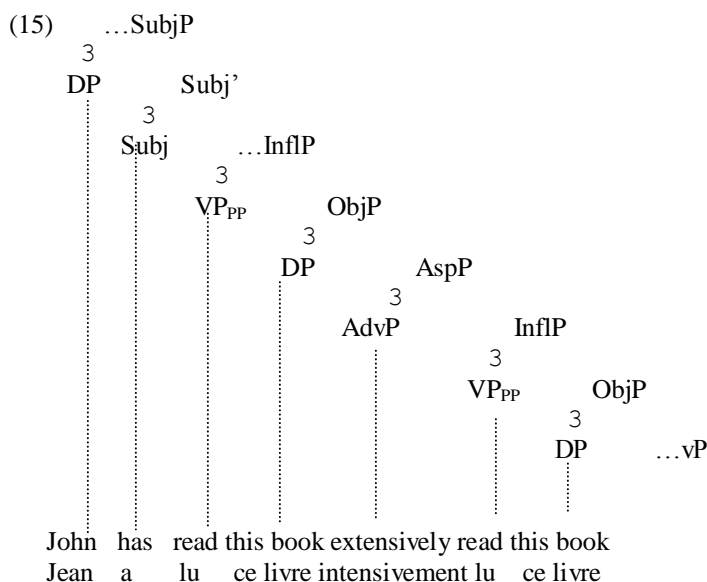
As discussed in Laenzlinger (1998), such low aspectual adverbs cannot move, e.g. in a fronted position to ModifP, as shown by the ungrammaticality of the French (14f) and the English (14g). These adverbs are "frozen" in their root-merge position, a fact reminiscent of Rizzi's (2004b) application of the Criterion which freezes the operators in place.

Let us consider argument floating with respect to manner adverbs. In both English and French, such adverbs can undergo movement to the left-peripheral [Spec-ModifP], such a position rendering them more 'prominent'.[7]

(16) a.   Calmement, ils se sont dirigés vers la sortie.
     b.   Quietly, they made for the exit.

The notion of informational 'prominence' thus reinforces the idea that the EPP feature which is assumed to license adverbs at the left periphery is intimately connected with the IS-interface. A word of caution is needed here: Some adverbs are ambiguous between a speaker-oriented reading and a manner reading, being merged in two distinct positions in the Mittelfeld (Cinque 1999, Laenzlinger 2004). The
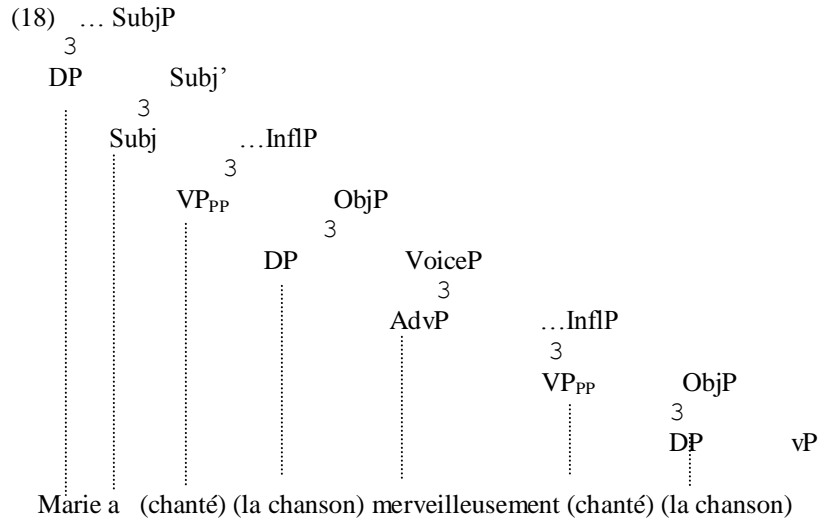
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[7] Rizzi (2002) suggests that in terms of the system of Chomsky (2000), the head Mod, corresponding to our Modif, is endowed with an EPP feature which triggers the creation of a specifier and the attraction of an adverb to this newly created position, the role of the EPP feature being that of rendering the adverb more 'salient' or 'prominent'.

distributional tests considered here will involve unambiguous manner adverbs such as *beautifully* and *merveilleusement*.

(17) a.   John has sung this song beautifully.
       b.   John has beautifully sung this song.
       c.   ??John beautifully has sung this song.
       d.   *John has sung beautifully this song.
       e.   Marie a chanté la chanson merveilleusement.
             Marie has sung the song beautifully.'
       f.   Marie a merveilleusement chanté la chanson.
       g.   Marie a chanté merveilleusement la chanson.

Example (17a) shows that a whole chunk made up of the subject, auxiliary, participial verb and object may float to their appropriate positions above the adverb-related projection. Alternatively, only the subject and the auxiliary can target higher positions (17b). Contrary to other classes of adverbs, a manner adverb can only marginally occur between the subject and the auxiliary. The ungrammaticality of (17d) can be accounted for in terms of a violation of Stowell's (1981) Case Resistance Constraint. Translated into the theory of chunks, this constraint forces the verb and its nominal direct object to occur within the same (S)VO chunk.[8] In French, the manner adverb's distribution provided in (17e-g) is accounted for in terms of floating of the whole chunk (DP_{Subj}-Aux-V_{PP}-DP_{Obj}) above the projection hosting the adverb as illustrated in (17e). A chunk consisting of a subject, auxiliary and participial verb may alternatively occur higher than the adverb, with the object remaining in a lower position in the space between VoiceP and vP as (17f) shows. The third possibility that French evinces implies movement of the DP subject and auxiliary above the adverb as seen in (17g). Given the fixed position filled by the manner adverb, the representation below indicates all floating possibilities of the verb and object DP in French.

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[8] As suggested by Ur Shlonsly (p.c), the direct object DP in English is a light element being morphologically/prosodically poor. Informationnally, they are weak elements and as such must belong to the same chunk as the verb. This analysis finds support in the process of heavy NP-shift. If the object is a heavy DP, as well as a PP or a CP, it acts as a free element with respect to the verb.

(18)   … SubjP
          3
      DP   Subj'
              3
          Subj   …InflP
                    3
              VP_{PP}   ObjP
                          3
                  DP   VoiceP
                          3
                      AdvP   …InflP
                                3
                          VP_{PP}   ObjP
                                      3
                              DP   vP

Marie a   (chanté) (la chanson) merveilleusement (chanté) (la chanson)

A note on word order variations with adverbs is needed here, since the variable floating nature of the chunks cannot rely solely on morpho-syntactic properties (the A-system). The role of adverbs in information structure is not very well known. To our knowledge, very few analyses exist on the topic and particular attention should be paid to this issue especially given the view of the apparently "free" placement of (some) adverbs. Consider again the placement possibilities of the manner adverb around the participial verb and its object in French given in (17e-g). The sentence final position of the adverb in (17e) is appropriate if the adverb conveys new information, i.e. as an answer to the question *"Comment a-t-il chanté la chanson?"* *"How did he sing the song?"* The verb and its object are informationnally unmarked. They target a chunk above VoiceP, right in the middle of the Mittelfeld. According to our analysis, this space is the locus of neutral information. When the adverb is preverbal, as in (17f), it overtly marks its scope to the verb plus its complement, which remain in a chunk below VoiceP. Finally, the order in (17g) results in an informational balance among of the verb, the adverb and the object. The verb occurs in a chunk above VoiceP, while the object is located in a chunk below VoiceP. The conclusion we can draw from such observations is that the distribution of constituents among different chunks is triggered by information structure.

To sum up, it has been observed in this section that among the adverb-related functional projections of the adverbs there are recursive chunks of A-positions hosting the arguments and the verb(s). As already explained, their potential occurrence is independently required by the computational system itself, i.e. the cyclicity principle, the notion of barriers and a phase-based system all lead to the

postulation of such chunks interspersed among the adverbs' rigid positions in the clause architecture. An argument accessing a particular position in a higher or lower chunk is parametrisable in function of the realisation of morphological, semantic and IS-features on the heads of the A-positions. As far as English and French are concerned, the following set of micro-parameters has been detected thus far:

- The subject and the auxiliary/conjugated verb must be in a Spec-head configuration in French.
- The verb must c-command the direct object DP in Romance and in English. This does not hold true for German (e.g. *Er hat ein Buch gelesen*).
- The lexical verb and the direct object DP must be adjacent in a chunk in English.
- The lexical verb and the direct object can raise higher than ModP in French but not in English.
- The lexical verb and the direct object can raise higher than AspP$_{quantification}$ in French but not in English.

3.2. Marked SVO: Italian, Spanish and Romanian

In this section argument floating with respect to the same classes of adverbs will be investigated considering the remaining Romance languages under analysis, i.e. Italian, Spanish and Romanian. The general property grouping these languages together is that the word order SVO represents the more marked order, VS being the canonical, neutral word order. Mention must be made at this point that there seems not to be a consensus on the basic word order in Spanish, there is variation among speakers as to the difference between SVO and VSO.[9] In this paper the variety of Spanish to be investigated has VSO as the basic word order.

The preverbal subject is assumed to bear a topic-like feature in the sense that, as Rizzi (2004b) puts it, if events are conceived of in the subject-predicate format, the description of an event may start by selecting an argument, with the event presented as being about that argument.[10] Therefore, preverbal subjects share the features [+aboutness, -D-linking]. An answer taking on the form SV(O) can be given to a question like 'What about X?' Though more marked, the subject is still part of the Mittelfeld.

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[9] Spanish is taken by some linguists (Suñer 1994, Ordóñez 2000) to have the basic order SVO, yet allowing its subject to appear postverbally, while others (Zubizarreta 1995, Costa 2001) claim that the basic word order is VSO. However, Ordóñez (2000:60, fn 3) himself considers examples in which the answer to the question '*Qué pasó*?' 'What happened?' is given in the order XP/que V S O.

[10] Class lectures delivered within the framework of the 2003-2004 MA programme of the University of Geneva.

Let us first consider the class of MoodP adverbs. In Italian such high adverbs can either precede or follow the subject, which means that a subject position may be available in the upper Mittelfeld. The same holds true for Spanish, though, according to some native speakers, such adverbs may be parentheticals. In Romanian, such high adverbs, i.e. MoodP$_{evaluative}$, MoodP$_{evidential}$ and MoodP$_{speech-act}$ have a parenthetical reading, whatever their position in the sentence.[11] The relevant examples are provided below.

(19) a. Francamente Gianni si   era formato una pessima opinione di voi.
          Frankly   Gianni se$_{refl}$ was made   a   very bad opinion of you.
          'Frankly   Gianni had a very bad opinion of you.'
     b. Gianni francamente si era formato una pessima opinione di voi.
     c. Evidentemente (,) Maria dirá la verdad.
         'Evidently, Maria will tell the truth.'
     d. Maria felizmente probablemente ha leido este libro.
         Maria fortunately probably has read this book.
         'Fortunately Maria probably told the truth.'
     e. Din fericire, Ion a citit cartea.
         'Happily, Ion read the book.'
     f. Ion, din fericire, a citit cartea.

Insofar as the epistemic adverb *probabil* 'probably' is concerned, the three languages pattern with English in that a subject position may be projected above the epistemic adverb, as illustrated in (20a,b,c). English differs from the two in that the participial verb may not raise to a position adjacent to that of the auxiliary, such a space being filled by different classes of adverbs. In other words, Spanish and Romanian exhibit the auxiliary-verb adjacency which can only be interrupted by a reduced class of clitic adverbs. As the example in (20d) shows, Italian exhibits only auxiliary raising above the functional projection of the adverb, participial verb movement above the epistemic adverb is not allowed, while in Romanian the chunk DP$_{Subj}$-Aux-V$_{PP}$ may occur above ModP as in (20f). Spanish opts for none of the three possibilities.

---

[11] Romanian exhibits classes of adverbs in which an adverb has an adverbial PP counterpart, the latter having a higher frequency of language use. A case in point is the class of MoodP$_{evaluative}$ adverbs which contains only PP's, such as: *în mod regretabil* 'regrettably', *în mod neaşteptat* 'unexpectedly, *din (ne)fericire* '(un)fortunately', etc.

(20) a.   Gianni probabilmente ha   letto il   libro.[12]
           Gianni probably   has read the book
      b.   Ion probabil   a   citit cartea.
           Ion probably has read book-the
      c.   Juan probablemente ha   leído este libro.
           Juan probably   has read this book
      d.   Gianni ha probabilmente letto il libro.
      e.   *Gianni ha letto probabilmente il libro
      f.   Ion a citit probabil cartea.

If the subject raises quite high in Spanish and Romanian, the space between the subject and the auxiliary can be filled by different classes of adverbs. Since the epistemic adverb can occur in this space, then lower adverbs are also expected to fill this space, such a prediction being indeed borne out.
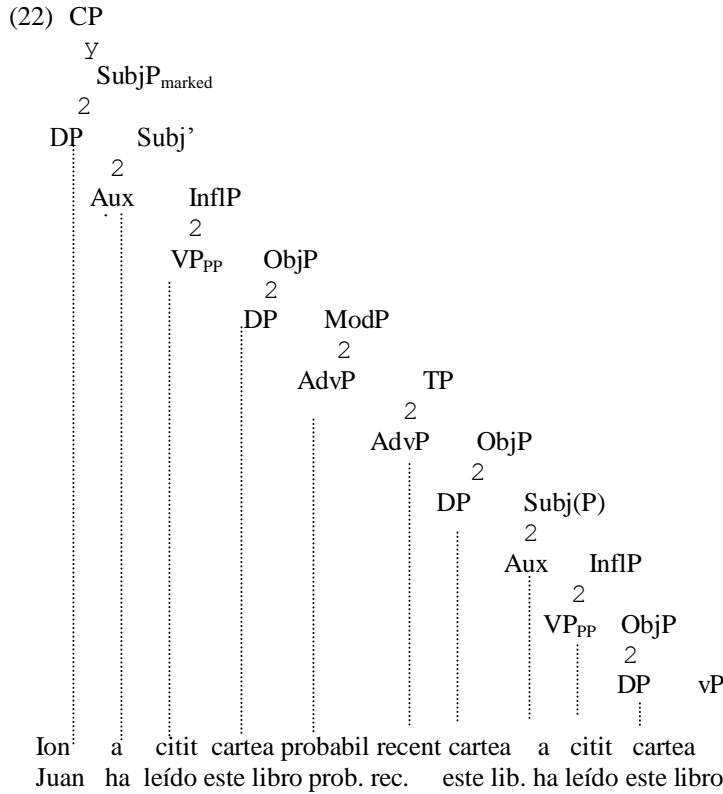
(21) a.   Juan recientemente/a menudo ha leído este libro.
           Juan recently/often has read this book.
      b.   Ion recent/RECENT a citit această carte.
           Ion recently   has read this book.
      c.   Ion adesea/ADESEA a   citit această carte.
           Ion often   has read this book.

In both languages a subject projection is available above frequency and anterior time adverbs.

Interestingly, Romanian seems to accommodate a high Mittelfeld-internal Focus position hosting the two time adverbs. Such a Focus position cannot but be postulated in the Mittelfeld as it does not constitute Rizzi's (1997) left-peripheral contrastive Focus. Romanian thus partially patterns with Italian in that a Focus position meant to host only the TP$_{anterior}$ adverb may be projected. Italian, Spanish and Romanian are alike in that a chunk containing the participial verb and the object may precede the adverbs under analysis. Alternatively, the object DP may remain lower in the structure. As already mentioned, Italian does not display the auxiliary-verb adjacency and thus the two adverbs may occur in between.[13] All these movement possibilities for feature checking around the ModP, TP$_{frequency}$ and TP$_{anterior}$ adverbs are rendered in the derivation (22) below.

---

[12] To some speakers the adverb in this configuration does not display a parenthetical use.

[13] According to some native speakers, the adverb *spesso* 'often' is not accepted between the auxiliary and the participial verb.

34

(22) CP
    y
      SubjP$_{marked}$
    2
  DP   Subj'
       2
    Aux   InflP
          2
        VP$_{PP}$ ObjP
              2
           DP   ModP
               2
             AdvP   TP
                  2
                AdvP   ObjP
                     2
                  DP   Subj(P)
                     2
                    Aux   InflP
                        2
                      VP$_{PP}$ ObjP
                           2
                        DP   vP

Ion   a   citit cartea probabil recent cartea a citit cartea
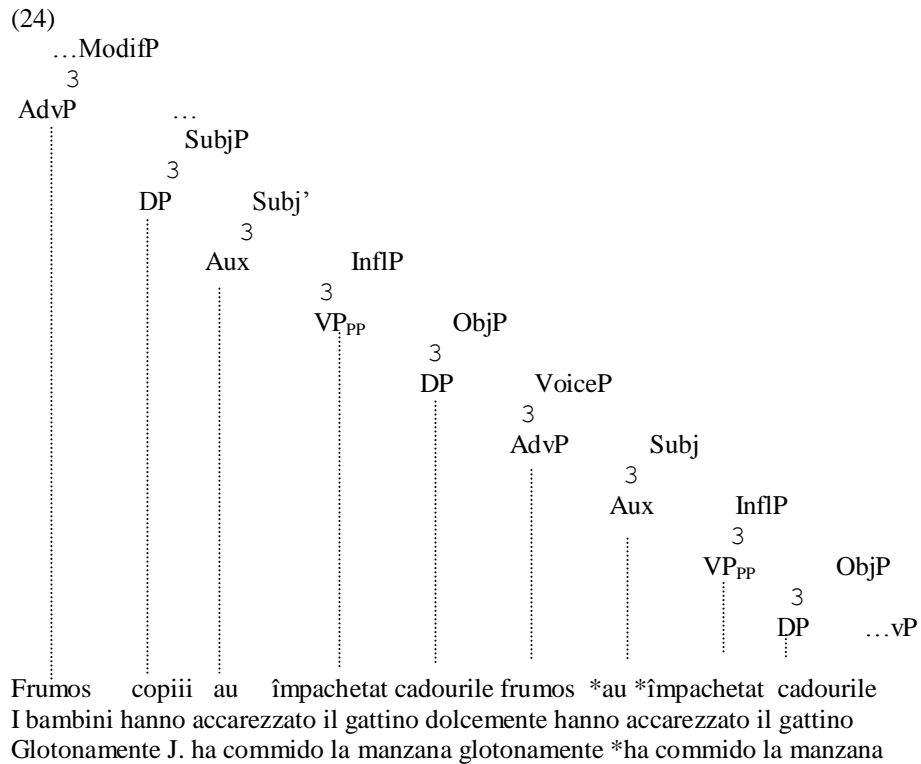Juan ha leído este libro prob. rec.   este lib. ha leído este libro

What this structure does not capture is adverb movement to [Spec-ModifP] at the left periphery for checking features associated with the Information Structure (i.e. features such as informational prominence), the three languages patterning alike in this respect.

One last class of adverbs will be considered here, that of unambiguous manner adverbs. Italian and Spanish are like French in that a pre-auxiliary position of the adverb leads to a parenthetical reading of the adverb. However, Spanish also exhibits a Mittelfeld-internal Focus position hosting the adverb (23a). Romanian does not project a subject position above the manner adverb (23c). The three languages exhibit the same behaviour with respect to object and participial verb movement to [Spec-ObjP] and [Spec-InflP] in a chunk above VoiceP. Alternatively, the object may remain lower, in the space between VoiceP and vP. In addition, Italian may allow only auxiliary movement above the adverb, the participial verb remaining in a lower chunk (23b). The three languages pattern alike in that the

manner adverb may fill [Spec-ModifP] at the left periphery. The structure in (24) provides the movement possibilities of the sentences below.

(23) a.   Juan (GLOTONAMENTE) ha comido (glotonamente) la manzana (glotonamente).
          'Juan greedily has eaten the apple'.

     b.   Bambini (,dolcemente,) hanno (dolcemente) accarezzato (dolcemente) il gattino
          (dolcemente).
          'The children caressed the cat gently.'

     c.   Copiii (*frumos) au împachetat (frumos) cadourile frumos.
          'The children wrapped up the presents nicely.'

(24)

Frumos   copiii au   împachetat cadourile frumos *au *împachetat cadourile
I bambini hanno accarezzato il gattino dolcemente hanno accarezzato il gattino
Glotonamente J. ha commido la manzana glotonamente *ha commido la manzana

The structure above also contains the [Spec-ModifP] at the left periphery of the clause. Such a position is activated only in Spanish, while the clause-initial position of (unambiguous) manner adverbs in Romanian results in their parenthetical use.

36

To sum up this section on the word order SVO in Italian, Romanian and Spanish, the following micro-parametric properties can be detected:

- The clause-internal preverbal subject position of these null subject languages has a Topic feature to check in the specifier of SubjP, quite high in the Mittelfeld.
- The Topic feature, strongly connected with the IS-interface, is checked together with the phi, Case and the EPP features present in the featural make-up of the syncretic head Subj.
- Romanian and Spanish exhibit the auxiliary-verb adjacency which may be interrupted by clitic adverb elements only. This adjacency condition can be accounted for in terms of one-step movement of Aux° to Subj°.
- A subject position is available very high in the Mittelfeld, i.e. above the MoodP adverbs in Italian and Spanish.
- The subject in its non-parenthetical reading can move as high as ModP$_{epistemic}$ adverbs in Romanian.

The arguments and verbs' movement possibilities in the languages considered thus far are all summarised in the table below.

(25) THE WORD ORDER SVO

	Adv	Subj	Adv	Aux	Adv	V$_{PP}$	Adv	Obj	Adv	XP
English	^{ok}probably		ok		ok		*		*	
	^{ok}recently		ok		ok		*		ok	
	^{ok}often		ok		ok		*		ok	
	^{ok}carefully		*		ok		*		ok	
French	,^{ok}probablement,		*		ok		??		(ok,)	
	^{ok}récemment,		*		ok		ok		ok	
	^{ok} souvent,		*		ok		ok		ok	
	^{ok}attentivement		*		ok		ok		ok	
Italian	^{ok}probabilmente		ok		ok		(ok,)		(ok,)	
	^{ok}recentemente		* (^{ok}Foc)		ok		ok		ok	
	^{ok}spesso		*		ok/ *		ok		ok	
	*dolcemente		*		ok		ok		ok	
Romanian	^{ok}probabil		ok		*		ok		(ok,)	
	^{ok}recent		ok/Foc		*		ok		ok	

			ok/Foc		*		ok		ok	
	[ok] adesea									
	[(ok,)] frumos		*		*		ok		ok	
Spanish	[ok] probablemente		ok		*		*		*	
	[ok] recientemente		ok		*		ok		ok	
	[ok] a menudo		ok		*		ok		ok	
	[ok] glotonamente		*(ok,)		*		ok		ok	

3.3 VS (Free inversion)

Subjet-verb inversion is a triggered phenomenon in English and French. For instance, it is attested in wh-contexts, as in (26).

(26) a. What has John/he eaten ? (I-to-C movement)
  b. Qu'a-t-il mangé ?[14]
  b' Qu'a mangé Jean ? (stylistic inversion)

In declarative contexts, without a special trigger (i.e. in out-of-the-blue contexts), free inversion is not allowed, as shown by the ungrammaticality of (B) in (27).

(27) A: What happened?
  B: *Cried John / Has (John) cried (John)
      *Pleurait Jean / A pleuré Jean.

In contrast, free inversion is possible in Italian, Spanish and Romanian, as shown in the answers in B. This is the unmarked order with intransitive and ergative verbs.[15]

(28) A: What happened ?
  B: - Ha pianto Gianni.
           Has cried Gianni.
          'Gianni cried.'
        - È arrivato Gianni.
           Has arrived Gianni.
          'Gianni arrived.'
        - Ha llorado Juan.
           Has cried Juan.
          'Juan cried.'
        - Ha llegado Juan.

---

[14] Simple inversion in French is only possible with clitic subjects, not with full DPs (see Rizzi & Roberts 1989 for an explanation in terms of Case theory).

[15] Mention must be made that free inversion is possible in Romanian with all classes of verbs, i.e. unergatives, unaccusatives and transitives.
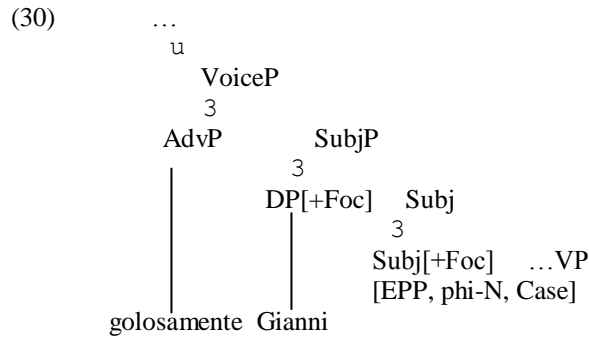
    Has arrived Juan.
    'Juan arrived.'
  - A sosit Ion.
    Has come Ion.
    'Ion arrived.'
  - A plâns Ion.
    Has cried Ion.
    Ion cried'

As noted by Rizzi (1982), free inversion is characteristic of Romance null subject languages. In Rizzi (1991), the VP-internal subject is assigned Case by an Asp° under government, while [Spec-IP] is filled by an expletive *pro*. Translated in recent minimalist terms, the phi- and Case-features of the subject are assigned a value (feature matching) under downward Agree. An expletive *pro* in Spec-IP would be required for EPP-feature checking. As far as Italian is concerned, Belletti (2001) argues that the postverbal subject is in a very low position, a focus position at the border of VP. This analysis finds support in the impossibility of having any adverb following the subject, as shown in (29a). The adverbs must precede the subject, as in (29b).
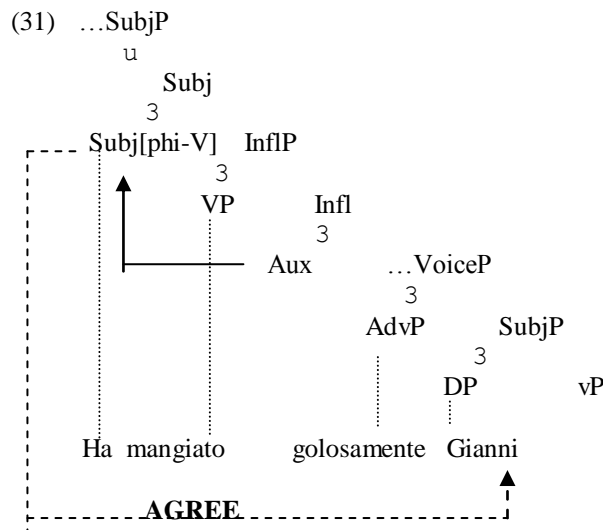
(29) a.   Ha mangiato Gianni (*golosamente/a volte/recentemente).
        Has eaten Gianni (greedily/sometimes/recently)
        'Gianni has eaten / sometimes/ recently'.
    b.   Ha mangiato (golosamente/a volte/recentemente) Gianni

Within the framework of the chunk analysis, the postverbal subject in (29) occurs in the lowest subject position, which is marked as "new information" focus.[16] This is represented in (30).

---

[16] This informational value is also called presential or identificational focus.

(30)   …
           u
         VoiceP
           3
     AdvP   SubjP
                  3
            DP[+Foc]   Subj
                         3
                   Subj[+Foc]   …VP
                   [EPP, phi-N, Case]

     golosamente Gianni

The verb moves as a remnant VP to [Spec-InflP], while the auxiliary merges as Infl and the verb raises to Subj in a short move. Subject-verb agreement is established under downward AGREE, as represented in (31).[17]

(31)   …SubjP
         u
         Subj
          3
    Subj[phi-V]   InflP
                   3
              VP   Infl
                         3
                   Aux   …VoiceP
                             3
                        AdvP   SubjP
                                   3
                              DP   vP

    Ha mangiato   golosamente Gianni

AGREE

As shown in (32a), the subject cannot be followed by a nominal object. Only PPs and CPs (but only with some verbs according to Belletti 2001: 69) are acceptable, as in (32b-c).

---

[17] The occurrence of an expletive *pro* in a high [Spec-SubjP] can be envisaged in order to satisfy EPP "every clause must have a subject" (see Rizzi's 2004b Subject Criterion), unless we adopt Alexiadou & Anagnostopoulou (1998)'s proposal that the raised verb can satisfy EPP. We leave this question open.

(32) a.   *Ha letto Gianni questo libro.
        Has written Gianni this book.
        'Gianni wrote this book.'
    b.   [?]Ha telefonato Gianni a Maria.
        Has phoned Gianni to Maria.
        'Gianni phoned Maria.'
    c.   Ha detto Gianni che ha telefonato Maria.
        Has said Gianni that has phoned Maria.
        'Gianni said that Maria had phoned.'

Note that, if the nominal object is a trace, i.e. a null copy of the moved constituent, the sentence becomes acceptable, as shown in (33), in contrast with (32a).

(33) a.   L'ha letto Gianni [t]
        It-has read Gianni [t].
        'Gianni read it.'
    b.   Che cosi ha letto   Gianni [t]
        What   has read Gianni [t]
        'What did Gianni read?'

According to Belletti (2001), the ungrammaticality of (32a) results from a Case-checking violation for the nominal object, which may not remain in situ. Since a trace, a PP and a CP does not require Case-checking, the sentences in (32b-c) and (33) are grammatical.

In addition to VSO, the order VOS in Italian is very constrained in the sense that the verb (V) and its nominal direct object (O) must be "given" information. For instance, the sentences in (34) cannot be uttered in an out-of-the-blue context, but constitutes an appropriate answer to the questions '*Chi ha letto questo libro*?/*Chi ha telefonato a Maria*?' 'Who read this book?/Who phoned Maria?'

(34) a.   (*)Ha letto questo libro Gianni.
        Has read this book Gianni.
        'Gianni read this book.'
    b.   Ha telefonato a Maria Gianni.
        Has phoned Maria Gianni.
        'Gianni phoned Maria.'

Belletti (2001) attributes the ungrammaticality of (34a), if uttered in an out-of-the-blue context, to a minimality violation in Accusative Case checking of the object, in the sense that the subject acts as a DP intervener for movement. Put differently, the subject DP is a closer attractee for the Probe head that matches ACC Case checking (Minimal Link Condition). If the verb and the direct object are directly accessible given information, they both move as one constituent (i.e. a

remnant VP) to a topic position above the subject's focus position. Belletti (2001) also observes that a prepositional object, as in (34b), can precede the subject, since it is not an intervener of the same category as the subject (Dative Case is checked/assigned PP-internally).[18] Belletti's explanation for (34a) cannot be generalized to Spanish (the variety discussed in this paper) and Romanian where the VOS order is allowed with a nominal direct object. This contrast is discussed in section 3.5. Let us first turn to the distribution of adverbs in VSO configuration in Spanish and Romanian.

3.4 VSO

Free inversion appears more natural in Romanian and (a variety of) Spanish than in Italian.[19] It is worthwhile noting at this point that a major difference between Italian and Spanish/Romanian is that an adverb may follow the postverbal subject in the latter group of languages. Compare (29a) above with (35).

(35) a. Ha   llorado Juan recientemente/a menudo/discretamente.
        Has$_{Aux3rdsg}$ cried Juan recently/often/gently.
        'Juan has recently/often cried gently.'
     b. A   plâns Ion recent/adesea/zgomotos.
        Has$_{Aux3rdsg}$ cried Juan recently/often/noisily.
        'Ion has recently/often cried /noisily.'

These facts show that the subject, which can express unmarked information, can float above VoiceP, AspP and TP. Alternatively, the floating subject can remain in a chunk below, among the adverb-related projections. This is represented in (36).

(36) [$_{SubjP}$ aux [$_{InflP}$ V$_{pp}$ [$_{SubjP}$ Subj [$_{TP}$ Adv [$_{SubjP}$ Subj [$_{AspP}$ Adv [$_{SubjP}$ Subj [$_{VoiceP}$ Adv [$_{SubjP}$ Subj [$_{vP}$ …]]]]]]]]]

---

[18] It is noted in Belletti (2001) that with some verb classes, Italian may display the word order V CP S, such as in (i). As long as such cases are analysed as remnant [V+O] moved across the subject position, the above-stated conclusion that Italian has a FocP in the lowest chunk is not invalidated.
(i) Ha pensato/pensa [che Gianni non capisca più niente] la mamma.
     Has thought/thinks [that Gianni not understands anything anymore] the mother
     'Mother has thought/thinks that Gianni does not understand anything anymore.'

[19] Ordóñez (2000: 85) argues that subjects can be neutral in Spanish in the word order VSO and focused in the order VOS. In the case of the former, he postulates what he calls a Neutral Phrase, situated below TP and above VP, the DP subject can thus move to Spec NeutP and the verb moves by head movement to the head Tense above.

VSO is a neutral order in Romanian and Spanish (the variety analysed in this paper). This order therefore is an appropriate answer to the "out-of-the-blue" question "*What happened*?", as in (37).

(37) a. A citit Ion această carte.
         Has read Ion this book.
         'Ion read this book.'
     b. Ha leído Juan este libro.
         Has read Juan this book.
         'Juan read this book.'

The six classes of adverbs considered have the distribution indicated in the following table for a sentence like (37a/b).

(38) THE WORD ORDER VSO

Adv	Aux	Adv	V$_{PP}$	Adv	Subj	Adv	Obj	Adv	XP
Romanian									
[ok(,)]din fericire		*		ok		ok		(ok,)	
[ok]probabil		*		ok		ok		(ok,)	
[(okFoc)]recent		*		ok/Foc		ok		ok	
[(okFoc)]adesea		*		ok/Foc		ok		ok	
[*]mult		*		ok		ok		?ok	
[(okFoc)]atent		*		?ok/Foc		ok		ok	
Spanish									
[ok]afortunadamente		*		?ok		?ok		ok	
[ok]probablemente		*		?ok		?ok		ok	
[ok]recientemente		*		ok		ok		ok	
[ok]a menudo		*		ok		ok		ok	
[OK]intensamente		*		?ok		?ok		(ok,)	
[?ok]atentamente		*		ok		ok		ok	

In sentence-initial position, mood and mode adverbs occupy the same position as in SVO contexts, that is their root-merge position, i.e. [Spec-MoodP] and [Spec-ModeP], respectively. Tense, frequency and manner adverbs can move to a topic-like position in the Comp domain, labelled ModifP in Rizzi (2002). These adverbs are fronted for informational prominence. Besides, they can also be focalized by being merged as the [Spec-FocP] in the Comp domain. Note that the low quantificational aspectual adverbs *mult* 'a lot', *intensamente* 'intensely' cannot move. They are frozen in place, namely in the specifier position of AspP$_{quant}$. The licensing condition for these adverbs resembles that of the system of Criteria (Laenzlinger 1998:86), since once they have their features checked/matched, they cannot move further (Rizzi 2004b).

The space between the auxiliary and the participial verb cannot contain any adverb in Romanian and Spanish, unless it is a clitic form.[20] Recall that the adjacency between the two verbal elements derives from the configuration in which the auxiliary moves a short distance past the participial VP.

Among the six classes of adverbs considered here, all adverbs except mood adverbs (unless parentheticals) may occur in the postverbal domain between the participle and the subject, as illustrated in (39a) for Romanian and (39b) for Spanish.

(39) a. A citit probabil/recent/adesea/attent   Ion această carte.
        Has read probably/recently/often/carefully Ion this book.
        'Ion probably/recently/often/carefully read this book.'
    b. Ha leído probablemente/recientemente/a menudo/atentamente Juan este libro.
        Has read probably/recently/often/carefully   Juan this book.
        'Juan probably/recently/often/carefully read this book.'

This means that the participial VP can target a chunk above VoiceP, AspP, TP and ModeP. These adverbs can also occur immediately after the subject, more precisely between the subject and the object, as shown in (40).
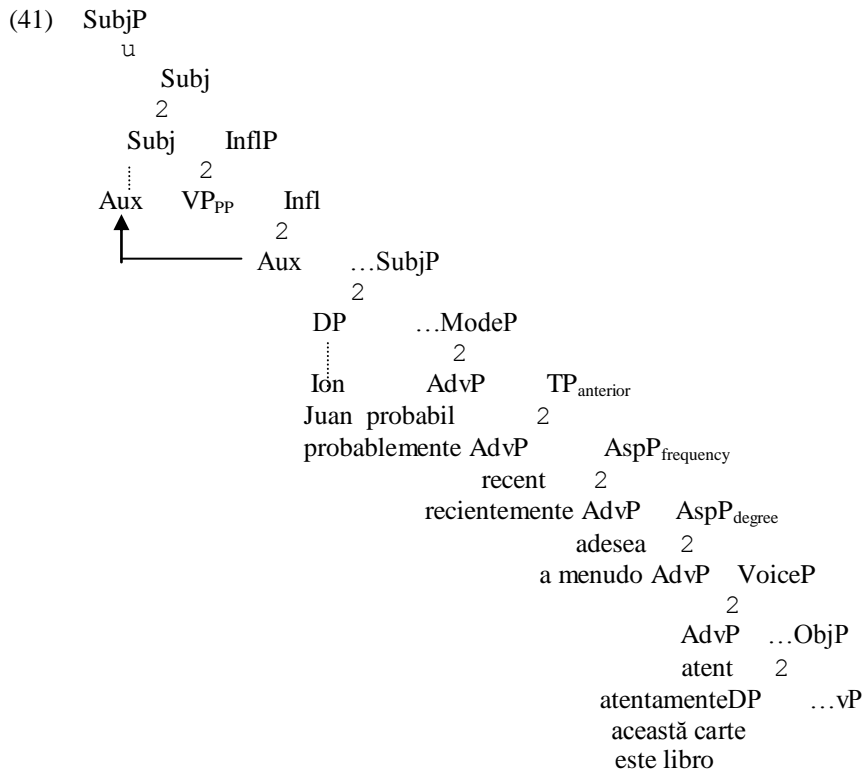
(40) a. A citit   Ion probabil/recent/adesea/attent această carte.
        Has read Ion probably/recently/often/carefully this book.
        'Ion probably/recently/often/carefully read this book.'
    b. Ha leído Juan probablemente/recientemente/a menudo/atentamente este libro.
        Has read Juan probably/recently/often/carefully this book.
        'Juan probably/recently/often/carefully read this book.'

In such a configuration, the subject raises to a chunk above the adverb-related projections, while the object remains in a lower chunk, as represented in (41).

---

[20] This is the case with the clitic adverb *mai* 'again' in Romanian :

Nu a mai   venit acasă
not has any longer come home
'He has not come home any longer'

The Spanish adverb *ya* 'already' behaves in a similar manner in being cliticised between the auxiliary and the participle.

(41)   SubjP
            u
                Subj
                2
        Subj   InflP
                2
        Aux   VP_PP   Infl
                                2
                        Aux   …SubjP
                                2
                    DP   …ModeP
                                    2
                    Ion   AdvP   TP_anterior
                    Juan   probabil   2
                    probablemente AdvP   AspP_frequency
                                    recent   2
                            recientemente AdvP   AspP_degree
                                            adesea   2
                                    a menudo AdvP   VoiceP
                                                    2
                                            AdvP   …ObjP
                                            atent   2
                                        atentamenteDP   …vP
                                        această carte
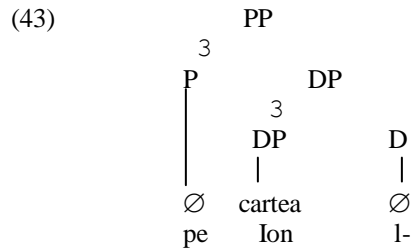   este libro

Unexpectedly, we can observe that movement of the subject past the object, being both nominal (chains), does not induce any minimality violation effect. To understand this absence of intervention effects, we propose to refer to the process of clitic doubling. Following proposals on clitic doubling constructions (Uriagereka 1995, Belletti 1999), we assume that nominal direct objects in clitic doubling languages are more than DP categories. More precisely, they always project a kind of PP, with a dummy preposition and an overt clitic if the object is doubled, as in (42a-b), or with an empty preposition and a null clitic if it is not doubled, as in (42c-d).

(42) a.   L-a   văzut pe el/Ion.
            Him_Cl-has seen pe_Accprep him/Ion.
            'S/he saw Ion.'

b. Lo vimos a el/Juan.[21]
    Him see a him/Juan.
    'We see Juan.'
c. A citit cartea.
    Has read book-the.
    'S/he read the book.'
d. Ha leído el libro.
    Has read book-the.
    'S/he read the book.'

Thus, a PP with the root-merged structure in (43) is projected from the nominal direct object in Spanish and Romanian (and Greek as well).

(43)
```
                   PP
            3
      P             DP
      |         3
      |        DP         D
      |        |          |
      ∅      cartea       ∅
      pe       Ion        l-
```

As a PP the nominal direct object does not behave as an intervening element with respect to the displaced subject. Since Italian does not have clitic doubling with direct objects, it induces minimality effects on the subject's chain, as shown by the ungrammaticality of (44a). When the object is a PP as in (44b), the sentence is (marginally) acceptable, as expected.

(44) a. *Ha letto Gianni il libro.
         Has read Gianni the book.
         'Gianni read the book.'
     b. Ha telefonato Gianni a Maria.
         Has phoned Giannni Maria.
         'Gianni phoned Maria.'

A very interesting consequence of the analysis of Spanish/Romanian nominal direct objects as PPs is that once displaced, the latter do not show past participle agreement,[22] contrary to what is observed in Italian and French. The contrast
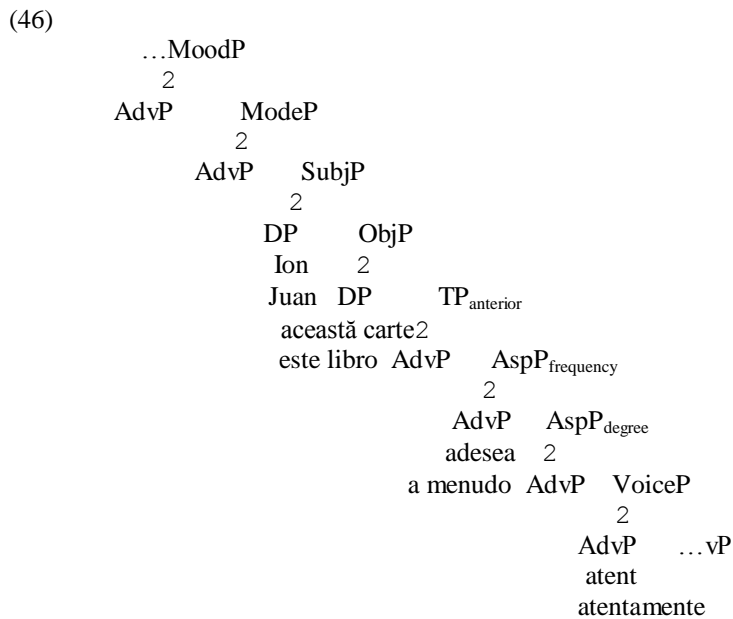
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[21] Clitic doubling with full NPs is limited to some varieties of Spanish (Borer 1986), although it is generally attested with full pronouns.

[22] This is also the case in Greek, a clitic doubling language. We owe thanks to Ur Shlonsky, who pointed out such a consequence of our analysis on Romance past participle agreement.

between (45a-b) and (45c-d) is thus expected on the view that nominal direct objects are not true DPs in Spanish and Romanian, unlike French and Italian.

(45) a.   Cette fille, je l'ai vue.
          This grirl, I her$_{Cl}$-have seen$_{fem}$
          'I saw this girl.'
    b.   Questa ragazza, l'ha vista.
    c.   Pe această fată, am văzut-o.
    d.   Esta chica, la he visto.

We now return to the distribution of adverbs in the field below the subject. As indicated in the table in (38), tense, aspect and manner adverbs can occur in sentence-final position, i.e. after the object. Mood and Mode adverbs must be parentheticals. Hence, the object can reach a chunk above VoiceP, AspP and TP, but not above ModeP. This is represented in (46).

(46)

```
            …MoodP
              2
      AdvP        ModeP
                    2
          AdvP      SubjP
                      2
              DP       ObjP
              Ion        2
              Juan  DP        TP_anterior
                    această carte 2
                    este libro  AdvP     AspP_frequency
                                            2
                                  AdvP      AspP_degree
                                adesea      2
                            a menudo  AdvP    VoiceP
                                                2
                                          AdvP    …vP
                                          atent
                                          atentamente
```

To sum up, the micro-parametric properties for VSO in Romanian and (a variety of) Spanish are the following:

(i) SubjP and ObjP have an unmarked informational value
(ii) Subj-Aux agreement can be done by the operation (downward) AGREE
(iii)   InflP can float from VoiceP to TP

(iv)   Aux moves to the closest Subj position (adjacency Aux-V$_{pp}$)
(v)   The object can float from below VoiceP up to TP
(vi)   The SubjP-ObjP chains do not show intervention effects, unlike in
        Italian, since ObjP is a kind of PP, not a DP category (clitic doubling)

3.5 VOS

As already mentioned, following Belletti (2001), the VOS order is highly
restricted in Italian given that the verb and the object must constitute directly
accessible "given" information, or information repeated from a question, as in (47).

(47) a: Chi ha letto questo libro?
           Who has read this book?
           'Who read this book?'
     b: Ha [letto questo libro] Gianni.
           Has [read this book] Gianni.
           'Gianni read this book.'

According to Belletti (2001), the subject occurs in a low focus position at the
border of the Mittelfeld, while the verb and its complement move together as one
constituent to a topic position immediately above FocP. Since the DP object is
embedded in a larger constituent, it does not act as a minimality intervener with
respect to the subject (i.e. in the operation of downward Agree by the Probe).

Romanian and (a variety of) Spanish allow VOS without such a contextual
restriction (repeated information). For instance, the order in (48) can also be
expressed given a well-determined extra-linguistic context, with the postverbal
subject as new information focus ("narrow focus").

(48) a.   A citit cartea Ion.
           Has read book-the Ion.
           'Ion read the book.'
     b.   A leído este libro Juan.

Ordóñez (2000) proposes an analysis of VOS in terms of object scrambling past
the subject.[23] On the basis of the usual tests for scrambling related to pronominal
quantifier binding, Principle C effects and reconstruction, he shows that the subject
is not in a VP right-adjoined position and that the object is scrambled in the
Mittelfeld. Such an analysis readily fits in with our chunk-based approach and the

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[23] Within a somewhat similar vein, Ordóñez (2000) proposes a unifrom analysis of the VOS
word order for Spanish, Catalan, Italian and even French in terms of subject movement to the
Focus position and object movement to a higher c-commanding position. His analysis
includes LPR (light predicate raising) of the remnant TP with any XP that follows the subject
scrambling out of the TP before LPR applies.

Full VP Evacuation Principle. An analysis in terms of remnant VP movement in the sense of Belletti (2001) is problematic in this respect, since the direct object does not leave the VP-domain, such a view running counter to the Full VP Evacuation Principle. Thus, in (48) the verb and its object move separately to their feature-matching/checking position. We will concentrate on Romanian and Spanish VOS data taking into account the distribution of adverbs. The placement of the six classes of adverbs in VOS is provided in table (49) on the basis of the examples in (48).

(49)

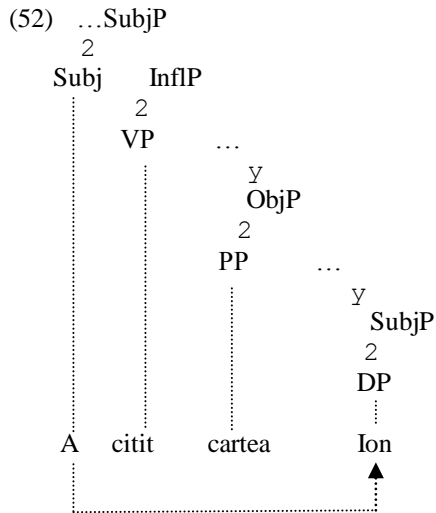|			Aux			Vpp			O		S
Romanian	^{ok}probabil				*		ok		ok		(ok,)
	$^{(okFoc)}$recent				*		ok/Foc		ok		ok
	$^{(okFoc)}$adesea				*		ok/?Foc		ok		ok
	$^{(okFoc)}$atent				*		ok/?Foc		ok		?ok
Spanish	^{ok}probablemente				*		ok		?ok		(ok,)
	^{ok}recientemente				*		ok		ok		(ok,)
	^{ok}a menudo				*		ok		?ok		ok
	$^{?ok}$atentamente				*		ok		ok		?ok

In sentence-initial position the adverbs are given the same distributional analysis in VOS as in VSO. Interestingly, adverbs of TP, aspect and manner can be sentence-final, occurring immediately after the subject, as illustrated below.

(50) a. A citit cartea   Ion recent/adesea/atent.
         Has read book-the Ion recently/often/carefully
         'Ion recently/often/carefully read the book.'
    b. A leído este libro Juan recientemente/a menudo/atentamente
         Has read book-the Ion recently/often/carefully
         'Ion recently/often/carefully read the book.'

This means that the subject can raise to a position above VoiceP, AspP or TP, where it is associated with a focus feature. The DP subject is attracted by the head Subj containing not only Case and phi-features, but also an EPP-feature associated with focus. As for the object, it is attracted to an Accusative Case position, i.e. [Spec-ObjP] situated from a position below VoiceP to a position above VoiceP, AspP or TP, as shown by the interference of manner, aspect and time adverbs between the subject and the object, and between the participial verb and its object. The floating positions for the object and the subject are represented in (51).

(51) …SubjP
2
Aux   InflP
2
VP   ModP
2
AdvP   ObjP
2
P/DP   TP
2
AdvP   SubjP
2
DP   …ObjP
2
P/DP   AspP
2
AdvP   SubjP
2
DP   …ObjP
2
P/DP   VoiceP
2
AdvP   SubjP
2
DP   …ObjP
2
P/DP   vP

A citit probabil cartea recent Ion   cartea adesea   Ion cartea atent Ion cartea
A leído probabl.e. libro recient. Juan e. libro   Juan e. libro atentam. Juan e. libro
a menudo
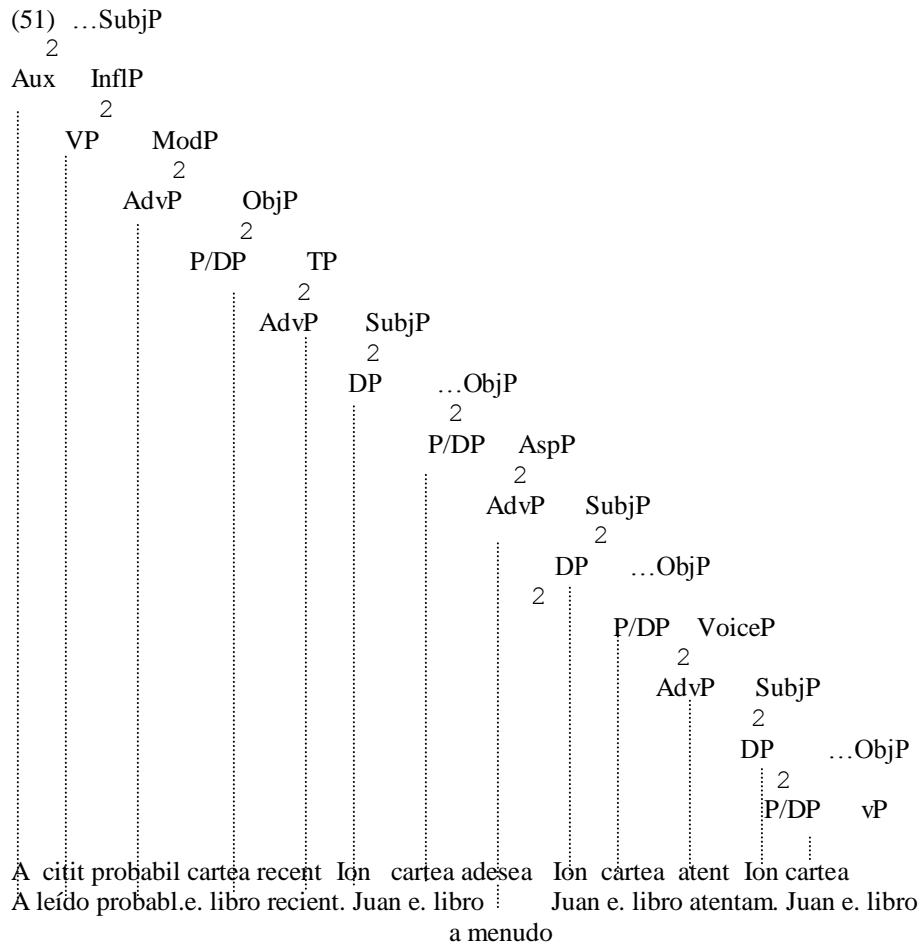
Following the analysis of clitic doubling put forth in the previous section, the nominal direct object in Spanish and Romanian is not a true DP, but a sort of PP. Hence, unlike Italian, the nominal direct object in (50) does not act as a DP intervener in the subject's chain in Spanish and Romanian. Since the nominal direct object as a PP is invisible to the Probe (i.e. subj), the MLC required for the operation downward Agree on the subject is observed, this being represented in (52). This configuration holds for true prepositional objects.

(52) …SubjP
         2
     Subj   InflP
              2
             VP   …
                    y
                  ObjP
                   2
                  PP   …
                          y
                        SubjP
                         2
                        DP
  A   citit   cartea   Ion

As indicated in table (49), Romanian exhibits a process of clause-internal focalization of time, aspect and manner adverbs. This process remains mysterious on syntactic grounds. Either the focalized adverb occurs in its root-merge position where it is stressed (in situ focus), or it is displaced in a focus-internal a focus position (Spec-FocP), which is restricted to a subset of adverbial elements.

So far, the observed micro-parametric properties for VOS are given below:

(i)   Subj-Aux agreement can be done by the operation (downward) AGREE
(ii)   The subject is associated with a "floating" new information focus feature
        ($\neq$ Belletti's (2001) FocP for Italian, since it can be followed by an adverb)
(iii)   InflP can float up to ModP
(iv)   The object can scramble past the subject (Ordóñez 2000 for Spanish) and can move up to TP
(v)   There is no intervention effect between Subj and Obj, because the latter is a kind of PP category

To summarize, the distribution of adverbs in SVO, VSO and VOS configurations has been analysed in terms of floating positions for the verb and the auxiliary, the subject and the object. The specific surface realization of such positions within recursive SVO chunks among the adverb-related positions is determined not only by the morpho-syntactic system, but also by information structure which assigns informational values to the EPP-feature attracting the relevant constituents. The advantage of this system is that it can be extended to discourse-configurational languages (e.g. Hungarian Russian).

3.5 The position of non-nominal complements

So far, our analysis has focused on nominal arguments. Let us now consider the placement of PP and CP complements in SVO, VSO and VOS configurations. In French and English SVO contexts, PPs can be preceded and followed by tense, aspect and manner adverbs, as illustrated in (53).

(53) a.   Jean a parlé (récemment/souvent/gentiment) à Marie (récemment/
            souvent/gentiment).
      b.   John talked (recently/often/kindly) to Mary (recently/(very) often/kindly).

This means that PPs can float among adverb-related projections up to TP and, in keeping with the Full VP Evacuation Principle, they too must leave the VP domain. They are also assigned an informational value, and following Kayne (2002), they raise out of VP to be Case-linked to their VP-external preposition.[24]

Since CP complements are not Case- and phi-dependent, they do not have to leave the VP domain for A-feature checking/matching. However, their status with respect to information structure is not clear, since they convey an information structure by themselves. It is often claimed in the literature that they are extraposed to the right, hence their sentence-final position. For instance, no adverb can follow the clausal complement, as shown in (54).

(54) a.   Jean a dit (récemment/souvent/gentiment) que Marie est belle
            (*récemment/*souvent/*gentiment).

---

[24] Kayne (1975) also points out that PPs can marginally (and parenthetically) be placed between the auxiliary and the participle. This is impossible with a direct object, as shown by the contrast between (i) and (ii).

(i) ?Il avait, à tous ses amis, présenté sa femme

(ii) *Il avait, sa femme, présenté à ses amis.

This means that the chunk between the auxiliary and the participle can host a parenthetical PP, as represented below. Obviously complement PPs can float more freely than complement DP, certainly for Case reasons.

```
    SubjP
      2
 Il     subj
         2
     avait   ObjP_pp
             2
     à ses amis  …SubjP
                    2
                        AuxP
                         2
                        VP
                      ramené
```
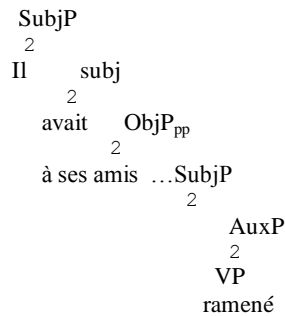
    b.   John (recently/often/kindly) said that Mary was beautiful
        (*recently/*often/*kindly).

On the assumption that no informational value is assigned within the VP domain, and that clausal arguments must receive some informational value, they should leave their root-merged position. According to the data, they target the lowest chunk, situated below VoiceP. Similar conclusions are drawn from German clausal argument extraposition (Laenzlinger 2004). The sentential complement in (55) is moved out of the VP to a very low object position, and then the remnant VP is raised.

(55) Er hat [VP gesagt], [ObjP dass er kommt [e]]

The clausal complement targets the object position of the lowest chunk, merged above vP, not only in Germanic, but also in Romance.[25]

In VSO configurations, the sentential object must also be final. As the Romanian data in (56) show, no adverb can follow the clausal argument.

(56) a.   *Se   întreabă   [dacă (Ion) va accepta (Ion) propunerea   (Ion)] adesea.
             Se$_{refl}$ wonders$_{3rdsg}$ if   Ion will accept Ion proposition-the Ion often
             'S/he often wonders whether Ion will accept the proposal.'
    b.   Se întreabă adesea [dacă (Ion) va accepta (Ion) propunerea (Ion)].
    c.   *M-a anunțat   [că a avut loc   un accident] imediat.
             Me-has informed that has taken place an accident immediately.
             'S/he informed me immediately that an accident had happened.'
    d.   M-a anunțat imediat [că a avut loc un accident].

This supports the analysis of CP objects as occurring in the lowest object position. It also accounts for the impossibility of the CP complement raising past the subject in VOS configurations, as in the ungrammatical Romanian sentence in (57a).[26]

---

[25] The verb's particles in English and German must precede the clausal complement, as in (i) and (ii), which means that they raise with the verb as well.

(i) Er schlägt vor, dass sie kommen (*vor)
    He proposes   that they come
(ii) He found (out) that it rained (*out)

[26] Belletti (2001) provides some examples of V CP S involving a restricted set of verbs which allow CP positioning above the subject (see also footnote 16).

(i) Ha *cominciato* a non capire più niente Gianni.
(ii) Has started to not understand anything anymore Gianni
    'Gianni started not to understand anything anymore.'

(57) a. *A   promis [că nu va   face aceeaşi greşeală] Ion.
          Has(aux3rdsg) promised that not will make same mistake   Ion
          'Ion promised that he will not make the same mistake.'
    b. (Ion) a promis (Ion) [că nu va face aceeaşi greşeală].

The sentence-final position of CP complements is to be related to their informational weight. They must occur to the right edge of the sentence, since they are heavy not only prosodically, but also in their information structure.

As for PP complements, they have a freer distribution than clausal complements. They can precede the subject and follow it in inversion structures, as shown in (58) for Romanian.

(58) a. A   orbit Ion despre Maria. (neutral order)
          Has talked Ion about Maria.
          'Ion talked about Mary.'
    b. A vorbit despre Maria Ion. (narrow focus on the subject)

This is significant of the fact that PPs can float in a chunk lower or higher than the subject position (SubjP). Since the adverbs of time, aspect and manner in (59) may occur between the verb and its arguments, between the two arguments or in a sentence-final position, both the subject and the PP complement can occupy float positions from VoiceP to TP.

(59) a. A vorbit (recent/adesea/calm) Ion (recent/adesea/calm) despre Maria
          (recent/adesea/calm).
          Has talked recently/often/calmly Ion   about Maria
          'Ion has recently/often/calmly talked about Maria'
          A vorbit (recent/adesea/calm) despre Maria (recent/adesea/calm) Ion
          (recent/adesea/calm).

3.6 Multiple complement reordering : complex chunks

Belletti & Shlonsky (1995) and Belletti (2002) study reordering of double complements with bitransitive verbs. Let us consider a verb like *donner* 'give' in French or *a da* 'to give' in Romanian which takes two complements: a direct object and an indirect object (PP or Dative). In Romanian such a verb takes a Dative DP and a direct object DP. As far as French is concerned, if the DP object is indefinite,

(ii) *Crede* che Gianni sia partito Maria.
     Thinks that Gianni has left Maria.
     'Maria thinks that Gianni.'
(iii) Ha deciso di parlare con Maria Gianni.
      Has decided to talk with Maria Gianni
      'Gianni decided to talk to Maria.'

54

the authors observe that the two arguments can permute, as shown in (60a-b). Note that in the Romanian examples (60c-d) the indirect object DP is morphologically marked for the dative Case.

(60) a. Jean a donné [une pomme] [à Marie].
          Jean has given an apple to Mary.
          'Jean gave an apple to Mary.'
      b. Jean a donné [à Marie] [une pomme].
      c. Andrei i-a dat un măr Mariei.
          Andrei her$_{Cl}$-has given an apple Mary$_{Dat}$.
          'Andrei gave an apple to Mary.'
      d. Andrei i-a dat Mariei un măr.

Belletti & Shlonsky (1995) show that the permutation in (60b) is a result of the focalisation of the direct object, the same holding true for (60d). This is an instance of new information focus, since the order in (60b) and (60d) constitutes an appropriate answer to the question *What did Jean/Andrei give to Mary*? If the distribution of adverbs is taken into account, an adverb like *récemment, recent* 'recently', for instance, can combine with the two complements in all the possible ways.

(61) a. Jean a donné (récemment) [une pomme] (récemment) [à Marie]
          Jean has given recently   an apple   to Mary (récemment).
          'Jean has recently given an apple to Mary.'
      b. Jean a donné (récemment) [à Marie] (récemment) [une pomme] (récemment).
      c. Andrei i-a dat (recent) [un măr] (recent) [Mariei] (recent).
      d. Andrei i-a dat (recent) Mariei (recent) un măr (recent).

The fact that the adverb can occur in a sentence-final position and that it can intervene between the two arguments show that (i) the direct object can raise very high (it is not left in situ, nor is it right-extraposed) in spite of being "narrow focus" in (61b,d) and that (ii) the two arguments raise separately.

Things are even more complex with a verb like *ramener* 'bring' or *a aduce* 'bring', which can take four arguments, as illustrated in the examples in (62).

(62) a. Jean a ramené un cadeau à Marie de Paris.
          Jean has brought a present for Mary from Paris.
          'Jean brought Mary a present from Paris.'
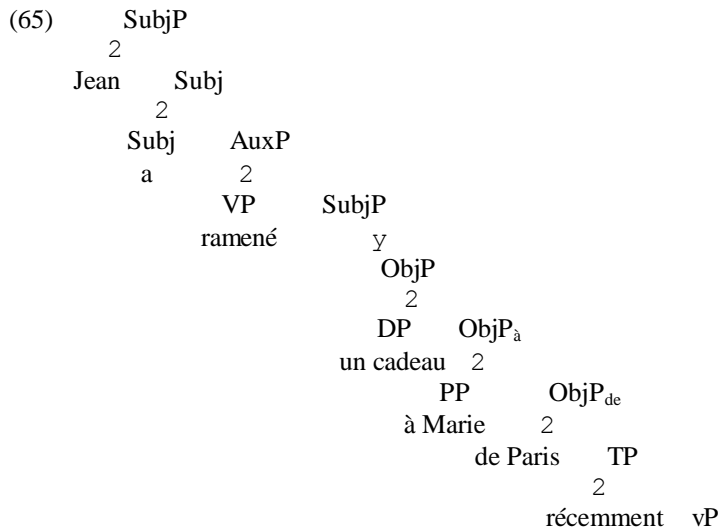   b. Ion i-a adus un cadou Mariei de la Paris.

The order of complements in (62) is the neutral one and seems to reflect the one root-merged in the VP-shell, as illustrated in (63) below.

(63)
      vP

```
           2
        Subj        v
                  2
                v         VP
                      2
                    DO        V
                            2
                          V       VP
                                2
                              IOà        V
                                       2
                                     V       IOde

      Jean    un cadeau     à Marie    ramène    de Paris
```
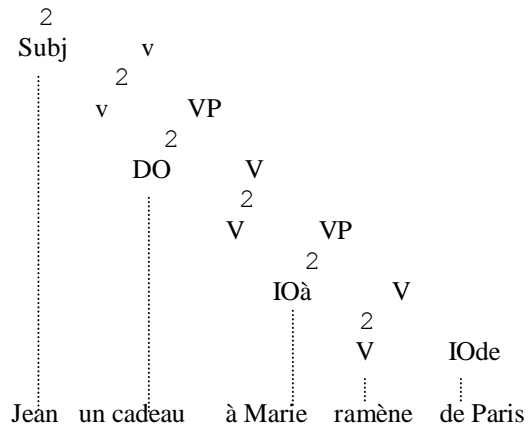
Since the adverb can follow all the complements in (64), the order inside the chunk right above the adverb position is represented in (65).

(64) a.   Jean a ramené un cadeau à Marie de Paris récemment.
           Jean has brought a present for Mary from Paris recently.
           'Jean has recently brought Mary a present from Paris.'
      b.   Ion i-a adus un cadou Mariei de la Paris? recent.

(65)   SubjP
        2
   Jean   Subj
       2
     Subj   AuxP
      a   2
        VP   SubjP
      ramené   y
           ObjP
            2
          DP   ObjP$_\text{à}$
       un cadeau   2
             PP   ObjP$_\text{de}$
          à Marie   2
              de Paris   TP
                     2
                récemment   vP

Consider the example below in Romanian, with the four arguments in the postverbal domain.

(66)   I-a adus (recent) Ion (recent) un cadou (recent) Mariei (recent) de la
       Her$_\text{Cl}$-has brought Ion recently a present   Maria$_\text{Dat}$ from
       Paris (?recent).
       Paris recently.
       'Jean brought Mary a present from Paris recently.'

The postverbal position of the arguments reflects the same word order as in the VP-shell, i.e. Subj-DO-IO-PP, which is fully acceptable and which thus indicates that this order is observed in the chunks. The possibility of adverb intervention among each of these arguments shows that each can target the appropriate position in a particular chunk ultimately conveying a particular informational prominence structure.

Furthermore, in French, the three complements and the adverb can permute quite freely, which gives 4! combinatory possibilities, i.e. 24 different orders, the latter being shown in the paradigm below.

(67) a.   Jean a ramené récemment un cadeau à Marie de Paris
      b.   Jean a ramené un cadeau récemment à Marie de Paris
      c.   Jean a ramené un cadeau à Marie récemment de Paris
      d.   Jean a ramené un cadeau à Marie de Paris récemment

 e. Jean a ramené récemment à Marie un cadeau de Paris
 f. Jean a ramené à Marie récemment un cadeau de Paris
 g. Jean a ramené à Marie un cadeau récemment de Paris
 h. Jean a ramené à Marie un cadeau de Paris récemment
 i. Jean a ramené récemment un cadeau de Paris à Marie
 j. Jean a ramené un cadeau récemment de Paris à Marie
 k. Jean a ramené un cadeau de Paris récemment à Marie
 l. Jean a ramené un cadeau de Paris à Marie récemment
 m. Jean a ramené récemment de Paris un cadeau à Marie
 n. Jean a ramené de Paris récemment un cadeau à Marie
 o. Jean a ramené de Paris un cadeau récemment à Marie
 p. Jean a ramené de Paris un cadeau à Marie récemment
 q. Jean a ramené récemment de Paris à Marie un cadeau
 r. Jean a ramené de Paris récemment à Marie un cadeau
 s. Jean a ramené de Paris à Marie récemment un cadeau
 t. Jean a ramené de Paris à Marie un cadeau récemment
 u. Jean a ramené récemment à Marie de Paris un cadeau
 v. Jean a ramené à Marie récemment de Paris un cadeau
 w. Jean a ramené à Marie de Paris récemment un cadeau
 x. Jean a ramené à Marie de Paris un cadeau récemment

The important point to make here is that the merger of clause structure by chunks makes available positions for arguments to move individually. Such an approach can thus deal with such complex data. Following the insight of Belletti & Shlonsky (1995) and Belletti (2002), the ordering possibilities in (67) result in subtle information structure differences. Here we will not go into these many possibilities of informational prominence value assignment.[27]

It is interesting to note that the order of the arguments within the chunk in (65) reflects the order of clitics in pronominal sequences in French. Laenzlinger (1993) argues that those French clitics which are overtly marked for Case combine following a Case hierarchy, namely [NOM, ACC, DAT, GEN]. Not surprisingly, this Case hierarchy is the one given by the chunk. If the four arguments in (67) are pronominalized, the order obtained is: [Il [le [lui [en [ramènera…]]]]]. We can argue that a specific chunk, situated in a high part of the clause, is reserved for clitics, along the line of Sportiche's (1998) Clitic Voices. The chunk for clitics has the representation in (68).[28]

---

[27] In the order SVO Romanian allows the same combinatory possibilities as French does.

[28] Clitics which are not overly marked for Case (*me, te, nous, vous*) have a special derivation, being adjoined to the Accusative clitic in *Il me le donne*. Observe that in German the weak

(68)

```
                    SubjP
                   2
                        InflP
                       Y
                           ObjPdo
                          2
                              ObjPpp(à)
                             2
                                  ObjPpp(de)
                                 2
      [ Il          le    lui    en ]
```
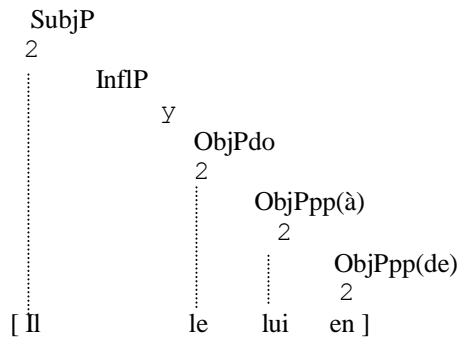
Similarly, a particular chunk in French is targeted by wh-elements *in situ*. As often observed in the literature (e.g. Rizzi 1991), a wh-element in French can be preposed or left in situ, as exemplified in (69).

(69) a.   Qui as-tu   vu ?
           who have-you seen
           'Who did you see ?'
     b   Tu as vu qui ?
           you have seen who

The placement of adverbs in (70) shows that the wh-element *in situ* has left the VP-shell, and most importantly, must reach a position above the adverb-related position.[29] More precisely, it can target a chunk above VoiceP, AspP and VoiceP.

(70) Tu as   vu (*récemment/*rapidement) qui   (récemment/rapidement)?
     you have seen   recently/quickly   whom recently/quickly
     'Who did you se recently?'

With multiple wh-complement *in situ*, the order must reflect the one in the VP-shell, namely [DO > $IO_à$ > IO_{de}]. The placement of adverbs in (71) shows that they are part of the same chunk, in which the object positions are arranged as in (71).[30]

---

pronouns in cluster also displays the above chunk's order, namely NOM > ACC > DAT (see Laenzlinger & Shlonsky 1997 for details), as exemplified in (i).

Gestern   hat er es ihm gegeben
Yesterday has-he-it-to-him given
'Yesterday he gave it to him'.

[29] Recently some authors (Munaro 2003) propose that wh-elements in situ move to Comp, followed by remnant IP-movement. Such an analysis runs into problems as far as adverb placement is concerned, i.e. in (70-71).

(71) a.   Tu   as   donné quoi (*récemment) à qui   (récemment) ?
          you have given what (*recently)   to-whom recently
          'What did you give to whom recently'
     b.   *Tu as donné à qui quoi ?
     c.   ?Tu as ramené   quoi à qui d'où   récemment?
          You have brought-back what to-whom from-where recently
          'What did you bring back to whom from where recently?'
     d.   *Tu as ramené à qui d'où quoi / d'où quoi à qui?

Thus far, we have provided evidence for the existence of complex chunks for scrambled multiple complements, clitic pronouns and wh-situ. In section 3.8, we will show that floating quantifiers also occupy specific positions among the Mittelfeld chunks.

3.7 Subject positions

Cardinaletti (1997, 2004) convincingly argues for the existence of more than one preverbal subject position. This analysis is fully compatible with the chunk-based theory of clause structure we propose here. Cardinaletti (2004) identifies the following subject positions:

(72) Spec-SubjP >> SpecEPP-P >> Spec-AgrsP >> Spec-NomP… >> Spec-VP

Spec-VP is the thematic subject position. Spec-NomP is dedicated to weak subjects (i.e. clitics), while null subjects (i.e. *pro*) occur in Spec-AgrsP. Expletive subject pronouns merge as Spec-EPP, and Spec-SubjP is destined to preposed PPs/CPs (i.e. with psy-verbs) satisfying the *subject-of-predication* feature, as below.

(73) a.   [A Gianni] piace questo film.
          To Gianni likes this film.
          'Gianni likes this film.'
     b.   [Che Gianni venga] mi sorprende.
          [That Gianni comes] me surprises.
          'It surprises me that Gianni comes.'

The *subject-of-predication* position in (73a-b) is a Subject Criterion position according to Rizzi (2004b), and serves to satisfy the EPP ("every clause must have a subject").

Cardinaletti (2004) further assumes that there is no restriction on the distribution of strong subjects. She explicitly states that there are multiple possible "strong"

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[30] Interestingly, the wh-chunk analysis can also account for the ordering of multiple wh fronting in Romanian, as in (i), and Bulgarian, if we adopt an analysis in terms of movement of wh-chunks to CP for those languages (see Laenzlinger & Soare (2005)).

subject positions in the Mittelfeld that interfere with adverbs. This is exactly the point that is reached in the discussion on the SVO configuration in sections 3.1 and 3.2. As for weak/clitic subjects, we have argued in the preceding section that there exists a special chunk for clitics (NOM, ACC, DAT, GEN).

3.8 Further evidence for intermediate DP-related positions: floating quantifiers

Floating quantifier (FQ) placement constitutes an important criterion for identifying the possible derived positions of arguments in the Mittelfeld. Following Sportiche (1988), FQs can be stranded in the course of the derivation as a result of raising of the DP to which they are associated.[31]

Let is first consider the order SVO in French. Subject raising leaves behind a floating quantifier in various positions, as in (74) below. The same goes for the direct object in which case the clitic pronoun raises to the conjugated verb as in (74b).

(74) a.　Les enfants ont (tous) probablement (tous) souvent (tous) tranquillement
　　　　The children have all　probably　　　　often　　　　calmly (tous)
　　　　dormi.
　　　　slept.

　　　b.　Je les　ai (tous) probablement (tous) souvent (tous) sévèrement (tous)
　　　　I them have all　probably　　　　often　　　　severely
　　　　grondés.
　　　　reprimanded.

The stranded FQ's positions in (74) are indicative of the occurrence of intermediate positions for the subject in (74a) and the object in (74b).

The sentences provided in (75a-c) below also indicate that a floating quantifier can be stranded in the appropriate position in the chunk above the ModP, TP and VoiceP adverbs. Besides, in English it may be stranded in the same chunks but slightly higher, i.e. above the participial verb (75b).

(75) a.　Copiii　　　au　cântat (toţi) probabil (toţi) adesea (toţi) minunat.
　　　　The children have sung　all　probably　　often　　　wonderfully.

　　　b.　The children have (all sung)　probably (all sung)　often　(all sung)
　　　　wonderfully.

　　　c.　The children have (all)　probably　(all)　often　(all) wonderfully sung.

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[31] Alternatively, Bobaljik (1998) hints at an analysis of FQs as adverbials that agree under predication with a c-commanding empty DP category. Such an approach must also account for the floating properties of FQs and its local agreement relation with a [$_{DP}$ e]. The locality of such a relation leads us to postulate intermediate derived positions for arguments (see Shlonsky 1996 for some criticism of the analysis of FQs as adverbials).

As Sportiche (1988) observes, the co-occurrence of a subject and an object floating quantifier must follow the order Subj > Obj, whatever their placement in the Mittelfeld (76).

(76) Ces filles, les professeurs les ont (probablement) tous (souvent) toutes
(sévèrement) grondées.
These girls, the teachers them have probably   all   often
Severely reprimanded.

This order marks the argument positions not only in the base position but also in the surface position. As the above example shows, this order must be observed in the course of the derivation. This is illustrated in the representation in (77).

(77)

Les prof.   les ont probablement tous   souvent toutes sévèrement grondées
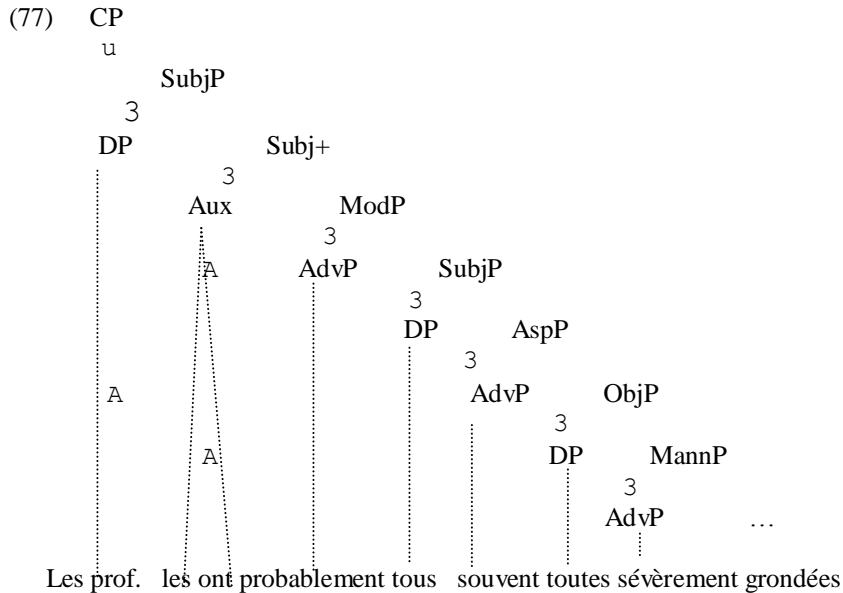
Interestingly, Sportiche (1988) further observes that three Mittelfeld FQs must respect the order in (78), namely Subj>IO>DO.[32]

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[32] Note that this order is also the one found with existential quantifiers in the German Mittelfeld, as observed by Frey (2000).

(i)   weil   wer   wem   (schnell)   was   (schnell) gegeben hat
        because someone to-someone quickly something quickly   given   has.

As shown by the intervention of adverbs, the direct object quantifier occurs in a chunk lower than the one occupied by the subject and the indirect object quantifiers. The same conclusion holds for the direct object quantifier *tout* in (78). Interestingly, the fact that the position of

(78) Elles leur ont [toutes à tous tout]   donné.
They them have all$_{fempl}$ to all$_{mascpl}$ all$_{mascsg}$ given.
'All of them gave them everything.'

The order of the two object FQs is not the one expected from the order of the VP-shell or of the internal structure of the derived Mittelfeld chunks. However, the interference of adverbs with the DO quantifier shows that the latter occurs in a chunk lower than that occupied by the other quantifiers.

(79) Elles leur ont   toutes à tous   gentiment tout   donné.
They them have all$_{fempl}$ to all$_{mascpl}$ amicably all$_{mascsg}$ given.
'All of them gave them everything.'

Thus, the order in (78) and (79) results from a configuration like (80).

(80)

```
      SubjP
       2
     Elles   Subj
              2
         leur-ont    …SubjP
                       2
                   toutes   InflP
                             y
                               ObjPpp
                                2
                            à tous   VoiceP
                                      2
                                        …ObjP_DP
                                          2
                                      tout    …AuxP
                                               2
                                              VP
```
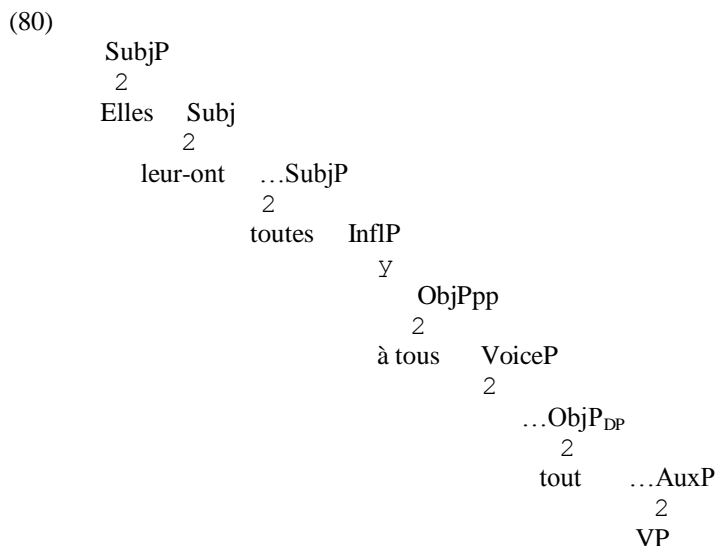
Insofar as the orders VSO and VOS are concerned, it is rather difficult to test the movement of the nominal arguments on the assumption that floating quantifiers move a short distance. First consider the VSO order with subject floating quantifiers. We can observe in (80) that the FQ can be stranded in a position above and below the object position. However, adverbs cannot intervene between the subject and its floating quantifier. This means that no adverb-related projection can separate them. The FQ must raise higher than VoiceP, AspP and TP.

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inanimate wh/quant in the Mittelfeld is lower than that of animate wh/quant reflects the traditional Animacy Hierarchy found in some languages (Comrie 1981).

(81) a.   Au   citit copiii   (*recent/*adesea/*rapid) toţi   (recent/adesea/rapid)
Have read children-the   all$_{masc.pl}$ recently/often/ quickly
poveştile.
stories-the
'The children all have recently/often/quickly read the stories.'

     b.   Au   citit copiii   [poveştile lui Creangă] (*recent/*adesea/*rapid) toţi
Have read children-the stories-the of Creangă   all
(recent/adesea/rapid)   în grădină.
Recently/often/quickly in garden-the.
'The children all have recently/often/quickly read Creangă's stories in the garden.'

As for object quantifiers, they can be left behind, as in (81), but in a position higher than the adverb-related projections. This shows that the FQ cannot be stranded in any position, such as in its-root merged position in the VP-shell.

(82) Au   citit copiii   poveştile (*recent/adesea/rapid) toate
Have read children-the stories-the   all
(recent/adesea/rapid) în clasă.
in class.
'The children have recently/often/quickly read all the stories in class.'

Consider now the VOS order. The sentence in (82) indicates that the subject FQ can be locally left behind, that is, in a position higher than the adverb-related projections. In other words, the subject FQ cannot be stranded in its VP-shell position. It raises up with the subject DP, and can be locally stranded.

(83) Au găsit   soluţiile   studenţii (*recent/adesea/rapid) toţi
Have found solutions-the students-the   all$_{mascpl}$
(recent/adesea/rapid) la curs   in class
'The students all have recently/often/quickly found the solutions in class.'

Finally, the object quantifier in the VOS order below cannot be stranded too far. It raises with its associate, possibly past the adverb-related projections (see (84b)), but cannot be left behind in a position lower than the subject, as shown by the ungrammaticality of (84a).

(84) a.   *Au găsit soluţiile   studenţii toate la curs.
Have found solutions-the students-the all$_{fempl}$ in class

     b.   Au găsit soluţiile (*recent/*adesea/*rapid) toate (recent/adesea/rapid)
Have found solutions   all$_{fempl}$ recently/often/quickly
studenţii la curs.
students-the in class
'The students have recently/often/quickly found all the solutions in class.'

64

To sum up, despite short movement of the arguments in inversion structures, floating-Qs are evidence for intermediate argument positions in the Mittelfeld. What is left unexplained is that FQs cannot be left within the VP-shell.[33] This can be brought in line with the analysis of the following English and French sentences, where the manner adverb marks the VP border.

(85) a.   The thieves have (all) been (all) arrested (all) violently (*all)
      b.   Les voleurs ont (tous) été (tous) arrêté (tous) violemment (*tous)

3 Conclusion

The major aim of this paper has been to propose an adequate computational system meant to account for different word order variations mainly in the Romance Mittelfeld taking as an essential criterion Cinque's (1999) rigid functional hierarchy of adverbs. In so doing the Principle of Full VP Evacuation has been forwarded according to which all arguments must leave the vP domain for A- and I-feature checking. Within the computational system envisaged here the Information Structure interface plays a crucial role in identifying the various positions of the constituents in the Mittelfeld, being thus intimately related to the EPP feature. In other words, arguments (and verbs) move in order to express some informational prominence value. The system described relies on the existence of SVO chunks among each adverb-related projection, each chunk marking a phase. This is a multiple Spell-Out system, i.e. at the end of each phase, the derived substructure is sent to Spell-Out in order to be interpreted. There is thus multiple access to PF and IS (Information Structure), which are strongly connected to LF. IS is organised function of the chunks which are marked for different features (distinct Topics and Foci, etc). It is the interfaces which dictate whether a constituent must remain in a particular chunk or move further up.

Within this theoretical framework, argument position identification has been conducted on the basis of the fixed positions of the adverbs. Put differently, adverb distribution in the configurations SVO, VSO and VOS has been considered in terms of the floating positions of the subject and object, and of the verb and the auxiliary. The analysis adopted is comparative in nature comprising English and French, which do not display free inversion thus having an unmarked SVO word order, and Italian, a variety of Spanish and Romanian, exhibiting an (informationally) marked SVO order in which the subject checks a Topic-like feature. It has been pointed out that no discrete Topic and Focus projections (except for adverbs) are merged in the Mittelfeld, such informational features being actually associated with distinct A-positions. It has been observed that the Romanian and, more restrictly, the Spanish

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[33] Possibly, the VP is not a domain for quantification. Scope of quantifiers must be expressed VP-externally.

Mittelfeld can exhibit clause-internal focalisation of certain adverbs, such a process being accounted for either in terms of adverb movement to a Focus position in this domain or in terms of the respective adverbs' being stressed in their root-merge position. Subsequently, the word orders VSO and VOS have been analyzed. It has been argued that in the case of the former subject movement past the object does not result in any minimality violation effects due to the nominal direct objects being more than a mere DP category in clitic doubling languages like Spanish, Romanian, Greek, etc. They have been analyzed as PPs containing an empty preposition and a null clitic in non-doubling cases. A non-clitic doubling language, Italian cannot have the order VSO that Spanish, Romanian and Greek display because a minimality effect on the subject chain would be involved.

Insofar as the word order VOS is concerned, it has been argued in this paper that the verb and the object can independently target their appropriate positions in the chunks for feature checking purposes.

Further evidence in favour of the Principle of Full VP Evacuation has been adduced from the different placement of the PP and CP in the clause architecture. In Romanian, for instance, the CP fills the lowest position in the chunk at the border of the vP, the PP enjoying more freedom in that it displays several floating positions in the Mittelfeld.

An analysis in terms of recursive SVO chunks can also explain the many ordering possibilities of multi-argument verbs like *ramener* in French or *a aduce* in Romanian. These arguments moving to the appropriate positions in the chunks delimited by adverb-related projections result in subtle information structure differences.

Argument position identification has further been conducted on the basis of floating quantifiers in English, French and Romanian considering configurations like SVO, VSO and VOS.

Such an approach in which a specific surface realization of a position within the recursive SVO chunks is dictated both by the morpho-syntactic system and Information Structure is capable of handling complex data from non-configurational languages (e.g. Hungarian).

The ultimate conclusion to draw is that the richer the A-system is, the more IS can avail itself of the system of chunks.

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