SOME NOTES ON DP-INTERNAL MOVEMENT[*]

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1. INTRODUCTION

The aim of this paper is to further investigate the current hypothesis that the clause and the noun phrase share not only structural properties, but also transformational ones (Abney 1987, Ritter 1991, Siloni 1995, Valois 1991, Laenzlinger 2004a, 2004b). Both the clause and the noun can be divided in three domains following the cartographic approach to syntactic structures (Cinque 2002, Belletti 2004, Rizzi 2004a).

(1) a. $[_{DP} \dots [_{DP} \quad [_{FPadj1} \dots [_{FPadj2} \dots [_{nP} \dots [_{NP} \dots]]] \quad]]]$

b. $[_{CP} \dots [_{CP} \quad [_{FPadv1} \dots [_{FPadv2} \dots [_{vP} \dots [_{VP} \dots]]] \quad]]]$

Vorfeld   Mittelfeld   Nachfeld

The *Nachfeld* corresponds to the thematic domain, the so-called VP/NP-shell (Larson 1988, Chomsky 1995, Grimshaw 1990, Valois 1991), where all arguments are merged. As for the *Mittelfeld*, it is constituted of functional projections hosting adverbial and adjectival modifiers (mainly Cinque 1994, 1999). It also contains derived positions for agreement, case and phi-feature checking (and also informational/IS-feature checking). Finally, the Vorfeld is the interpretative left-periphery of the clause/noun phrase which is assigned a split structure following Rizzi (1997) for the clause and Aboh (2003) for the noun phrase).

Laenzlinger and Soare (2004) propose that, as far as the clause is concerned, all arguments must leave the VP-shell in order to have their A- and IS-features checked/assigned a value. This is stated in terms of the Full VP-evacuation principle in (2).

(2) **VP full evacuation principle**

"All arguments must leave the vP domain in order to have their A- and I-features matched/assigned a value (previously checked) in the overt syntax."

This principle is clearly illustrated in Germanic OV languages displaying high scrambling of objects past the participial verb and adverbs, as represented in (3).

(3) weil $[_{SubjP}$ Hans $[_{ObjP}$ dieses Buch $[_{FP}$ oft $[_{FP}$ ruhig $[_{VP}$ gelesen] hat]]]
because   Hans   this   book   often quietly   read   has
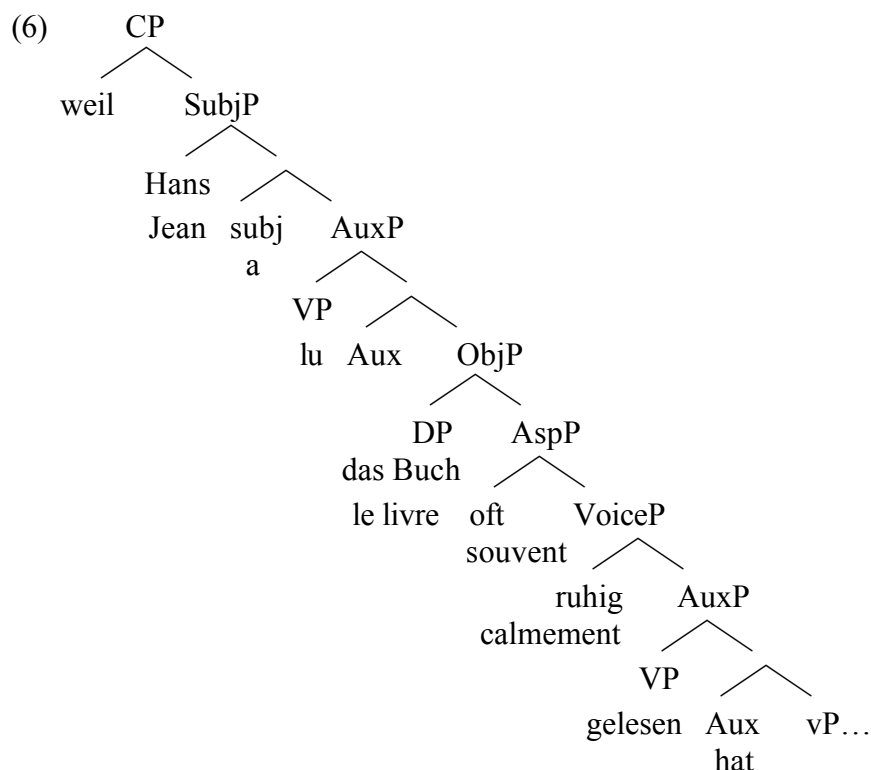'because Hans often read this book quietly'

More precisely, both the subject and the object leave the VP-domain raising to their Case-checking position, which can be labelled SubjP (=AgrsP) and ObjP (=AgroP) respectively. Although the generalized scrambling analysis is less obvious in VO languages, the possibility of getting adverbs in sentence final position show that these languages display scrambling of arguments, as illustrated in (4) for French and English.

(4)   a.   Jean a (souvent) lu ce livre (souvent) calmement
      b.   John often read this book (often) quietly

Since adverbs may not be right-attached (neither as Specifiers nor as adjoined elements following Kayne 1994), the object on a par with the subject evacuates the VP-shell and raises to a scrambling position. Laenzlinger and Soare (2004) propose a generalized scrambling analysis of arguments in Romance (and Germanic). The VP-shell is not a checking domain for the argument's Case/phi-features as well as for the informational (IS) features. The sentences in (4) are given the structure in (5).

(5)   [$_{SubjP}$ Jean/John read/a lu [$_{ObjP}$ ce livre/this book [$_{FP}$ souvent/often [$_{ObjP}$ ce livre/this book [$_{FP}$ calmement/quietly [$_{VP}$]]]

What differentiates VO from OV languages is simple verb/auxiliary movement, which is absent in e.g. German non V2 contexts and long in e.g. French. Lexical/participial verb movement is implemented as remnant VP-movement instead of as V-movement. Head-movement is domain-confined, that is, v-to-V movement (VP-domain), fin-to-foc/force movement (CP-domain) and Aux-to-Subj (IP-domain). Participial verb movement targets the specifier of the auxiliary phrase (AuxP) both in Germanic and Romance. AuxP is situated in the lowest part of the clause in German and the auxiliary does not move (in non V2-contexts). In French, AuxP can float across the clause, but not higher than ModeP, while the auxiliary always moves to Subj(=Agrs). Thus, the difference between (3) and (4a) is represented in (6).

(6)   CP
         /   \
      weil   SubjP
             /   \
          Hans   \
          Jean   subj   AuxP
                  a   /   \
                       VP   \
                      / \   \
                    lu   Aux   ObjP
                              /   \
                            DP   AspP
                         das Buch   /   \
                          le livre oft   VoiceP
                                 souvent /   \
                                       ruhig   AuxP
                                    calmement /   \
                                             VP   \
                                            / \   \
                                       gelesen Aux   vP…
                                              hat

Crosslinguistic facts in Romance and English show that both SubjP and ObjP are floating positions among the adverb-related projections. Thus, SubjP can be higher than ModeP, while ObjP can be higher than TP$_{past}$, as shown in (7). AuxP is also a floating projection from VoiceP up to TP.
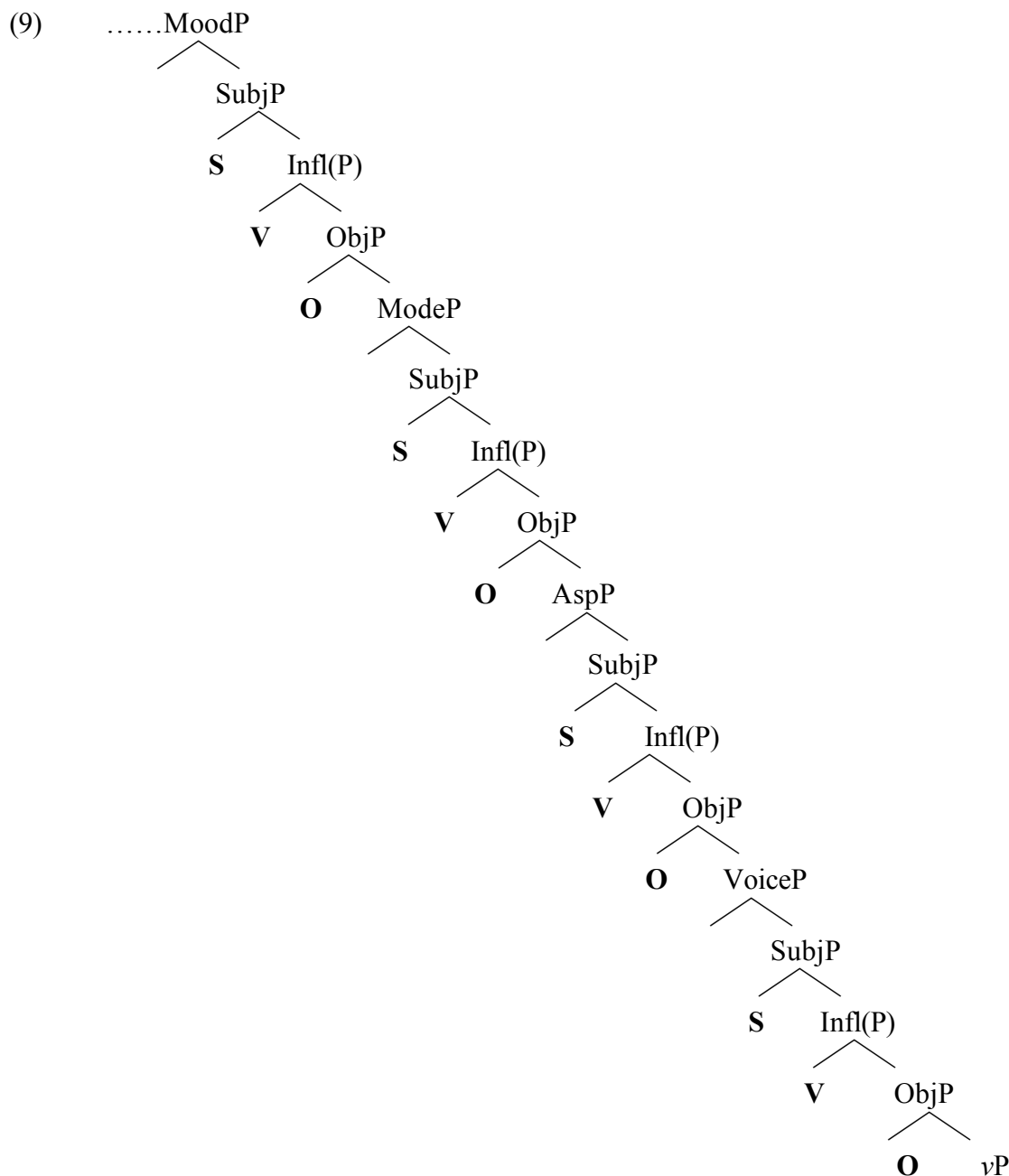
(7)   [$_{SubjP}$ Jean a [$_{ModeP}$ probablement ([$_{AuxP}$ [$_{VP}$ lu) ([$_{ObjP}$ ce livre) [$_{TP}$ récemment ([$_{AuxP}$ [$_{VP}$ lu) ([$_{ObjP}$ ce livre) [$_{AspP}$ souvent ([$_{AuxP}$ [$_{VP}$ lu)) ([$_{ObjP}$ ce livre]]]]]

As far as the subject and object positions are concerned, German shows free scrambling (with definite/specific arguments) from VoiceP up to ModeP, as illustrated in (8).

(8)   weil ([$_{SubjP}$ Hans ([$_{ObjP}$ dieses Buch) [$_{ModeP}$ wahrscheinlich ([$_{SubjP}$ Hans ([$_{ObjP}$ dieses Buch) [$_{TP}$ kürzlich ([$_{SubjP}$ Hans ([$_{ObjP}$ dieses Buch) [$_{AspP}$ oft [$_{AuxP}$ [$_{VP}$ gelesen] hat]]]]]

Contrary to Romance, German has a fixed low auxiliary projection from where the auxiliary can move only to satisfy V2. Otherwise, it is blocked in this sentence final position.
       On the basis of crosslinguistic facts that show that argument and verb positions can be reduplicated among the adverb-related projections, Laenzlinger and Soare (2004) propose a system of recursive SVO chunks between adverb-related projections for the clause structure. Given the core semantico-functional projections of the clause, the universally available positions for the subject, the object and the verb are represented in (9).

(9)   ……MoodP
                    SubjP
              S   Infl(P)
                  V   ObjP
                      O   ModeP
                              SubjP
                        S   Infl(P)
                            V   ObjP
                                O   AspP
                                        SubjP
                                  S   Infl(P)
                                      V   ObjP
                                          O   VoiceP
                                                  SubjP
                                            S   Infl(P)
                                                V   ObjP
   O   *v*P

The order within the chunks is derived from Strict Cyclicity (Chomsky 1973) in the sense that the SVO configuration recovers that of the VP-shell. The realization of an argument in a particular position is determined by the conjunction of A-feature checking possibilities and informational structure (top, foc, informational prominence). It is at these levels that the parametric values for a specific language (or group of languages) are specified. As for verb movement, the richness of inflected morphology is involved, as assumed since Pollock (1989).

The aim of this paper is to examine to what extent the above proposal can apply to the noun phrase. By analogy with adverbs, attributive adjectives occupy the specifier positions of discrete functional projections in the Mittelfeld of the noun phrase. In Laenzlinger (2004a) I further explore Cinque's (1994) specifier-based approach to adjectives by proposing that the postnominal placement of adjectives in Romance is the result of NP-movement instead of N-movement. By analogy with Rizzi's (1997) ForceP and FinP for the CP-layer, the DP-domain

is composed of a high external DP expressing deixis and a low internal DP expressing determination (see Lanezlinger 2004a for details). Shortly, the nominal projection targets the specifier of the lower DP in a split-DP structure, while the determiner raises from the lower D to the higher D. It is commonly assumed that the prenominal placement of adjective in Germanic results from the absence of noun raising. I depart from this view in assuming that it is the adjective-related projection containing the adjective and the noun that raises to Spec-DP. Thus, the difference between (10a) and (10b) relies on the occurrence of NP-movement for French, as represented in (11a) and FP_{adj}-movement for English, as represented in (11b) (see section 2 for evidence for such movement related to the noun's PP arguments).

(10) a.   la voiture rouge
      b.   the red car

(11) a.

      b.
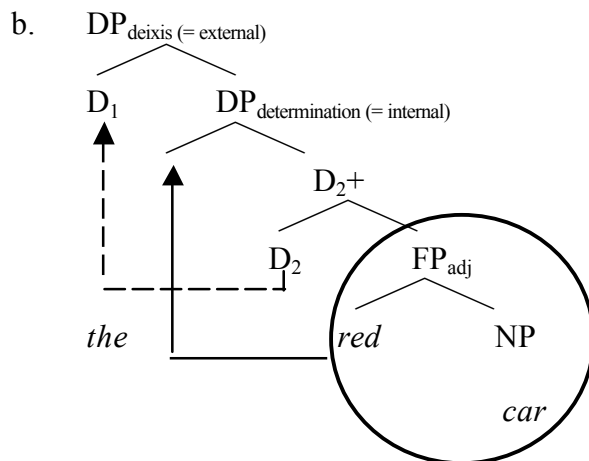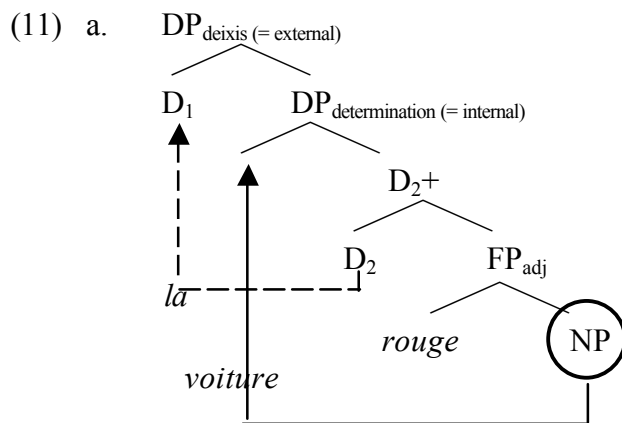
Thus, the difference between the Germanic adjectival prenominalization and the Romance adjectival postnominalization does not rely on the (non)-occurrence of N/NP-movement, but on the category that raises: FP_{adj} in Germanic and NP in Romance.

A more precise derivation for NP-movement in Romance involves an intermediate agreement (number, gender) position situated in a local configuration with the adjectives (Shlonsky 2004). This agreement projection is labelled $FP_{agreement}$, the specifier of which is a derived position for NP. In the case of multiple adjectival modification, there is an NP agreement projection right above each adjective-related projection. This illustrated in (12).

(12)   une voiture [$_{FPagr}$ *t* [$_{FPcolor}$ rouge [$_{FPagr}$ *t* [$_{FPnational}$ américaine]]]]

As is well-known, attributive adjectives can be prenominal in Romance, particularly in French. However, adjectival prenominal placement in French is restricted to some adjectives, with a specific interpretation and/or specific effects. Prenominal adjectives must be quantificational, subjective/evaluative or light/weak/short. This is illustrated in (13).

(13)   ces   nombreuses splendides petites voitures
              these   numerous   wonderful small   cars

Laenzlinger (2004a) argues that the adjectives in (13) are fronted to the left-periphery of the DP, each targeting a specific position in the DP-domain, as represented in (14).
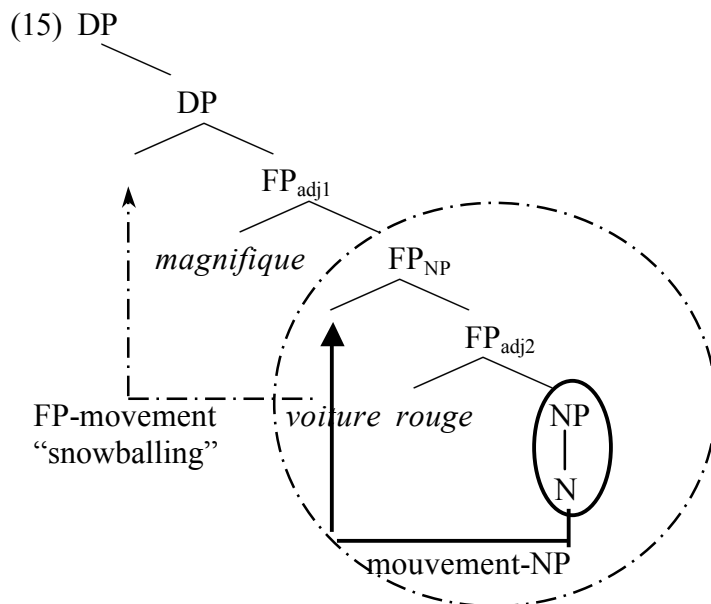
(14)
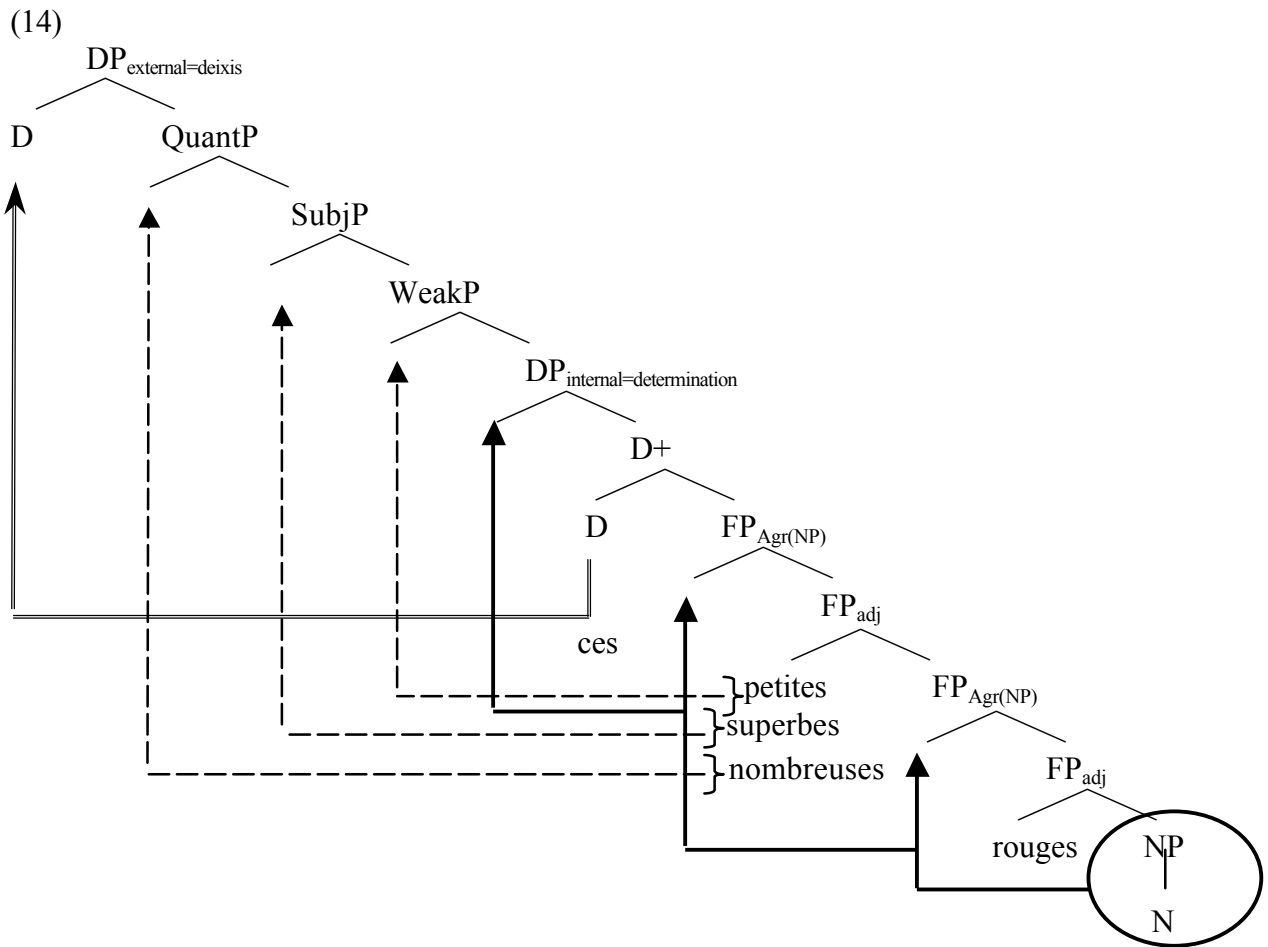
So far, the similarities between the clause and the noun phrase are the following:
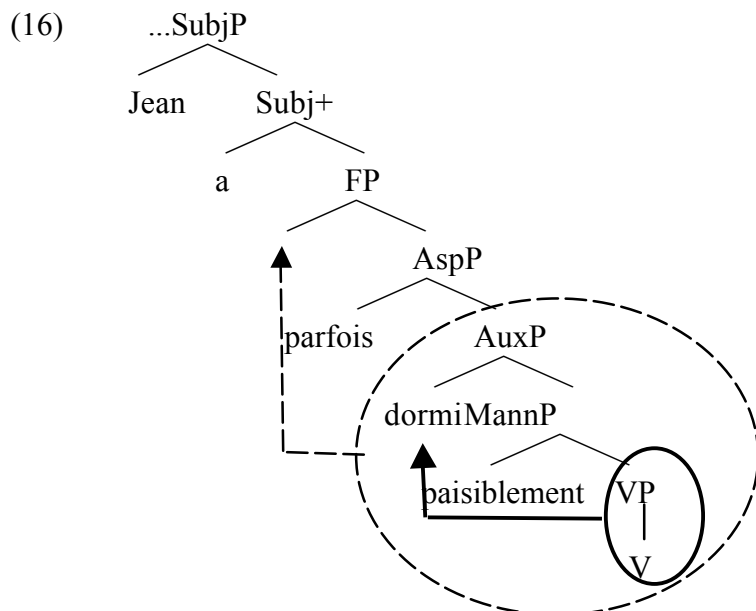
(i)   split-DP/CP

(ii)   NP/VP-shell

(iii)   Mittelfeld structure containing projections for adverbs/adjectives and also derived positions for checking features (Case, phi-, informational features for the clause, and number, gender features for the noun phrase)

(iv)   NP/VP-movement

Another interesting analogy exists between the clause and the noun phrase Nachfeld where we can find two adverbs/adjectives in a mirror-image order as compared to the preverbal/prenominal order. Consider the following examples.

(14) a.   une magnifique voiture rouge
      b.   une voiture rouge magnifique
            'a beautiful red car'
      c.   Jean a parfois dormi paisiblement
      d.   Jean a dormi paisiblement parfois
            'Jean sometimes slept quietly'

The mirror-image order of modifiers in (14b) and (14d) derives from a one-step roll-up/snowballing derivation in which the functional projection containing the noun/verb plus the lower modifier is moved to a position higher than that of the higher modifier. This is represented in (15) and (16) for the noun phrase and the clause respectively.

(15) DP

(16)   ...SubjP

        Jean   Subj+

              a   FP

                   ↑   AspP

                 parfois   AuxP

                          dormiMannP

                          paisiblement   VP

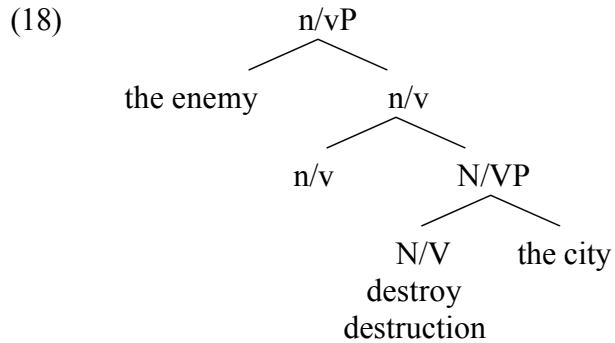   V

The aim of the next section is to examine whether there is a principle analogous to the Full VP-evacuation principle applying to the noun phrase. To this end, the relevant types of nouns to consider are argument-bearing nouns, which include deverbal and depictive nouns.
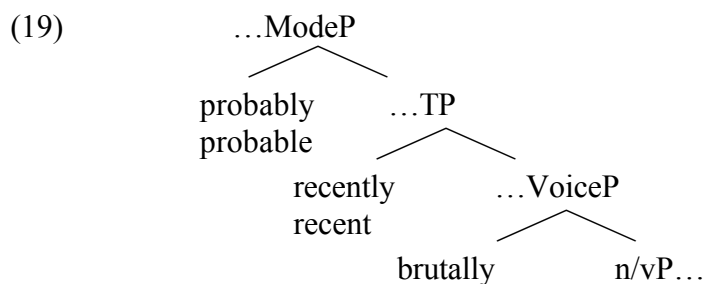
2. ARGUMENT-BEARING NOUNS

As already mentioned, NP is the thematic domain of the noun where all its arguments merge either as Spec or Compl of n/N. Consider first the case of event-nominals. The parallelism between the noun and the clause is striking in English event-nominals, as often discussed in the literature since the beginning of generative grammar (Lees 1964, Chomsky 1970, Grimshaw 1990, Borer 1993, Alexiadou 2001, etc). Consider the following pair of examples.

(17) a.   The enemy probably recently/brutally destroyed the city
      b.   The enemy's probable recent/brutal destruction of the city
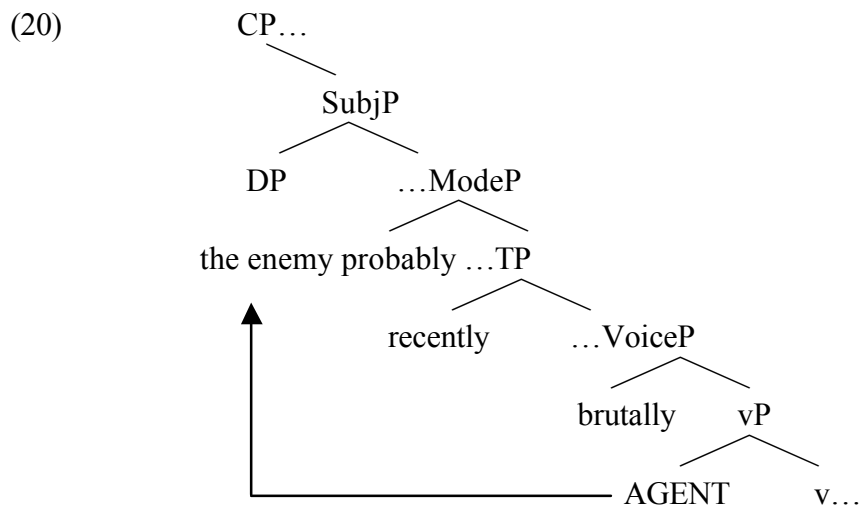
The long-standing debate bears on the lexico-morpho-syntactic relation between the verb and the derived noun. According to Chomsky's (1970) Lexicalist Hypothesis, *destruction* is derived in the Lexicon, inheriting the argument structure from the noun. Recently, the Distributed Morphology approach derives the nominal in syntax. I will not discuss this point in the present paper, focussing on the internal structure of the noun phrase and the clause. The important fact is that the adverbs in (17a) displaying the order mode > time > manner have adjectival correlates in (17b). The adverbs and the adjectives are preverbal and prenominal respectively. The shell-structure for both NP/VP is the one given in (18). This is a purely thematic domain.

(18)   n/vP
                        ⟋   ⟍
              the enemy   n/v
                              ⟋   ⟍
                        n/v   N/VP
                                      ⟋   ⟍
                                  N/V   the city
                                destroy
                              destruction

The above structure extends to functional projections hosting the modifiers. The relevant
categories for the three classes of modifiers in (17a-b) are VoiceP, TP and ModeP, as
represented in (19).

(19)   …ModeP
                  ⟋   ⟍
          probably   …TP
          probable   ⟋   ⟍
                      recently   …VoiceP
                      recent   ⟋   ⟍
                                brutally   n/vP…

The subject argument *the enemy* is raised both in (17a) and (17b). It targets a Case position,
nominative for the clause and genitive for the noun phrase. As for the object argument, it is
realized as a nominal complement in (17a) and a prepositional complement in (17b). The
subject position within the clause is labelled SubjP (=AgrsP) in Laenzlinger (2004b) and
Laenzlinger and Soare (2004), and belongs to the Mittelfeld. This is represented in (20).

(20)   CP…
                        ⟍
                        SubjP
                  ⟋   ⟍
          DP   …ModeP
                        ⟋   ⟍
  the enemy probably …TP
                  ⟋   ⟍
            recently   …VoiceP
                        ⟋   ⟍
                  brutally   vP
                              ⟋   ⟍
            AGENT   v…

In the event-nominal in (17b), the subject leaves the NP-domain and targets a Saxon genitive
Case position in the left-periphery of DP. Recall that the DP layer is a complex structure, by
analogy with Rizzi's (1997) split-CP. There is a Case position on the top of DP relevant to the
Saxon Genitive. As for the noun, there is no direct evidence from (17b) that it moves, contrary
to French (e.g. *la destruction probable/récente/brutale de la ville*). However, I have assumed

that English, and more generally Germanic displays noun projection raising (see (11b)). Note that in some configurations the noun manifestly raises past a predicative position filled by subcategorising and predicative adjectives, as illustrated in (21a-b).

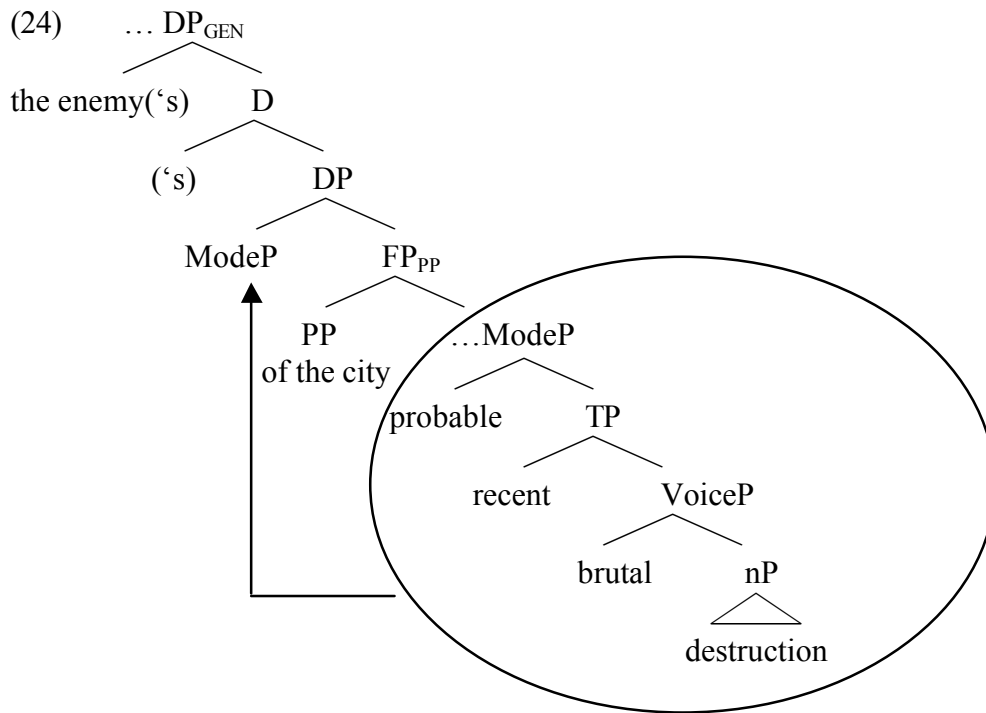(21) a.   a man completely crazy
      b.   a father proud of his son

Laenzlinger (2004a) assumes that the noun moves as an NP past a predicative projection, as represented in (22).

(22)   [$_{DP}$ a [$_{FP}$ [$_{NP}$ man [$_{PredP}$ completely crazy/proud of his son [$_{NP}$ t]]]]

Another piece of evidence that shows that the noun raises in English concerns prepositional complements. Following Kayne's (2002) insight, I have proposed in Laenzlinger (2004a) that prepositional phrases are built quite high in the nominal structure, at the border of the DP layer. Hence, the object in (17b) leaves the NP-domain reaching the PP-related position, as represented in (23). As for the noun, it raises past the PP-related position, giving rise to the order N < PP. On the basis of what Laenzlinger (2004a) proposes for French, the noun raises as a maximal projection to the specifier of the lower DP. As we will see below, it is the projection complement of FP$_{PP}$ that raises to the DP-layer.

(23)   …DP$_{GEN}$
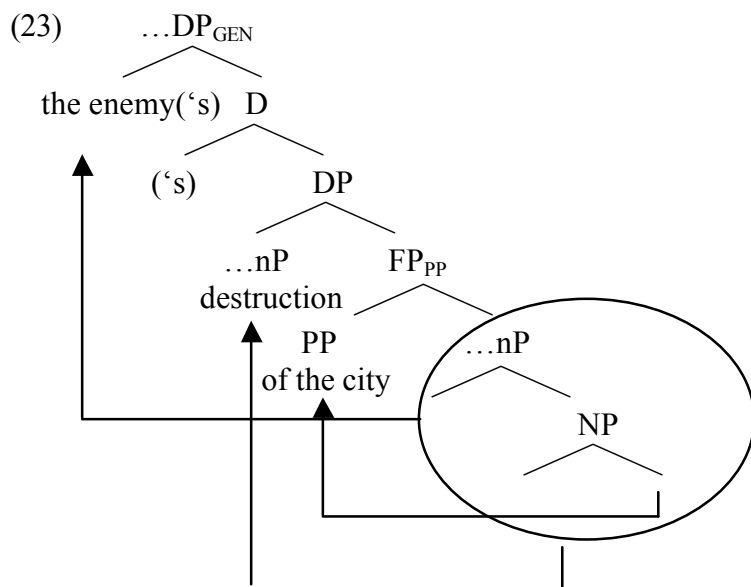
Considering the prenominal placement of attributive adjectives in (17b), the NP alone does not raise up to VoiceP, TP and ModeP. The linear order in (17b) is obtained after movement of the projection containing the adjectives plus the noun to Spec-DP (see also (11b)). This is represented in (24).

(24)   … DP_{GEN}

the enemy('s)   D

              ('s)   DP

           ModeP   FP_{PP}

                  PP   …ModeP
               of the city

                      probable   TP

                          recent   VoiceP

                              brutal   nP

                                      destruction

Given these facts, let us propose the Full NP evacuation principle in (25) by analogy with (2).

(25)   **NP full evacuation principle**

  "All arguments must leave the nP domain in order to have their Case features matched/assigned a value (previously checked) in the overt syntax."

Since at first sight the Information Structure is irrelevant at the level of the noun phrase, there is no I-feature to be checked. The only relevant feature is Case assigned by the "default" preposition *of* to the object and by the genitive head to the subject.
  Consider now the case of French. The examples corresponding to the English (17a-b) are given in (26).

(26) a. L'ennemi a probablement récemment brutalement détruit la ville.
   The enemy probably recently brutally destroyed the city
  b. La probable récente (brutale) destruction (brutale) de la ville par l'ennemi
   The probable recent brutal destruction of the city by the enemy

The clause structure for (26a) involves movement of the subject to Spec-SubjP with the auxiliary in Subj°. As for the participle, it moves as a remnant VP to Spec-AuxP after the object has raised to Spec-ObjP (see Laenzlinger and Soare 2004 for a detailed implementation of the derivation). Both AuxP and ObjP are projections floating from VoiceP to ModeP, as shown by the alternative possibilities in (27).

(27) [_{SubjP} L'ennemi [_{Subj} a] [_{ModeP} probablement [_{AuxP} [_{VP} détruit] (récemment)
   (brutalement) [_{ObjP} la ville (récemment) (brutalement)]]]]

Similarly to English, the VP-domain is evacuated by all the arguments in conformity with (2). As for the nominal phrase in (26b), it involves NP-movement to the specifier of the lower DP. Thus, the adjectives can be postnominal in French, as illustrated in (28).

(28)   la destruction probable/récente/brutale de la ville…

Note that the three adjectives in (26b) cannot be all postnominal due to the surface rule stated in (29a) (see also (65) below). At least two adjectives must be prenominal, as in (29c) compared to (29b).

(29)   a.   *   [N < Adj < Adj < Adj]
       b.   *   la destruction probable récente brutale (de la ville)
       c.   la probable récente destruction brutale de la ville

Prenominal adjectives in Romance are analyzed in terms of movement to the left-periphery of the DP-layer. Thus, the prenominal adjectives in (26b) and (29c) are moved to the left-periphery of DP, as represented in (30).
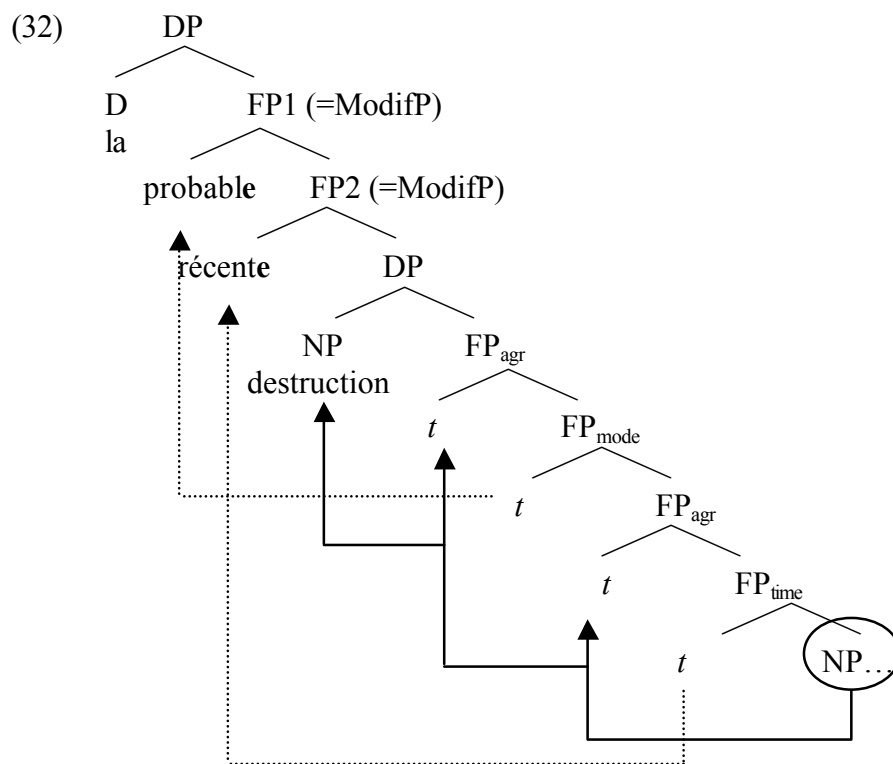
(30)   [$_{DP}$ la [$_{FP1}$ probable [$_{FP2}$ récente [$_{DP}$ [$_{NP}$ destruction] [$_{FPpp}$ de la ville [$_{ModeP}$ t [$_{TP}$ t…]]]]]]

The problem with this analysis is the exact label of FP1 and FP2 in (20),[1] and also the obligatory order *probable* < *récente*, as shown by the ungrammaticality of (31).

(31)   *   la récente probable destruction…

Note that the order in (30) can derive from the cyclicity of movement of the two adjectives. The temporal adjective first moves and merges in the left-periphery and then the epistemic adjective raises and merges in a higher position in the left-periphery. An alternative analysis for (29c) is to consider a derivation analogous to the English counterpart given in (24), namely movement of ModeP containing the sequence [*probable récente destruction*] to the specifier of the lower DP. However, this analysis fails to account for the agreement relation between the noun and the adjective, In addition, it does not capture the fact that adjectives in French are most natural postnominal. Therefore, we will favor an analysis in terms of successive NP-movement through agreement projections among the adjective-related projections and subsequent adjective fronting. The complete derivation for (29c) is given in (32).

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[1] Note that adjective fronting can be considered a kind of topicalization in the left-periphery of DP, akin to adjunct fronting in the clause (to ModifP in Rizzi 2004b).

(32)

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              DP
           ／     ＼
         D           FP1 (=ModifP)
         la         ／      ＼
              probable        FP2 (=ModifP)
                  ▲          ／      ＼
                récente        DP
                        ／        ＼
                    NP              FPagr
                 destruction      ／    ＼
                              t          FPmode
                                       ／    ＼
                                   t          FPagr
                                            ／    ＼
                                         t          FPtime
                                                   ／    ＼
                                                t          NP…
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Valois (1991) provides very interesting examples concerning the pre-/postnominal placement of adjectives with event-nominals in French. His examples, slightly modified, are given in (33).

(33) a.   les probables/récentes brutales invasions…
            (cf. English : *the recent brutal invasions…*)
      b.   les brutales invasions récentes/probables…

The left-to-right mirror-image order of adjectives is reminiscent of what is observed with object denoting nouns in Laenzlinger (2004a), illustrated in (34).

(34)   une petite voiture magnifique (cf. a beautiful small car)

The linear order in (34) is obtained after raising of the adjective of size to the left-periphery of the noun phrase. Similarly, the manner adjective in (23b) is moved to a subject-oriented projection (SubjectiveP) in the left-periphery. Crisma (1993) observes the difference of reading of adjectives like *brutal(e)*, which has a manner reading when postnominal and a subject-oriented reading when prenominal. This observation reinforces a movement analysis of *brutales* in (33b) from VoiceP in the Mittelfeld of the noun phrase to SubjP in the Vorfeld. This is shown in (35).

(35) $[_{DP}$ les $[_{SubjP}$ brutales $[_{DP}$ $[_{NP}$ invasions] $[_{FPagr}$ t $[_{ModeP/TP}$ récentes/probables
            $[_{VoiceP}$ t $[_{NP}$ t]]]]]]

 Let us now turn to the formation of argumental PPs in event-nominals. As in English, the theme argument is associated with a default preposition. This preposition is *de* in French and *of* in English, which is required for Case assignment/checking. The theme argument is merged

at the root as a DP in Compl-N, and subsequently moves to the border of DP in order to be associated with the preposition. This has been represented in (23/24) for English. Once the PP co-occurs with a postnominal adjective in French, the latter is preferably adjacent to the noun, as shown by the contrast between (36a) and (36b).

(36) a.   la destruction récente de la ville
            'the recent destruction of the city'
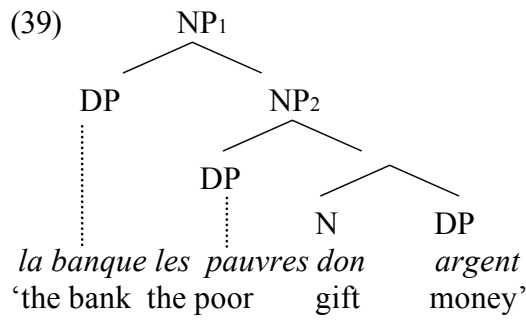   b.?(?)la destruction de la ville récente

The derivation of (36a) is identical to that of *une voiture rouge de 1958* discussed in Laenzlinger (2004a). The noun raises as an NP past the adjective and then the projection containing the raised noun and the adjective raise to Spec-DP, as the derivation in (37) shows.
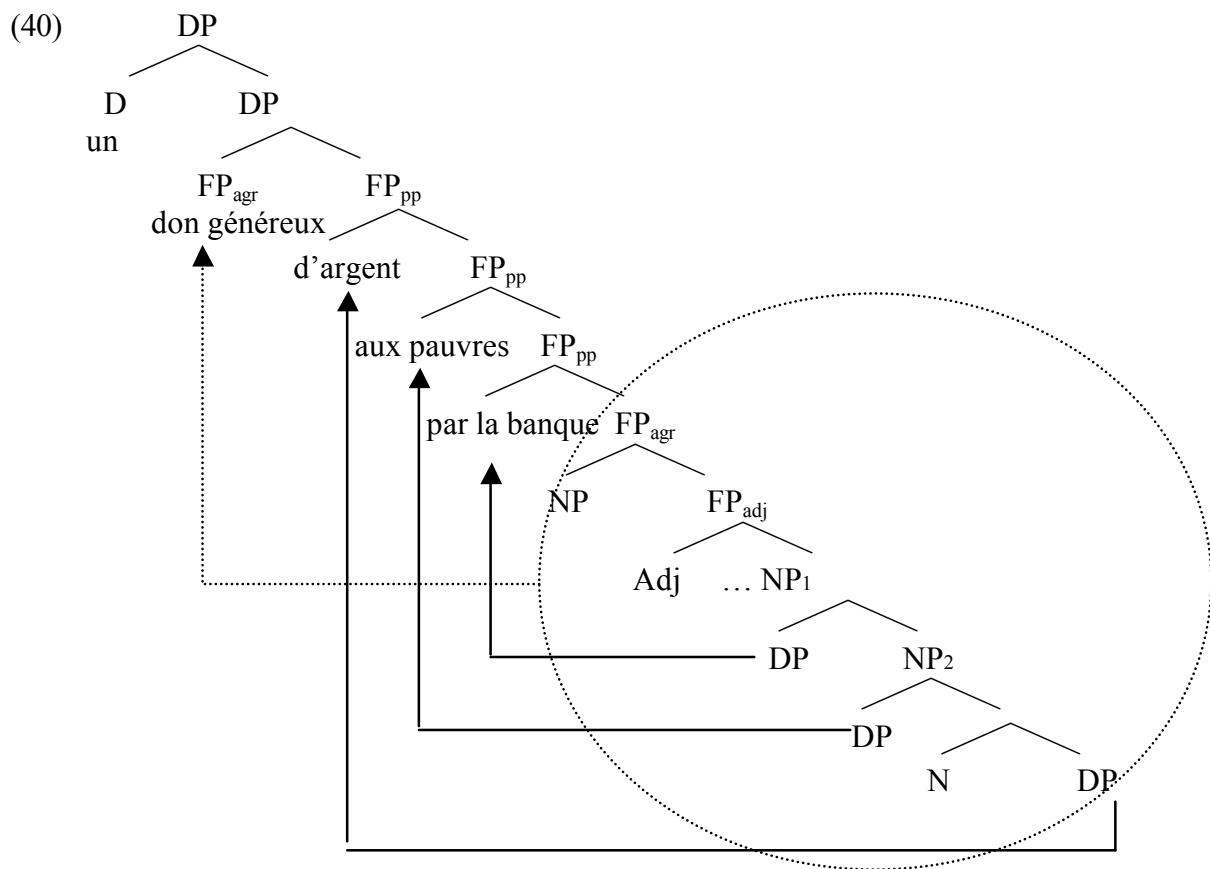
(37)
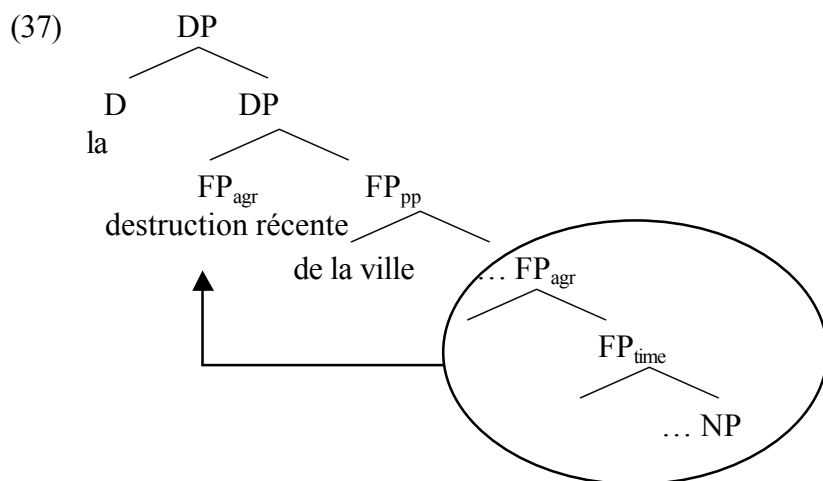
The subject argument (i.e. Agent) of *destruction* is expressed by a *par*-phrase, as in (38a), while it is expressed by *de* in result/state-nominals, as in (38b-c). In (38d-e) the deverbal noun is associated with three arguments (Agent, Theme, Beneficiary). The difference between (38d) and (38e) lies in the Event-reading of the noun when the subject is expressed by *par* and the Result/State-reading when the subject is expressed by *de*.

(38) a.   la destruction récente de la ville par l'ennemi
            'the recent destruction of the city by the enemy'
      b.   la description précise de Jean de l'événement
            'Jean's precise description of the event'
      c.   la réaction subite de Jean à cette nouvelle
            'Jean's sudden reaction to the news'
      d.   un don généreux d'argent aux pauvres par la banque
            'a generous gift of money to the poor by the bank'
      e.   un don généreux d'argent de la banque aux pauvres

Given (38) the most natural order among the different kinds of PPs is *de** (recursive) < *à* < *par*. This means that the relevant PPs are built within the noun in such an order. Consider the example in (38d). The three arguments merge within the Larsonian NP-shell according to the following configuration.

(39)   NP₁
        /   \
      DP   NP₂
              /   \
            DP   /\
                   N   DP

la banque les pauvres don   argent
'the bank the poor   gift   money'

Following the Full NP evacuation Principle all arguments must leave the NP-domain in order
to be associated with their Case-marker. The agent raises to the *par*-projection, the lowest PP-
related projection, followed by raising of the beneficiary to the above *à*-projection. Finally, the
theme targets the *de*-projection, the highest PP-related projection, as represented in (40). The
noun raises as an NP, or more precisely as FP$_{agr}$ containing *don généreux* in (38d), to the
specifier of the lower DP.

(40)   DP
          /   \
         D   DP
         un   /   \
          FP$_{agr}$ FP$_{pp}$
       don généreux   /   \
                d'argent   FP$_{pp}$
                          /   \
                    aux pauvres   FP$_{pp}$
                                /   \
                         par la banque FP$_{agr}$
                                       /   \
                                     NP   FP$_{adj}$
                                           /   \
                                         Adj   … NP₁
                                               /   \
                                             DP   NP₂
                                                    /   \
                                                  DP   /\
                                                         N   DP

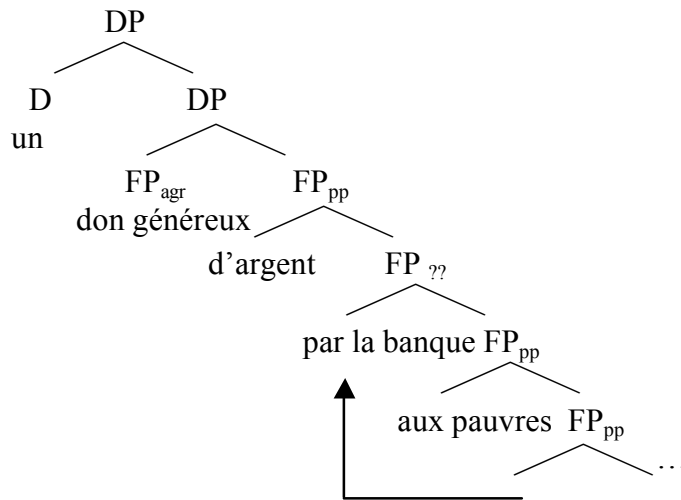Note that the permutation of PPs leads to various degrees of marginality, as illustrated in the
contrasts in (41).

(41) a. ?   un don d'argent par la banque aux pauvres
              a   gift of money by the bank to the poor
      b. ?? un don aux pauvres par la banque d'argent
      c. ?? un don par la banque d'argent aux pauvres

The *de*-PP must remain the closest element to the noun, while the *à*-PP and the *par*-PP are allowed to permute (slightly marginally). Reordering of PPs is derived by a further raising of one PP over the other, as represented in (42).

(42)

```
              DP
           /      \
         D          DP
         un       /    \
            FP_agr       FP_pp
          don généreux   /    \
                 d'argent      FP ??
                          /         \
                  par la banque    FP_pp
                              /        \
                      aux pauvres    FP_pp
                                   /      \
                                        ...
```

The sequence of two *de*-PP is not possible with event-nominals, as shown in (43a), but it is possible with result/state-nominals, as in (43b), and with depictive nouns, as in (43c) (taken from Valois 1991). The subject argument can also be expressed by a *par*-phrase with the depictive noun, as in (43d).

(43) a. * la destruction de la ville de l'ennemi
          the destruction of the city of the enemy
     b.   la description de Jean de l'événement
          the description of Jean of the event
     c.   le portait de Rembrandt d'Aristote
          the portrait of Rembrandt of Aristote
          'Rembrandt's portrait of Aristote'
     d.   le portait d'Aristote par Rembrandt
          'the portrait of Aristote by Rembrandt'

The difference between a subject expressed by a *by*-phrase and a subject expressed by a *de*-phrase is that the former denotes the Agent and the latter the Source. Thus, a *de*-phrase can express the Theme, the Source (subject) and also the Possessor, as in (44).

(44) a.   Le tableau de Rembrandt du Louvre
          the painting of Rembrandt from the Louvre
     b.   La voiture de course de Jean
          The car   of race   of Jean
          'Jean's racecar'

Giorgi and Longobardi (1991) assign a structural hierarchy to a noun's arguments in which the possessor is the highest argument. This thematic hierarchy is expressed within the complex NP-shell, as in (45).

(45)   NP₁
         /   \
    POSS   NP₂
              /   \
         AGENT   /   \
              N   THEME
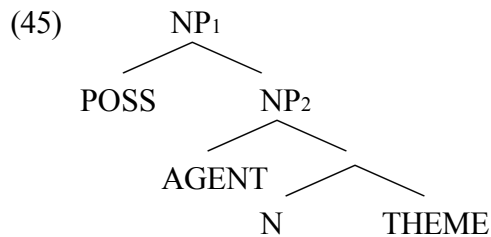
Now these three arguments are expressed in a configuration in which both the theme and the possessor are realized by a *de*-phrase, while the agent is expressed by a *par*-phrase in preference over another *de*-phrase.

(46)   ?(?) le tableau de Rembrandt d'Aristote de ce collectionneur
              the painting of Rembrandt of Aristote of this collector
                  ⇨   le tableau d'Aristote de ce collectionneur par Rembrandt
                      the painting of Aristote of this collector by Rembrandt

So far, the hierarchy of PPs' formation on the top of the Mittelfeld is the following: *de*-phrase (recursive) > *à*-phrase > *par*-phrase. Let us see if such a hierarchy can be refined in view of the data in (47).

(47)   a.   la description de Jean de l'événement récent
              the description of Jean of the event recent
              'Jean's description of the recent event'
       b.   la photo de Jean de la mer
              the picture of Jean of the sea
              'Jean's picture of the sea'
       c.   le désir de vengeance de Jean
              the desire of revenge of Jean
              'Jean's desire of revenge'
       d.   le téléphone de Jean à Marie
              the phone call of Jean to Marie
              'Jean's call phone to Mary'
       e.   le départ de Jean de Paris
              the departure of Jean from Paris
       f.   la promesse de Jean à Marie
              the promise of Jean to Marie
              'Jean's promise to Marie'

The subject argument in (47) is expressed by a *de*-phrase. Deverbal nouns derived from psy-, epistemic and unaccusative verbs express the "subject" argument with a *de*-phrase, as in (47d-f). The nominals in (47) have a non-agentive reading. For some of them, the subject can be expressed by a *par*-phrase, as exemplified in (48). In these cases, the nominals have an event/agentive-reading.

(48)   a.   la description de l'événement récent par Jean
              the description of the event recent   by Jean
       b.   la photo de la mer par Jean
              the picture of the sea by Jean

> c.   le tableau d'Aristote par Rembrandt
>   the painting of Aristote by Rambrandt

Thus far, two subject PP positions have been identified, one realized by *de* and the other by *par*. The former is higher in the hierarchy of PPs than the former. As for the order between the *de*-subject and *de*-object in (47a-c), it is preferably Subject-Object in (47a-b), but Object-Subject in (47c) (see Cinque 1995, 1996 for Italian). The permutation of the two *de*-phrases is still possible in (47a-b), as shown in (49).

(49) a. ? la description de l'événement récent de Jean (O-S)
      b.   la photo de la mer de Jean (O-S)
      c.   le tableau d'Aristote de Rembrandt (O-S)

The indirect object expressed by an *à*-phrase in (47d) and (47f) preferably follows the subject, which means that the *à*-phrase is lower than the subject *de*-phrase. Let us further consider nominals with multiple arguments, as in (50), so as to refine the hierarchy of functional projections hosting the PPs on the top of the Mittelfeld.

(50) a.   l'ordre de départ du général à ses troupes (par le général)
             the order of departure of the general to his troups (by the general)
      b.   la promesse de bonté de Jean à l'Eglise
             the promise of kindness of Jean to the Church
      c.   l'envoi d'une lettre à Marie de Paris par Jean
             the sending of a letter to Marie from Paris by Jean

In (50a-b), the most natural order is *de*-object < *de*-subject and *à*-object. Note that the *de*-subject preferably precedes the *de*-object in (47a-b). Therefore, we assume that the subject and object (Theme) *de*-phrases are permutable,[2] while the *à*-phrase follows them. Interestingly, the *de*-phrase expressing the thematic role of Provenance/Origin, as in (50c), is most naturally placed after the *à*-phrase, which is indicative of the fact that this *de*-phrase is lower than the *à*-phrase, but higher than the *par*-phrase. So far, the hierarchy of PPs has the representation in (51).

---

[2] However, it is not always the case, as in (i). It seems that *de*-object must be closer to the noun than the *de*-subject, although the reverse order is possible with a heavier object. Thus, the permutation of two *de*-phrases can depend on the heaviness of the prepositional phrases (i.e. Heavy PP-shift).

(i)   a.   la menace de représailles d'Israël
             the threat of reprisals of Israël
      b.   ?(?)la menace d'Israël de représailles (ok immédiates)
             the threat of Israël of reprisals   immediate

(51) DP
       DP
           FP$_{de}$ [AGENT]
              FP$_{de}$ [THEME]   } permutable
                 FP$_{à}$ [GOAL/DEST]
                    FP$_{de}$ [PROV]
                        …NP
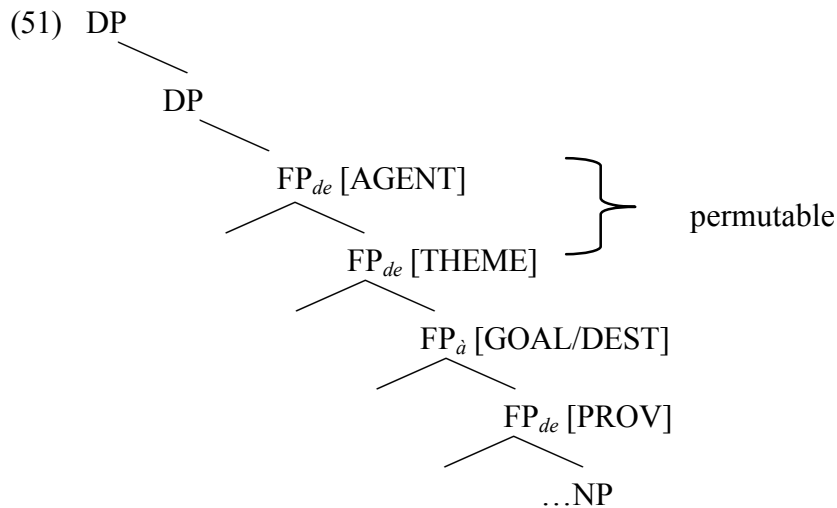
Consider now a *de*-CP infinitival complement, which needs a controller for its subject, as in (52). When the subject of the deverbal noun is expressed by a *de*-phrase, it must precede the CP-complement, as shown in (52a-b). When the subject is expressed by a *par*-phrase, both orders are allowed, as in (52c-d).[3]

(52) a.   la menace d'Israël d'entreprendre des représailles
         the threat   of Israël to undertake   reprisals
    b.   la menace d'entreprendre des représailles ??d'Israël[4]
    c.   la menace par Israël d'entreprendre des représailles
         the threat   by Israël to undertake   reprisals
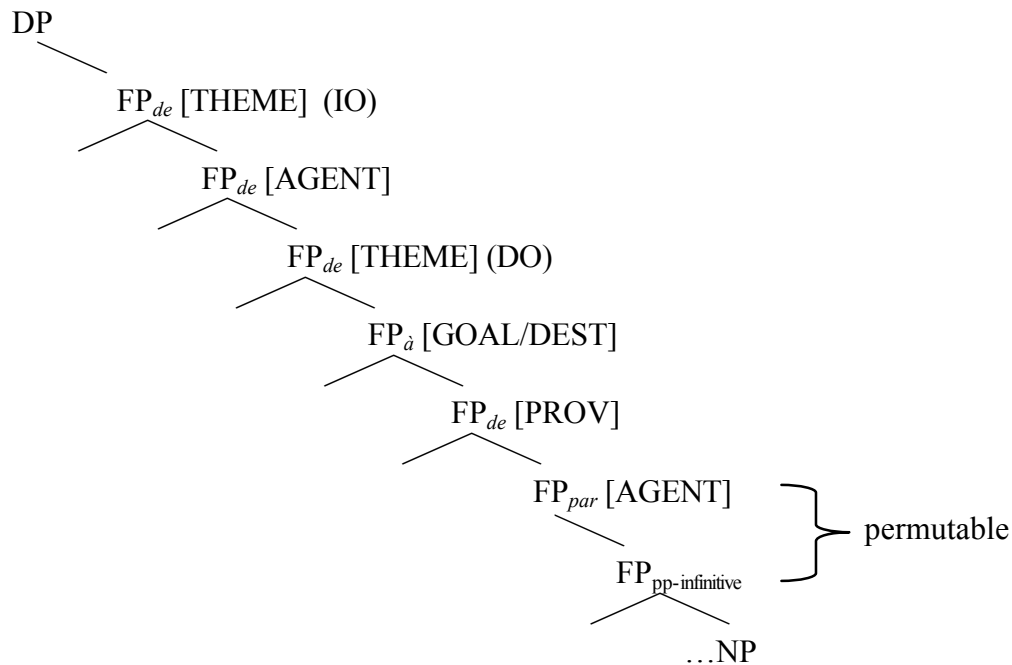   d.   la menace d'entreprendre des représailles par Israël

These data show that the sentential complement is lower than the subject *de*-PP, although it is permutable with the subject *par*-phrase. Thus far, the complete hierarchy of PPs is given in (53).

---

[3] This means that the *de*-subject unlike the *par*-subject must c-command the PRO subject.
[4] See also the following examples :
(i)   l'ordre   aux soldats d'attaquer vs. ??l'ordre d'attaquer aux soldats
       the order to the soldiers to attack

(53)

```
DP
   \
    FP_de [THEME]  (IO)
       \
        FP_de [AGENT]
           \
            FP_de [THEME] (DO)
               \
                FP_à [GOAL/DEST]
                   \
                    FP_de [PROV]
                       \
                        FP_par [AGENT] ⎫
                           \            ⎬ permutable
                            FP_pp-infinitive ⎭
                               \
                                …NP
```

Finally, deverbal nouns can also be modified by a PP adjunct (time/manner). This is exemplified in (54).

(54) a. la description d'hier/sans enthousiasme de Jean
          the description of yesterday/without enthusiasm
      b. la description de Jean d'hier/sans enthousiasme
      c. la photo   d'hier/en vacances   de Jean
          the picture of yesterday/in holidays of Jean
      d. la photo de Jean d'hier/en vacances

Apparently, the PP-adjunct are free mergers among the argumental PPs. They can float generally. They can even break up the argumental PPs' hierarchy, as shown below.

(55) a. la photo (sans attrait)   de Jean (sans attrait)   de la mer
          the picture (without attraction) of Jean (without attraction) of the sea
      b. la description (en détail) de Jean (en détail) de l'événement
          the description (in detail) of Jean (in detail) of the event

3. INTERACTION OF AJECTIVES WITH PPS

If PP adjuncts can interfere between argumental PPs, postnominal adjectives are more constrained as to their distribution w.r.t. to prepositional phrases. If the PP is an adjunct, the placement of the adjective is free, as in (56).

(56) a. un tableau (splendide) de 1887 (splendide)
          a painting (splendid)   of 1887 (splendid)

    b.   une description (pertinente) à contre courant (pertinente)
           a description (relevant) against the trend   (relevant)

It is not so if the PP is an argument, as shown in the examples in (57).

(57) a.   la voiture (rouge) de Jean (=POSS) ($^{??}$rouge)
           the car   (red)   of Jean
           'Jean's red car'
    c.   le tableau (fameux) de Rembrandt (=AGENT) ($^{??}$fameux)
           the painting (famous) of Rembrandt
           'Rembrandt famous painting'
    d.   l'invasion (soudaine) de l'Irak (=THEME) ($^{??}$soudaine)
           the invasion (sudden) of Irak
           'the sudden invasion of Irak'

The adjective must stand close to the noun, and cannot break up the hierarchy of PPs. This is illustrated in (58).

(58) a.   la description **récente** de Jean ($^{??}$récente) de l'événement ($^{??}$récente)
           the description recent of Jean   of the event
           'Jean's recent description of the event'
    b.   la photo **splendide** de Jean (*splendide) de la mer (*splendide)
           the picture splendid of Jean   of the sea
           'Jean's splendid picture of the sea'
    c.   le téléphone **soudain** de Jean (*soudain) à Marie (*soudain)
           the phone call sudden of Jean   to Marie
           'Jean's sudden phone call to Marie'
    d.   le désir **irrémédiable** de vengeance (*irrémédiable) de Jean (*irrémédiable)
           the desire irremediable of revenge   of Jean
           'Jean's irremediable desire of revenge'

As expected, these adjectives can be prenominal, as in (59).

(59) a.   la **récente** description de Jean de l'événement
           the recent description of Jean of the event
    b.   la **splendide** photo de Jean de la mer
           the splendid picture of Jean of the sea
    c.   le **soudain** téléphone de Jean à Marie
           the sudden phone call of Jean to Marie
    d.   l'**irrémédiable** désir de vengeance de Jean
           the irremediable desire of revenge of Jean

In such cases, the adjectives are moved to the left-periphery of DP. Fronting of these adjectives has special effects on their interpretation (marked, subjective reading).
    As formalized before, the obligatory order N < Adj < PP < PP in (58) is obtained after raising the noun plus the adjective (i.e. FP$_{agr}$) to the specifier of the lower DP, as represented in (60) for (58b).

(60)   DP
         ╱   ╲
      D   DP
      la   ╱   ╲
         FP_agr   FP_pp
    photo splendide   ╱   ╲
              de Jean   FP_pp
                        ╱   ╲
                  de la mer   FP_agr
                              ╱   ╲
                           NP   FP_adj
                                      ╱   ╲
                                   Adj   … NP₁
                                  ╱   ╱   ╲
                                DP   NP₂
                                          ╱   ╲
                                        DP
                                      ╱   ╲
                                     N   DP
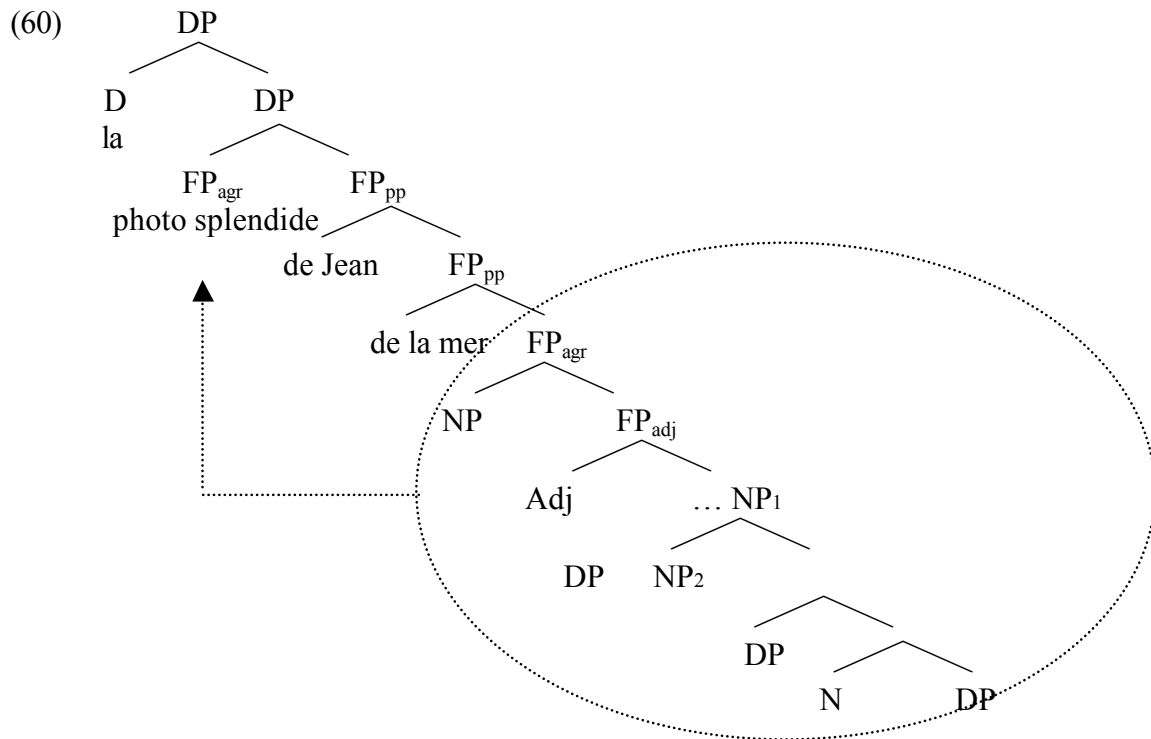
Note that in some indefinite contexts the adjective can be stranded, as in (61).

(61)   a.   c'est une photo de ma mère récente
              this is a picture of my mother recent
              'This is a recent picture of my mother'
       b.   voilà une description de l'événement précise
              here (is) a description of the event precise
              'Here's a precise description of the event'

According to us, stranding of the adjective is possible only if it has a predicative reading. This means that the rightward adjectives in (61) merge in a predicative projection below the PPs, as represented in (62).

(62)   [_DP une [_DP [_NP photo] [_FPpp de ma mère [_PredP récente]]]]

As expected, we cannot have two right-hand adjectives, as shown by the ungrammaticality of (63). Only one predicative position is available.

(63)   * une photo de ma mère récente splendide
              a   picture of my mother recent splendid

The two adjectives can occur in a position preceding the prepositional complement, as in (64). But in this case they do not occupy a predicative position.

(64)   a. ? une photo récente splendide de ma mère
              a   picture recent splendid of my mother
              'a recent splendid picture of my mother'

    b.   la voiture rouge magnifique de Jean
            the car   red   beautiful   of Jean
            'Jean's beautiful red car'

This order is derived from snowballing FP$_{agr}$-movement containing the sequence *voiture rouge magnifique* to the left-periphery past the FP$_{pp}$-projection hosting the possessor argument.

        Coming back to (63), Laenzlinger (2004a) states the rule in (65a), which prohibits the occurrence of a simple (non predicative) adjective at the right-edge of the noun phrase when two XPs (AdjP or PP) precede the adjective, as in (65b-d).

(65) a.   [N < XP < XP < Adj]
      b. * la voiture rouge de Jean magnifique/Américaine
             the car   red   of Jean beautiful/American
      c. * la voiture de 1958 rouge magnifique
             the car   of 1958 red   beautiful
      d. * la voiture rouge de 1958 magnifique

It would be tempting to derive the rule in (65a) syntactically, for instance by means of derivational complexity. However, it seems to be a surface constraint related to the lightness of the adjectival form in DP-final position. If the adjective is stressed or lexically modified, then the result for (65b-d) is acceptable (e.g. *une voiture de 1958 rouge vraiment magnifique*).

4. FURTHER EVIDENCE FOR DP-INTERNAL MOVEMENT: THE CASE OF ROMANIAN

As a Romance language, Romanian exhibits postnominal adjectives, as in (66).

(66) a.   băiatul frumos
            boy-the nice
            'the nice boy'
      b.   maşini roşii americane
            cars   red   American
            'red American cars'

As observed for French, some adjectives can be prenominal, given some specific effects on the fronted adjectives: They must be (i) quantificational (ii) subjective or (iii) short. This is illustrated in (67).

(67)   numeroasele   frumose mici maşini
            numerous(the) beautiful small cars

Consider first the case of (66). The postnominal placement of the adjectives results from NP-raising to the specifier of the lower DP, as in the other Romance languages. The particularity of (66a) is that the definite determiner is a suffix on the noun (see Grosu 1988, Giusti 1995 and related work). Following the split-DP analysis, the affix *–ul* merges as the lower D. Since the noun raises as an NP to the specifier of this lower DP, the adjacent configuration is

obtained for the morphological process of affixation.[5] This is shown in the representation in (68).

(68)

```
            DP
          /    \
         D      DP
              /    \
            NP       \
            ┊        /  \
            ┊       D    FP_adj
            ┊       ┊   /    \
            ┊       ┊ AdjP    …
            ┊       ┊  ┊
         Băiat-ul  frumos
```
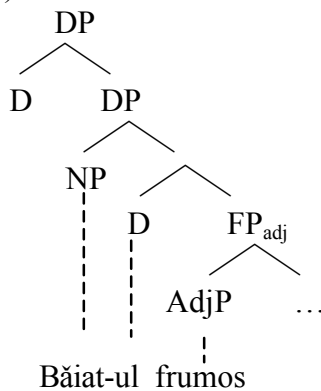
The prenominal placement of the adjectives in (66) is the result of their movement to the appropriate hierarchical positions in the left-periphery of the DP, QuantP > SubjectiveP > WeakP respectively. The derivation is given in (69).

(69)
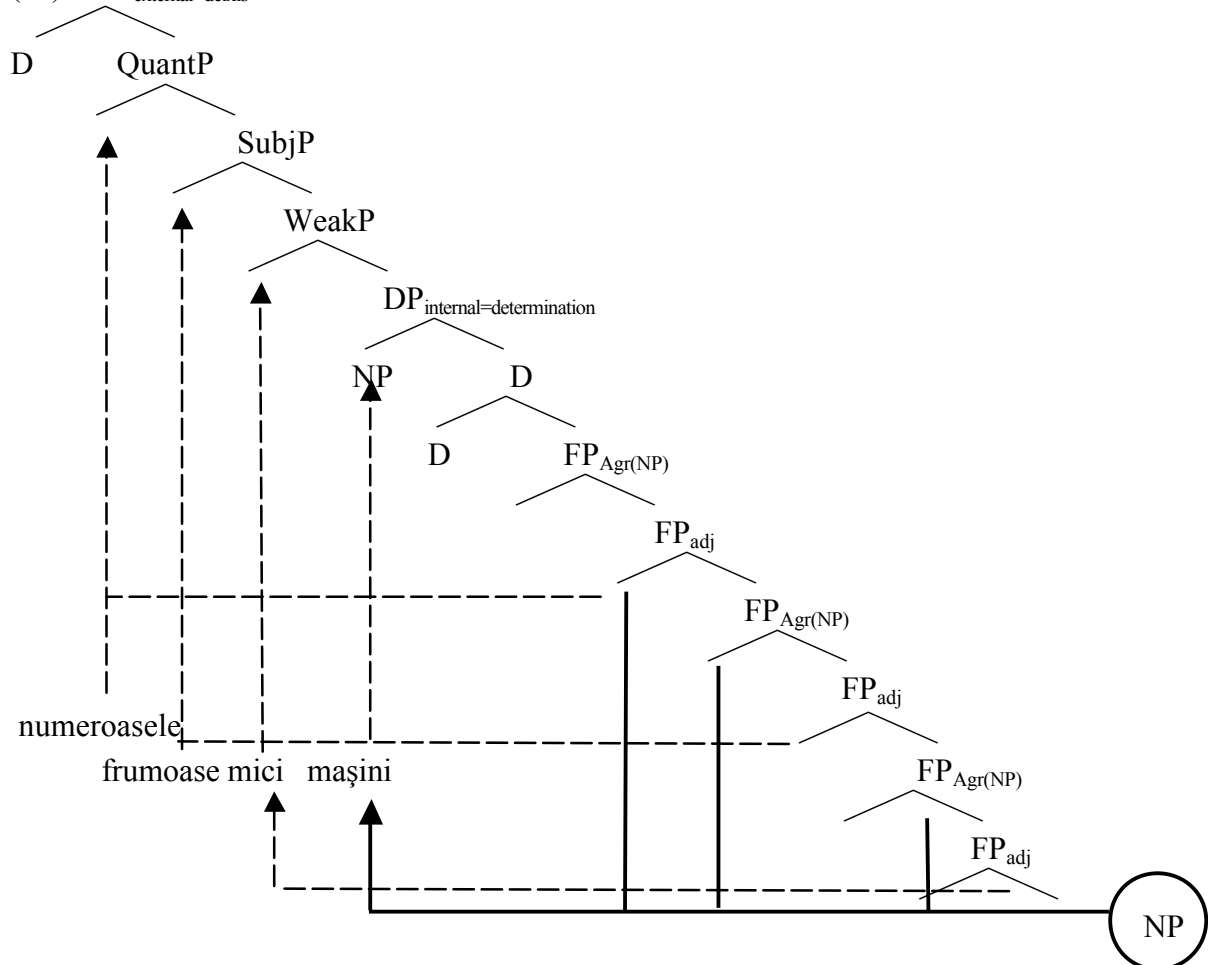
As discussed by Giusti (1995) and others, when the adjective is fronted, the definite determiner does not occur on the noun, but on the adjective, or more precisely on the first adjective if there is more than one fronted adjective, as in (69). This can be explained in our framework by raising the lower D to the head of the projection where the fronted adjective is merged, as shown in (70). The generalization is that the highest lexically filled projection in the left-periphery must bear the definite determiner.

(70)
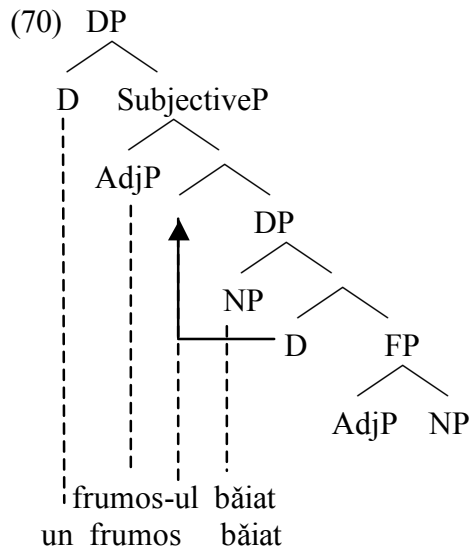
Note that the indefinite determiner precedes the fronted adjective(s), which indicates that it merges as the higher D, as represented in (70).

Romanian displays the property of having (two) postnominal adjectives either in a left-to-right order or in a mirror-image order with respect to the English prenominal order. The comparative data are given in (71).

(71) a. $small_1$ $beautiful_2$ red_3 $American_4$ cars
     b. maşini $mici_1$ $roşii_3$
         cars   small red
     c. maşini $roşii_3$ $mici_1$
         cars   red   small
     d. maşini $frumoase_2$ $roşii_3$
         cars   beautiful red
     e. maşini $roşii_3$ $frumoase_2$
         cars   red   beautiful
     f. maşini $roşii_3$ $americane_4$
         cars   red   American
     g. maşini $americane_4$ $roşii_3$
         cars   American red

The left-to-right order in (71b,d,f) is derived from cyclic NP-movement, while the mirror-image order in (71c,e,g) results from snowballing/roll-up/pied-piping FP_{agr}-movement. The two options are represented in (72).

(72)

```
            DP
           /  \
          DP
        /    \
  NP/FP_agr   D+
   ▲  ▲      /  \
           D    FP_agr
               /    \
             FP_adj1
            /   \
         Adj1    FP_agr
               /    \
            FP_adj2
            /   \
         Adj2    NP
```

maşini   mici₁   roşii₃
[maşini roşii₃]   mici₁
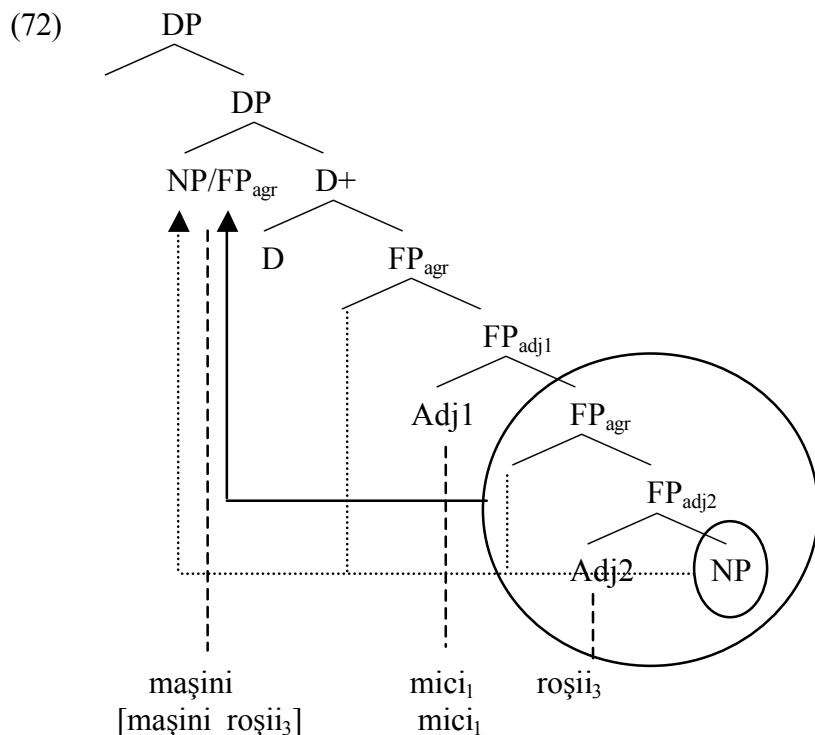
Giusti (1995) offers a detailed discussion of the syntactic behaviour of the Romanian demonstrative element *acest-*. In its long form it can occur in the postnominal domain being compatible with the definite determiner. In such a context, it merges as the specifier of a demonstrative adjective-like projection, which is higher than NumP/CardP and the other adjective-related projections. This is represented in (73).

(73)

```
       DP
      /  \
      DP
     /  \
   NP    
   :    D   DemP
   :    :   /   \
  fete  le acestea  NumP
  girls the these  /   \
                douǎ    FP
                two    /  \
                   frumoase
                   beautiful
```

'These two beautiful girls'
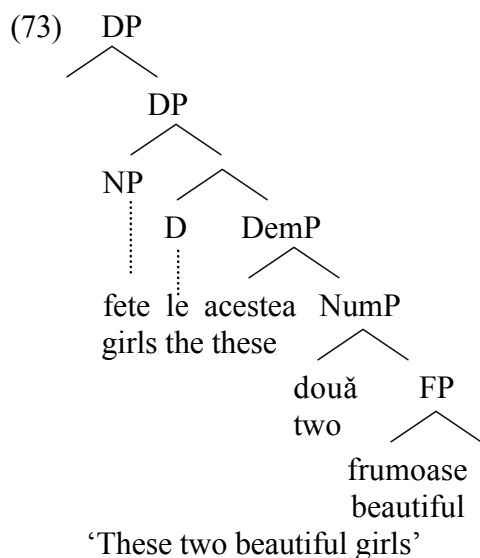
Alternatively, the demonstrative in its short form, as well as the numeral and the adjective of quality, can occur in the prenominal domain, and in so doing they must observe the postnominal order. In the framework of our analysis, the fronted adjective of quality targets the subjective projections in the split-DP structure, while the numeral adjectives target the higher QuantP. As for the demonstrative, we argue that it targets the higher DP, a projection expressing deixis. Note that the fronted demonstrative is incompatible with the definite

determiner and does not show definiteness agreement. This property can be explained by the fact that the demonstrative assigns definiteness to the DP, so that the occurrence of the definite determiner is no longer necessary. The relevant derivation is represented in (74).

(74)
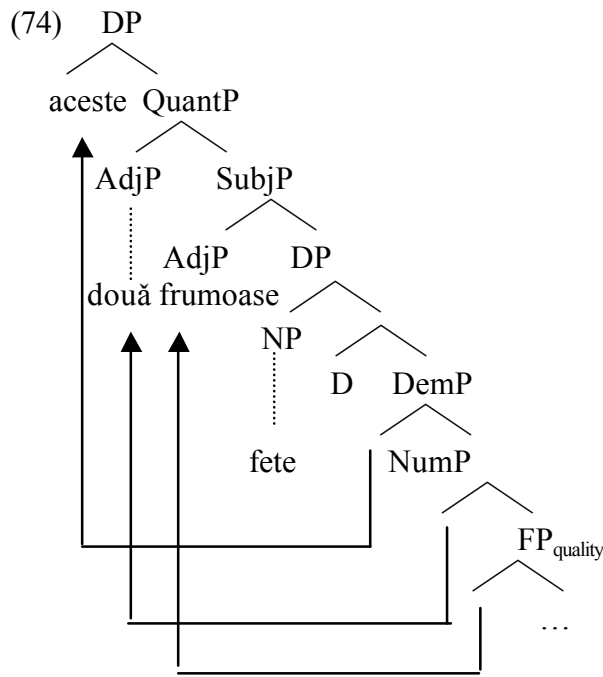
'These two beautiful girls'

Let us now consider the distribution of PP adjuncts in the postnominal domain in Romanian. As in French (example (75b)), the PP-adjunct in (75a) can occur before or after the postnominal adjective.

(75) a.   o maşină (din 1958) roşie (din 1958)
      b.   une voiture (de 1958) rouge (de 1958)
            a   car   from 1958 red
            'A 1958 red car'

The rule stated in (65a), and repeated in (76c) also applies to Romanian, as illustrated by the distribution of the PP adjunct with respect to two postnominal adjectives in (76a) (cf. (76b) for French).

(76) a.   o maşină (*din 1958) roşie (*din 1958) americană (din 1958)
      b.   une voiture (*de 1958) rouge (*de 1958) américaine (de 1958)
            a   car   red   American from 1958
      c. * [Adj/PP < Adj/PP < Adj]

The order [N < Adj_{color} < $Adj_{nationality}$ < PP] is derived by raising the FP_{agr} containing the noun and two adjectives to Spec-DP past the functional projection where the PP is formed, as represented in (77).

(77)
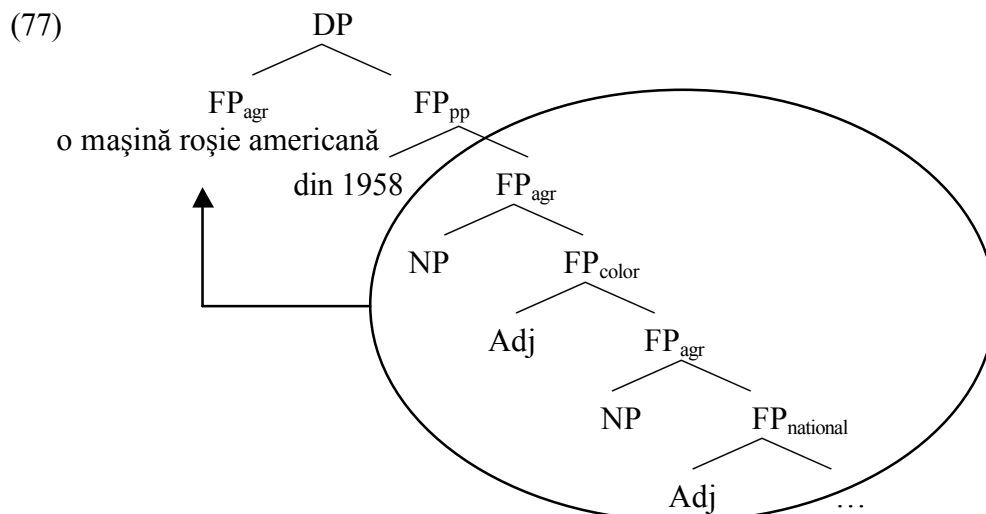
Let us now turn to the noun's arguments, first with object-denoting nouns and then with event-nominals. In (78) the genitive argument is the possessor of the noun. It is associated with the genitive determiner *lui* and is accompanied by a possessive marker ("*a-*"). This is exemplified in (78a) with an indefinite noun. However, when the noun is associated with a definite article, as in (78b-c), the genitive phrase is not preceded by the possessive article, unless a constituent like an adjective intervenes between the matrix noun and the genitive phrase, as illustrated in (78d-e).

(78) a. maşină a   lui   Ion
          car$_{[-def]}$ POSS the$_{+Gen}$ Ion
          'one of Ion's cars'
      b. maşina (*a)   lui   Ion
          car$_{[+def]}$ POSS the$_{+Gen}$ Ion
          'Ion's car'
      c. câinele (*a) lui Ion
          dog$_{[+def]}$ the$_{+Gen}$ Ion
          'Ion's dog'
      d. maşina roşie a   lui Ion
          car   red POSS the$_{+Gen}$ Ion
          'Ion's red car'
      e. maşina roşie frumoasă/americană   a   lui Ion
          car   red   beautiful/American POSS the$_{+Gen}$ Ion
          'Ion's beautiful red/American car'

The complex genitive form deserves some attention. *Lui* is a masculine genitive/dative D occurring with the noun. It precedes proper nouns (e.g. *lui Ion*), but follows common nouns (e.g. *băiatului*).[6] The element *a* which is added to the genitive DP in (78a/d-e) is linked to the main noun in some way, since it is inflected for the same number and gender value as the main noun. This is illustrated in the following data.

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[6] The enclitic placement of *lui* on the common noun and its proclitic placement on the proper noun go against Longobardi's (1995) proposal that proper nouns, unlike common nouns, raise to D.

(79) a.   maşini$_{[+fem,+pl]}$ roşii ale$_{[+fem,+pl]}$ lui   Ion
            cars   red POSS   the$_{+Gen}$ Ion
            Ion's red cars'
      b.   copii$_{[+masc,+pl]}$ … ai$_{[+masc,+pl]}$ lui   Ion
            children   POSS   the$_{+Gen}$ Ion

This phi-feature copy procedure can be explained derivationally by having the noun occurring in a local configuration with the genitive DP. We assume this position to be the specifier of an FP$_{agr}$ projection right above the genitive projection through which the (extended) nominal projection moves on its way to the DP layer. This step is indicated in (80).

(80) a.   [$_{DP}$ [$_{FP}$ maşini$_{[+fem,+pl]}$ roşii] [$_{FPagr}$ t [$_{FPgen}$ ale$_{[+fem,+pl]}$ lui Ion ….]]]
      b.   [$_{DP}$ [$_{FP}$ copii$_{[+masc,+pl]}$] … [$_{FPagr}$ t [$_{FPgen}$ ai$_{[+masc,+pl]}$ lui Ion …]]]

According to Cornilescu (1995 :13-22), the element *a* is a possessive article occupying a determiner head. In the framework of the split-DP analysis, the possessive head merges as a D$_{poss}$ which is higher than the genitive/dative D *lui* (i.e. [$_{DPposs}$ *a* [$_{DPdef}$ *lui Ion*]]).

When a definite determiner occurs on the noun (i.e. *–a* in (78b) and *–le* in (78c)), it attracts the root NP so that an intervening attractor (the possessive article *a-*) is banned under Relativized Minimality effects. This accounts for the absence of *a-* in (78b-c). When an adjective intervenes, it is not the root NP, but the agreement projection containing the adjective plus the noun that is attracted to the agreement projection above *ale/ai* in (80), and then the NP alone raises to the specifier of DP, thus avoiding Relativized Minimality effects. These steps are represented in (81).

(81)
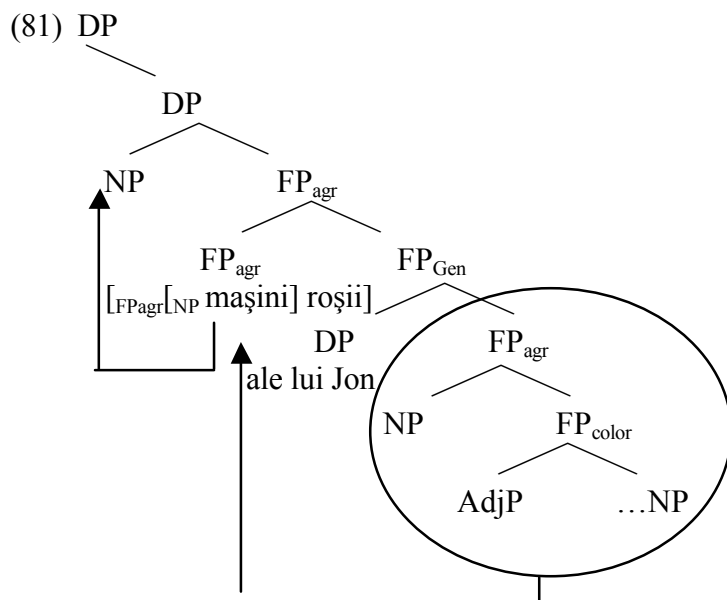
Note that the genitive argument in the Romanian postnominal domain occupies the functional projection that hosts the genitive possessor PP argument in Romance, given the structure in (82).

(82)   DP
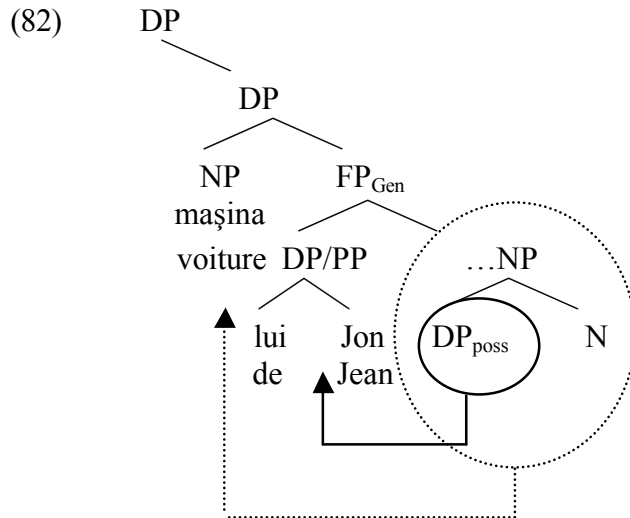
      Interestingly, the genitive argument can also occur in the Saxon Genitive position in front of the noun.[7] As in English, it must precede the prenominal adjective(s). The comparative data are provided in (83).

(83) a.   John's beautiful car
      b.   A   lui   Ion frumoasă maşină
            POSS the$_{+Gen}$ Ion beautiful car$_{[-def]}$
            'A beautiful car of Ion's'

Romanian makes use of the Vorfeld's Germanic genitive position in addition to the Mittelfeld's Romance one. The Saxon Genitive position is situated on the top of the DP layer (see (23)).

(84)   …DP$_{Gen}$
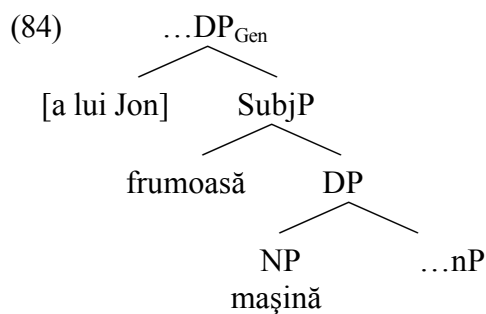
      Event-nominals too can select a genitive complement realizing the Theme, as in (85a). In (85b-c) the genitive element expresses the subject argument.

(85) a.   distrugerea   imediată a   oraşului   de către duşman
            destruction-the immediate POSS city-the$_{[+Gen]}$ by   enemy-the
            'The immediate destruction of the city by the enemy'

---

[7] This type of construction induces some stylistic effects, being rather infrequent in spoken Romanian.

    b.   reacţia   (imediată a)   lui   Ion   la   această ştire
        reaction-the immediate POSS the$_{[+Gen]}$ Ion at$_{[+Acc]}$ this story
        'Ion's immediate reaction to this story'
    c.   promisiunea de amabilitate a   lui Ion   către   Maria
        promise   of amiability   POSS the$_{[+Gen]}$ towards Maria

For all constructions the genitive phrase can reach the Saxon Genitive position, as exemplified in (86).

(86) a.   [$_{DP[+Gen]}$ [a oraşului] [$_{DP}$ distrugere imediată de către duşmani]]
      b.   [$_{DP[+Gen]}$ [a lui Ion] [$_{DP}$ reacţie imediată la această ştire]]
      c.   [$_{DP[+Gen]}$ [a lui Ion] [$_{DP}$ promisiune de amabilitate către Maria]]

In the postnominal domain, the genitive argument precedes the oblique phrase, as shown in (85a-b). In (85c) one observes that the *de*-PP expressing the Theme precedes the genitive/dative and oblique argument most naturally. Apart from the Genitive/Dative distinction inexistent in the Romanian DP, the same hierarchy as in French is obtained, namely: FP$_{de\text{-}theme}$ > FP$_{GEN/DAT}$ > FP$_{OBL.}$

    Finally, let us examine the distribution of possessive pronouns. According to Cornilescu (1995), possessive pronominal elements can be divided into Cardinaletti and Starke's (1999) three classes of pronouns. The complex form in (87a) is a strong one, accompanied by the possessive article. The form without *a* in (87b) is considered weak, while the reduced pronoun in (87c) is a clitic. The strong form in (87a) can be fronted in the DP left-periphery, as in (87d).

(87) a.   fată a mea
        'a girl of mine'
      b.   fata mea
        'my girl'
      c.   fata-mi
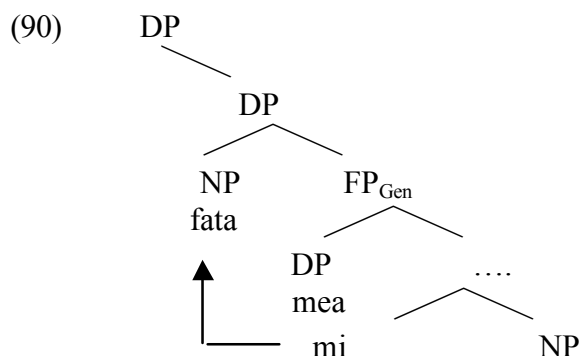   'my girl'
      d.   a mea fată

The complex strong form has exactly the same distribution as a possessive full DP (e.g. *a lui Ion*) occupying the specifier position of the genitive/dative functional projection represented in (82) and repeated below.

(88)
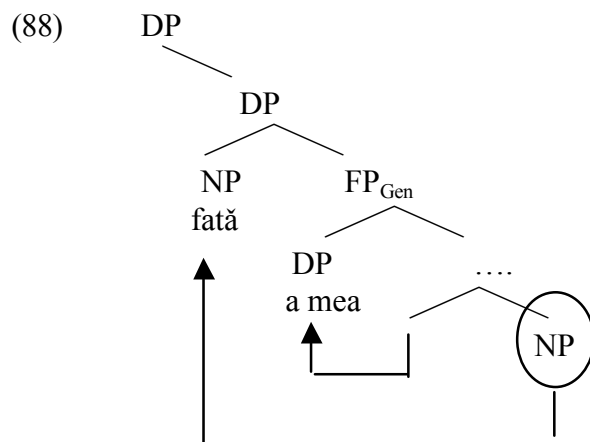
Like full genitive DPs, the strong pronominal form can be fronted in the Saxon Genitive position, as illustrated in (89).

(89)   DP~Gen~
         /   \
      DP   DP
    a mea   /   \
               NP   ....
              fată
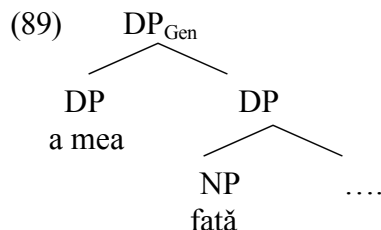
When the possessive pronoun is a weak/clitic form, it must be adjacent to the noun in order to incorporate into it, either before Spell-Out (clitic) or after Spell-Out (weak). This is represented in (90).

(90)   DP
          /   \
              DP
          /   \
       NP   FP~Gen~
      fata   /   \
             DP   ....
            mea   /   \
             mi   NP

The adjacency requirement with the noun (i.e. NP) is shown by the impossibility of having an adjective/demonstrative element intervening between the noun and the possessive weak/clitic pronoun, whence the contrast between (91a-b) and (91c-d).

(91) a. * [~DP~ [~FPagr~ maşina frumoasă] [~FPGen~ lui/sa …]] (weak)
                    car   beautiful   his
      b   * [~DP~ [~NP~ maşina] [~DemP~ aceasta [~FPGen~ lui/sa [~FPquality~ frumoasă]]] (weak)
                    car   this   his   beautiful
      c.   [~DP~ [~FPagr~ maşină frumoasă] [~FPGen~ a lui/a sa …]] (strong)
                    car   beautiful   of his
      d.   [~DP~ [~NP~ maşina] [~DemP~ aceasta [~FPGen~ a lui/a sa [~FPquality~ frumoasă]]] (strong)
                    car   this   of his   beautiful

To sum up, the Romanian noun phrase is a complex field that displays a series of DP-internal movement involving various functional projections not only in the Mittelfeld, but also in the Vorfeld (left-periphery) of the noun phrase. Romanian brings strong pieces of evidence in favour of the cartographic approach to the noun phrase.

5. CONCLUSION

We have provided pieces of evidence in favour of a complex noun phrase structure based on the intermingled placement of noun's modifiers and arguments. In addition to the Mittelfeld, the noun phrase's Vorfeld is a complex structure which hosts preposed adjectives and genitive arguments. The case of Romanian brings strong support for various types of DP-

internal movement: NP-movement, FP$_{agr}$-movement, adjective and demonstrative fronting, genitive argument preposing.

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