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5. **DETERMINER PHRASE (OVERVIEW)**

5.1. **Introduction**

In Chapters 5/6/7 I am going to introduce some concepts concerning the internal structure of a nominal phrase (i.e. DP) and discuss them using Czech data. Chapter 5 concentrates on the complex structure of DP containing a lexical noun and adjectives. In Chapter 6 I am going to discuss in more detail the structure and position of the elements occurring in the high periphery of the DP (demonstratives, possessives and quantifiers). Chapter 7 suggests a possible analysis for the pronominal elements replacing DP, i.e. pronouns, reflexives and clitics.

Czech nouns appear fully inflected for case + number + gender (+ animacy) features. Extending the concept of functional projections discussed in Chapters 2/3/4 with respect to Verb Movement, I will claim that these 'nominal features' are evidence of FHs existing above the (lexical) NP projection. In these Chapters I will argue that in spite of its overt morphology a Czech noun is located at PF in its base $N_0$ position and that at LF the noun checks all the features by a movement through all the relevant FHs, i.e. via the LF N-to-D movement. The occurrence of
the nominal morphology without any PF $N^0$ movement follows from the hypothesis presented in Chapter 2/3 for the verbal morphology: as long as the noun is the only lexical head inside the DP, it can reflect the FHs' features with no PF movement required.

Assuming the same framework, this Chapter therefore supports the hypothesis underlying the analysis of the position of the Czech finite verb, i.e. a hypothesis about the character of syntactically relevant inflection that is generated in a lexical head (LexH) and which allows/signals the LexH raising into the assumed FH's position as late as at LF.

5.2. Internal Structure of DP

The internal structure of the DP projection can be discussed/analyzed in many ways, the main one still being the ordering of the elements that co-occur within the complex DP. Since in this work I assume a uniform bar notation system, I am going to accept the structure of DP as given in e.g. Cinque (1993): I will analyze DP as an extended projection with lexical head Noun - $N^0$, a head of NP which occurs at the bottom of a string of functional projections FH$m$ related to nominal functional features.

Prior to the more detailed analysis of the structure of the Czech DP I am going to introduce the terminology and briefly sketch the development of the framework in some historical perspective. From many relevant works I chose only two - Jackendoff (1977) and Abney (1987), since they both discuss the English DP and some basic problems which appear in more recent analyses as well.

5.2.1. Jackendoff (1977)

In the work by Ray Jackendoff's X' Syntax: A Study of Phrase Structure (1977), topics relevant for internal DP structure are discussed in connection with the 'NP Specifiers'. Abstracting away from the semantically rich attributive adjectives which modify the noun,1 Jackendoff analyzes all the closed class categories regularly co-occurring with nominals. As NP is assumed to be the maximal projection of a noun, he takes all the elements standardly appearing within the nominal phrase for elements related to the SPEC positions of $N^0$. He argues that these elements represent syntactic categories of Art (article) and Q (quantifier) category. He divides them according to their semantic roles into three main classes: demonstratives (articles, demonstratives, interrogatives), quantifiers and numerals. Given the regular restrictions on co-occurrence of all the specifiers Jackendoff proposes a Specifier Constraint given below in (1)

1 There is no detailed analysis of the positions of attributive modifiers in Jackendoff (1977). Given that there is also no discussion of the $N'$ specifiers, my conclusion is that those adjectives were assumed to appear in a recursive SPEC $N'$. 

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Chapter 5: Determiner Phrase (Overview)
(1) **Specifier Constraint (Jackendoff 1977:104)**

An NP specifier may contain at most one demonstrative, one quantifier, and one numeral. ²

Jackendoff (1977) proposes a triple-bar structure for all lexical categories and argues that some of the *Art* and *Q* NP Specifiers occur as N” Specifiers and others as N” Specifiers. Since only the N” Specifiers are marked for the feature [+Det], the complementary distribution of possessives, articles and some quantifiers in English follows from either the feature content or from the structure of NP, which is given in the following schema.

(2)

\[ \begin{array}{c}
N''' = NP \\
N'''/Art''' \quad N'' \\
[+Det] \quad Q''' \quad N' \\
Fred's \quad the \quad many \\
those \quad few \quad dwarfs \\
which \quad several \\
\end{array} \]

The scheme above, reproduced from Jackendoff (1977:105), excludes strings with combinations shown below in (3) where the (*) quantifiers in the second column share a feature [+Det] and therefore compete for the same position with possessives and articles in the first column. (3) below is a reformulated (5.3) from Jackendoff (1977:105).

(3)

\[ \begin{array}{cccc}
Fred's & *some & many & dwarfs \\
the & *each & few & dwarfs \\
those & *all & several \\
which & *no & several \\
& *any & & \downarrow \\
\end{array} \]

² Jackendoff assumes that the N (noun) category can also appear as an NP specifier if such an N is a group noun, seminumeral, cardinal or pronoun.
Following Jackendoff the third column quantifiers (numerals) in (3) above do not contain a [+Det] feature and occur in the N'' specifier position. The co-occurrence of [+Det] quantifiers with [-Det] numerals is excluded by his Specifier Constraint (1).

Although the triple bar structure is not allowed in the framework accepted here,³ Jackendoff’s data and discussion show clearly that the number of positions preceding a noun inside NP=DP is more than one. It shows that these positions are locations of structurally identifiable elements which appear in a fixed order. Jackendoff’s three bar system allowed the author to distinguish three positions for the elements preceding a noun, which appears to be sufficient for most English data. However, in some other languages the co-occurrence of articles, demonstratives, possessives and numerals is not barred and therefore especially the non-uniform group of N''' specifiers deserve more refined treatment.

5.2.2 Abney (1987)

In more recent generative frameworks a high level of uniformity is assumed between the projections of all lexical categories. Among the works which started to overtly claim an analogy between nominal and verbal projections with respect to the presence of functional categories, Abney's dissertation (1987) The English Noun Phrase in Its Sentential Aspect is the most often cited.⁴ The author argues for an independent category of D (=Determiner), which is related to NP analogously to the category of I (=Inflection), which is related to VP. The arguments presented in Abney (1987) are derived from the similarity between complex sentential and nominal structures with regard to their semantic and syntactic properties:

First, the DP-hypothesis treats D analogously to I and C, which captures the similar semantic (functional) characteristics of all of them. In the same time it allows a uniform pattern of phrase projection within the X-bar theory suggested e.g. in Stowell (1981) and widely accepted after Chomsky Barriers (1986a/b).

Second, for English, the concept of a functional category D(eterminer) selecting a complement NP predicts the linear ordering of (at least functional) elements within the English DP more accurately than the previous hypotheses: If N is a head, the head-initial characteristics of English requires the occurrence of another D category preceding the noun. Moreover, under the assumption that in English determiners, demonstratives and possessive marker ‘s occur in the unique D-position, the DP hypothesis explains the restrictions on co-occurrence of the above elements in English.

³ It would be, presumably, fully acceptable following Chomsky's (1994/1995) Bare Phrase Structure and Multiple SPEC Hypothesis.
⁴ For similar proposals see also Hellan (1985) for Norwegian and above all Szabolcsi (1987 and subsequent works) for Hungarian.
And third, the DP-hypothesis predicts a similarity between verbal (clausal) nominal projections with respect to a thematic subject of V and of N, and between the overt subject agreement within both VP and NP. In (4) below I give examples with John as a subject of a sentence (4a), of a gerundive (4b), and of a derived nominal (4c).

(4)  (a)  [John]  destroyed  the spaceship  
(b)  [John's]  destroying  the spaceship  
(c)  [John's]  destruction  of  the spaceship

There are obvious distinctions between the structures given in (4) with respect to the Case assigned to the DP-subject (NOM vs. GEN) and the form of the complement (ACC vs. of-phrase). Abney claims that these distinctions can be plausibly derived from distinct properties of N and V categories, the projections of which otherwise follow the same pattern.

Arguing for his inflectional (functional) D category, Abney also exemplifies how in some languages a noun shows overt agreement with a possessive phrase. The example of such an agreement in Hungarian is cited below in (5) from Abney (1987:17), who cites Szabolcsi (1981, 1987).

(5)  (a)  Kaz en kalapOM,  
the I-NOM hat  -1S  'the my hat'  
(b)  az te kalapOD  
the you-NOM hat  -2S  'the your hat'  
(c)  a Peter kalapJA  
the Peter hat  -3S  'the Peter's hat'

Abney argues that the possessive agreement on a noun is an equivalent of the clausal subject-verb agreement. (In Hungarian the agreements are morphologically identical). As far as subject-verb agreement is attributed to the I category (which is also the Case assigner to the NOM subject), the data exemplified in (5) suggest the existence of some I-like category related to the noun (which may be also the Case assigner to the GEN/POSS subject). Abney (1987) identifies this I-like category related to noun with D.

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5 For more discussion of postnominal Genitives (esp. in Czech) see Chapter 8.
6 Abney (1987) shows data similar to those given in (5) above also for ergative-absolutive Yupic language.
7 Abney (1987) cites works by Szabolcsi and gives examples in Hungarian. In recent works by Szabolcsi (Szabolcsi 1989, 1991) the parallel character of agreement systems inside the DP an inside a clause is carried even further. Szabolcsi 1989 repeatedly shows that the possessive inflection occurring on the Hungarian noun is almost identical to the verbal inflection. She recalls Brody (1990, 1991), who made a similar proposal for the verbal inflection, and she
In his work, Abney further suggests the existence of functional categories similar to I or D for the structure of any lexical element. He claims (see Abney 1987:54-56) that the functional categories are semantically distinct from thematic categories:

While lexical elements enter into thematic relations between each other (including theta role assignment and adjunct licensing), functional elements are not related to the thematic relations.

Functional elements contain a feature [+F] and select a unique complement, i.e. they f-select their unique (functional or thematic) complement. Functional categories are semantically non-distinct from their complements - they do not describe a distinct object from that described by their complement but they only 'pass on' the descriptive content. E.g. D (determiner) specifies the NP for its referential properties in the same way as the FH T (Tense) specifies the VP with respect to its temporal location.

As for the attributive modifiers (adjectives), Abney (1987) proposes a structure analogous to the FH projections: D selects AP and within the AP A selects NP as its complements. The scheme of Abney's (1987) DP is given below in (6).

Abney's arguments for the existence of the functional inflectional category which is 'a head' of the DP are clearly independent of his claim about which lexical element represents such a head. The author, however, assumes that language acquisition requires some overt phonetic realization of the category D and proposes that the category of determiner is be such a lexical element (analogously to the class of modals which instantiate the I category within a sentential structure).

Reformulating Pesetsky's (1982) proposal, Abney suggests the distinction between c-projection (categorial, syntactic projection) and s-projection (semantic projection). Then VP/NP are maximal c-projections of VN, while IP/DP are their maximal s-projections. The same reasoning is applied also in Grimshaw's (1991) 'extended projection' concept, which claims syntactic relevance for Abney's s-projections.
The scheme (6) exemplifies that (following the universal pattern of phrase projection) DP is an NP dominated by its FHs. According to Abney, adjectival premodifiers (and numerals) appear in the positions equivalent to those of FHs. The restrictions on co-occurrence and ordering are then to be based on semantic criteria mainly, alternatively they are presented as a result of the subcategorisational features of respective FHs.

Although Abney's analysis of premodifiers as A-heads explains some characteristics of theirs (the fact that prenominal adjectives do not take complements and resist standard premodification, above all) it remains controversial with respect to other properties of adjective premodifiers. Therefore I am not going to follow Abney's analysis of prenominal adjectives here, assuming that prenominal adjectives are APs. (For more discussion see the sections below.)

### 5.3. The Position of $N^0$ inside the DP

The core of Abney's DP Hypothesis has been widely accepted. The similarity between VP and NP projections which the author pointed out is non-deniable and many interesting parallels are attested. Abney's dissertation thus opened the field for works introducing other nominal functional categories similar to the proliferation of verbal FHs.\(^{10}\) As for the characteristics of the positions and

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\(^{10}\) Following Abney's (1987) proposal, in e.g. Cornilescu (1993) where the Romanian DP is discussed, functional categories are defined with respect to their (a) c-selectional properties (requiring a unique syntactic complements), (b) grammatical features (e.g. Phi features of Chomsky (1981a/b), ARG features, or operator (e.g. +wh) features), and (c) m-selectional properties (stating the character of the related morpheme: free/bound). However, in e.g. Crisma (1990, 1993), Cinque (1993), Zamparelli (1994) and many other works, the claim appears that apart from FHs which show the above functional/semantic properties of D (Determiner), and apart from FHs which reflect DP agreement and features related to categorial functions of the noun, also adjectival premodifiers appear in semantically specified FHs related to NP. In other words, the authors' argue that the obligatory serialization of see next page
properties of lexical elements which are argued to instantiate various functional heads, however, far less consistency appears to be found.

Although the many controversial specifications of \( \text{FH}^N \) are disturbing, I have no intention to sort them out here. As I state more formally in the following section, from a syntactic point of view, any syntactically relevant \([+F]\) feature can be expressed as a specific phonetically realized \(X^0 (\text{FH}^N)\) element (e.g. an article), or reflected in a related \(\text{Lex}^0\) element (e.g. \(\text{FH}^N\) can be reflected by some kind of inflection on \(N^0\) governed by the \(\text{FH}^N\)). Through \(\text{SPEC}\)-head agreement the \([+F]\) feature can be alternatively found on phrasal elements in \(\text{SPEC(\text{FH}^N)}\) (e.g. on an AP). I will also assume that the distinct internal structure and the distinct position of the element follow the principles of the \(X\)-bar theory and therefore result in distinct properties of the structure.\(^{11}\)

### 5.3.1. Nominal Functional Heads

The following trichotomy (7) is based on principles of overt morphology I discussed in Chapter 2 with relation to verbal morphology. (7) below states more formally the assumptions made in section 5.3. above.

\[(7) \quad \text{The morphological feature} \ [+F] \text{ of the } \text{FH}_i \text{ can be realized:}
\]

(a) on the lexical \(X^0\) of the \(\text{FH}_i\),

(b) on the XP of the SPEC of the \(\text{FH}_i\), or

(c) on the closest lexical \(Y^0\) c-commanded by the \(\text{FH}_i\).

(7c) above follows the hypothesis I discussed in more detail in Chapter 2. This proposal allows morphology appearing on \(Y^0\) to be an overt reflection of the LF

\(^{11}\) As far as a FH is the site of some functional feature only, FH should be in fact semantically empty with the exception of the unique \([+F]\) feature. As long as this feature is of syntactic nature, such a concept is in my view clearly theoretically superior to any other. On the other hand, English modals are not one feature only, nor are all the elements claimed to appear on \(D\) for English such simple bundles of features. Therefore I will assume here that in a position of an FH some 'more complex' elements may also appear as far as they are X. An alternative is always possible, by some process of subsequent incorporation of all the separable features by raising from lower (adjacent and subcategorized) FH into higher FH. If such movement is not motivated independently and evidenced by some data, I take the more complex FHs of X for a preferred formalization.
raising of the lexical element Y\(^0\) into a FH\(_i\). Such a realization of [+F], however, is restricted because LF movement is subject to the same principles as syntactic head-movement before Spell Out,\(^{12}\) i.e. by a Head Movement Constraint derived from the ECP, which prevents a head from skipping another head.\(^{13}\)

Moreover, while syntactic head-to-head movement before Spell Out (‘the PF Movement’) can overcome an intervening head by adjoining to it, I claim here that this process is impossible in a derivation using morphology on a lexical element. Therefore any lexical head intervening in the c-commanding relation between the FH and the lexical element which reflects its feature is ‘intervening element’ preventing morphology to appear. Since the LF movement is characterized as substitution (see discussion in Chapter 2, sections 2.9 and 2.10) the feature checking procedure do not tolerate any intervening lexical head. If the features of a higher FH cannot be realized on the lower lexical head and if there is no other alternative of the realization of the [+F] (i.e. (7a) and (7b) cannot apply), the structure is ruled out.

Analogously to the discussion of Verb Movement, I propose that LF raising is the economically preferred alternative to the PF raising. Therefore as long as PF movement is not evidenced independently, I argue that morphology is not its signal. On the other hand I take morphology as evidence of a string of empty head elements in the region between the FH containing the [+F] feature and the lexical element which reflects the [+F] feature morphologically. Given the discussion in Chapter 2, only head elements can interfere with head movement: therefore neither adjoined phrases nor phrasal SPEC constitute an intervening element with respect to LF movement, i.e. overt morphology.

If the above is right, overt inflection is evidence of the presence of the related FHS but is independent of whether the lexical element raises into the higher FH before or after Spell Out.

With respect to DP structures, the following general assumptions are also going to be accepted in the following text:

(8)  
(a)  **Case filter**: DP must receive a Case.

(b)  **Case [+K] is a feature of a FH(D).\(^{14}\)**

\(^{12}\) Although the terminology is not exact, I will often use the label ‘PF Movement’ for the syntactic movement before Spell out in the following text.

\(^{13}\) For more discussion see Chapter 2. For the proposal of the Head Movement Constraint see Travis (1984) and Baker (1988) where also the ECP is discussed in detail. For definitions see (7) in Chapter 2. The following are from Hale & Keyser (1993): ‘Empty Category Principle: [e] (an empty category) must be properly governed.’ (H&K 1993:58) ‘The Head Movement Constraint: An X may only move into the Y that properly governs it.’ (H&K 1993:55)

\(^{14}\) For arguments to this claim see e.g. Giusti 1992a/b, 1993.
(c) The structure of the Czech DP contains the following FHs (the ordering follows):

(i) FH:D (determiner=Case),
(ii) FH:POSS (Possessive),
(iii) FH:Number & Ph(Phi features),
which dominate NP.

(d) Phi features in Czech are gender and animacy.

Czech nouns contain overt nominal morphology reflecting Case / Number / Gender / Animacy. As for the Case and Number, given that their are not so obviously inherently nominal properties, I take FH(s) for related to them as a plausible formalization of the phenomena.

The gender and animacy distinctions are on other hand related to the semantics and specific nominal paradigm, and as for their morphological realization they are the features most closely related to the nominal stem. Whether these features presuppose any FH(s) above NP is not so obvious. Still, following the framework accepted for the verbal projection, I will assume that also Phi features are reflections of some FH(s). All the nominal morphology appears in Czech in a fused form in the same way as the verbal morphology discussed already in Chapter 3. Therefore I suggest the same process of formalization, which can be repeated here as follows:

The morphology is generated on the lexical head, i.e. a noun, with no raising needed at PF if such a raising is not required independently. Since the FHs' features are reflected in one clustered (fused) form I argued that they are to be also checked in one position. The fused character of the morphology thus signals a fusion of the relevant FHs which precedes the raising of the N₀ into its final LF position. ¹⁵

¹⁵ These rules for overt morphology and the core structure of the DP are arguably universal. The number and character of the overtly realized Phi features, however, seem to differ cross-linguistically and it is also plausible to assume that some of them can be related to several lexical heads: e.g. some features which I take here for "nominal" may well be related to the category of Determiner, especially when D is lexical. With no claim about the complete set of features derivable from some UG principles, I will assume here that a given language can make its specific choice with respect to the number and character of Phi features which it requires to be realized and which are syntactically relevant. Therefore for Czech I will in this work use the label 'nominal Phi Features' for a complex of Gender/animacy and Number which are FHs inside an extended nominal projection (see e.g. (9) below). There are, however, some other quite plausible FHs in Czech which are not shown in (9) below, e.g. a claim for a FH specific for 'size' could be supported by the existence of standard Czech inflection for diminutives and augmentatives. Anyway, I believe that the structures and principles are equal
In the following (9) I show the suggested scheme of the Czech DP. The assumed N-to-D movement is marked here as a cyclic LF movement. All the FHs in the structure (9) have their SPEC positions. Following Cinque (1993), which is introduced in more detail in the following section, I take these positions for the sites of adjectival elements modifying the noun and reflecting the feature of the relevant FH.  

(9)

```
DP=KaseP
   / \  
SP(DP) D'  
   /   \     
   D     PossP  [+]
      /   \     
     SP(PossP) Poss'  
        /       \   
       Poss  [+]  PhP
          /     \  
         SP(PhP) PhP  
            /   \  
           Ph   NP  [+]
               /   \  
              SP(NP) N'
                /   
               N+Ph/+NUM/+CASE
```

5.3.2. Cinque (1993)

In these sections I reproduce some of the arguments given for the analysis of prenominal modifiers and internal structure of DP proposed in e.g. Cinque (1990b, 1993). I will also use some of Cinque’s data for Italian and English. Czech equivalents are added to show that the same concept can be successfully applied on Czech as well. At the same time the Czech data exemplify that there is no see previous page

for all FHs. Therefore for simplicity reasons I am not going to try to specify the exact number and contents of all the FHs in Czech.

Nothing, however, changes if one accepts the alternative with the FHs overtly moved into the highest FH before Spell Out already: i.e. the N can then move at LF into the highest FH in one step only. In the following Chapter 8 I will discuss the structure given in (9) in more detail with respect to the positions of possessives and postnominal genitives. I will argue that the N position is higher than suggested in (9) and I will also claim existence of other FHs dominating NP. With respect to the data in this Chapter, however, (9) is a proper estimation.
obvious structural distinction between the English and Czech DPs with respect to the ordering of the noun and its modifiers.

5.3.2.1. N-to-D Movement

Cinque (1993) On the Evidence for Partial N-Movement in the Romance DP argues that the distinct orders of attributive adjectives inside the DP in Romance and Germanic languages are derivable from the movement of N\(^0\) into a higher FH position.\(^{17}\) In his conception the head of NP (N\(^0\)) is assumed universally to move to the highest nominal (functional) projection: the D\(^0\) position at LF.

Languages differ only with respect to the position which the N\(^0\) takes at PF. In some languages the N-to-D movement takes place overtly in syntax and N\(^0\) appears in D\(^0\). Others languages show no N-to-D movement at all and N\(^0\) remains inside NP. The third type of language realizes the movement only partially, i.e. N\(^0\) leaves NP but does not raise as high as D\(^0\).\(^{18}\)

The example (10) below shows Cinque’s proposed structure for a language with partial N-to-D Movement: (n\(_{LF}\)) marks the assumed LF movement of the noun, N the PF position of N\(^0\), and \(\_\_t\) a trace in the base position of the noun i.e. in N\(^0\).

(10) **Partial N-to-D movement**

(Cinque 1993, for Romance)

```
[1FHP  XP  [1FH  nLF  [2FHP  n\(_{LF}\)  [3FHP  YP  [3FH  N  [NP  ZP  [N  t ]]]]]]
```

In (10) the SPEC positions of the FHs and NP contain optional phrasal elements (XP, YP, ZP above) of presumably attributive AP character. FHs are specified for the features related to the noun as well as to the elements in their SPECs.

The following (11) exemplifies the structures used by Giusti (1992a) and Cinque (1993) as instantiations of various levels of this movement. The English noun in (11a) remains in the base N\(^0\) position where it follows all the adjectives

---

\(^{17}\) I will not mention here the possibility of explaining the [N-A] ordering as a result of some distinct directionality of relevant relations inside the DP. For a discussion of theories deriving the mirror image structures from language specific directional and structural parameters see e.g. Cinque (1993).

plus the adjective which can be interpreted as a thematic subject of the DP. In (11b) the Italian noun raises to some higher FH (still following the D₀, however).¹⁹ In (11c) the Rumanian noun is moved into D₀ (as evidenced by the word order and also by an enclitic article -ul which appears at N₀).

(11)
(a) English: \([\text{DP the [Italian [invasion_N [of Albania]]]]}\]
(b) Italian: \([\text{DP l'invasione_N [italiana [t_N [dell'Albania]]]}]\)
   invasion Italian of-the Albania
(c) Rumanian: \([\text{DP portretul_N [acesta t_N [frumos [t_N]]]}]\)
   portrait this beautiful

Below I give the Czech equivalents of (11) to show that a surface string of elements does not evidence any overt N-to-D raising in Czech. Such a movement would raise the noun over the attributive adjectives (as in (10a) above) or over "thematic" APs carrying the thematic role of subject (see e.g. Italian in (12b). (Notice that the postnominal N complement of Albania is in the object position as in (11b) or (11c) above.)

(12) Czech (a) ten jeho krásný obraz
   the his beautiful picture
   (b) italská invaze do Albánie
   Italian invasion to Albania

Comparing (12) with the English (11c) there is no reason to claim any other than the left position of the adjectives with respect to the noun at any level of projection in Czech or English. This position of the noun signals that there is no syntactic N-to-D movement in either English or Czech. Cinque (1993) argues that the same A-N structure appears with the Romance structures at D-Structure (or its counterpart) and he gives more diagnostics for the structure. Some of his arguments are repeated below.

5.3.2.2. Pre/Post-modifiers with a Subject Theta Role

Cinque (1993) observes that in English a noun cannot raise over an adjective which is assigned a thematic role of a subject although it can raise over a base position of the DP subject if this subject is expressed by another DP within a PP. The examples are reproduced in (13).

¹⁹ Notice that in the Italian example (11b) the element italiana 'Italian' is of adjectival character - it shows agreement features with the preceding noun.
(13) (a) (i) **the liberal** withdrawal from the government
(ii) *the withdrawal **liberal** from the government

(b) **the withdrawal of the liberals** from the government

In (12b) above I illustrated that contrary to Italian and similarly to English, the Czech noun appears following an adjective which is interpreted as a subject of the DP.

The Czech equivalents to (13) which are in (14) below exemplify, however, that the subject interpretation in (12b) may be more a result of pragmatic factors (or are related to the interpretation of adjectives referring to nationality): given a possibility of some other (especially manner) interpretation, the subject reading is impossible and postnominal position is the only acceptable one in Czech for thematic subjects.20

(14) (a) **liberální** / *liberálů** odchod z vlády
liberal**ADJ/liberals**NOUN-GEN withdrawal from government

(b) odchod (*liberální) / liberálů z vlády
withdrawal liberal**ADJ/liberals**NOUN-GEN from government

The examples in (14) show that prenominal position in both Czech and English is available for adjectival elements only,21 while the postnominal is only possible with PPs (or case marked DPs).

Cinque (1993) suggests that a subject thematic role is assigned inside NP analogously to VP subjects - to the external position outside X', i.e. to SPEC(NP). If so, then the English (13b) and Czech (14b) are to be analyzed as N0 raising over a thematically marked position of the DP subject. This N0 raising over its SPEC containing the 'subject' element is supported also by data in (15a/b)

(15) (a) **the withdrawal from the government of the liberals**
(b) odchod z vlády **liberálů**
withdrawal from government liberalsGEN
'**the withdrawal from the government of the liberals’

20 For more discussion about the thematic roles related to noun see e.g. Giorgi & Longobardi (1991) or Cornilescu (1993) and the works cited there. As for the DP subject realization (and position) in Czech see Chapter 7 below where I show that subject arguments are related mainly to prenominal possessives or postnominal genitives. Following the discussion in Chapter 7, (14a) is ungrammatical because in prenominal position genitive DPs are (*) and their possessive counterparts never occur with plural. Therefore only the more vague form (AP premodifier) can be used in (12b) or (14a), alternatively (14b).

21 With the exception of the English Anglo Saxon genitive, apparently.
In (15a/b) in both languages the possible subject reading of liberals with respect to withdrawal is completely lost if the 'subject' structure appears non-adjacent to the head noun. Thus the examples in (13/14/15) argue for a specific position of thematically marked DPs/PPs immediately following the noun (postnominal genitives in Czech and of-phrases in English).

Following the idea that the subject interpretation of the postnominal genitives in (13b/14b/15b) is the result of N\(^0\) raising into some higher FH\(^N\), the examples (16) and (15a/b) show that it is only the N\(^0\) which undergoes the raising, since other parts of the lower NP cannot precede the thematic subject.

(16) (a) ta brutální invaze Italù do Albánie (*Italù)
   the brutal invasion Italians\(_{\text{GEN}}\) to Albania (*Italians\(_{\text{GEN}}\) )
   
   (b) the brutal invasion of Italians of Albania (*of Italians)

Thus (13/16) seem to argue that both English and Czech DP exhibit a kind of short N-to-D Movement, namely a movement to the position immediately above the SPEC of NP. A natural solution would be to relate the location of the N\(^0\) raising to the position of possessives, since the thematic role of subject is closely related to the possessive elements: possessives both in English (cf. Chomsky, 1971, and others) and Czech precede the noun and are complementary with GEN and of-DPs with subject role. (17a) shows, however, that in both languages any potential FH related to possessive elements would appear very high in the DP structure\(^{22}\), while in (17b) the adjectives interpreted as thematic subjects are close to the noun.

(17) (a) ta jejich brutální (*jejich) invaze do Albánie
   the their\(_{\text{POSS}}\) brutal (*their) invasion to Albania
   Their brutal (*their) invasion to Albania

   (b) ta (? Italská) brutální Italská invaze do Albánie
   the (?Italian\(_{\text{ADJ}}\) brutal Italian\(_{\text{ADJ}}\) invasion to Albania
   The (?Italian) brutal Italian invasion to Albania

Therefore (16/17) show that the FH\(^N\) related to possessives is not a plausible landing site for the movement of N\(^0\) when it raises to precede the SPEC NP interpreted as thematic subject.

Within a framework which allows any number of FHs to appear wherever needed, one can claim a special FH position above NP created for the N

---

\(^{22}\) Assuming that an FH related to possessive is an FH with a possessive element in its SPEC. See section 6.2. below.
movement. However, as long as there are no other signals of any N-to-D partial movement in either English or Czech full DP I conclude that the subject interpretation of adjective in (17a/b) and that of postnominal genitives can be explained by some semantic rule instead.23

5.3.2.3. Postnominal Adjectives

The prenominal position of the modifying adjectives was taken above as the only possible one in Czech. However, given the relaxed character of Czech word-order, some might claim that the ordering A+N is not required in Czech, and examples with inverted N+A orders like those in (18) below certainly could be given.

(18)  (a)  skokan zelený     kysličník uhličitý
  frog       green     oxygen     carbon     ('carbon dioxide')

         (b)  oblaka bílá     milý můj
  clouds white     dear my

Some problems with evaluation are caused by the fact that e.g. most of the scientific terminology in Czech follows the Latin patterns, i.e. with postnominal adjectives (see 18a). Similarly in poetic language the word order shows much wider variety and Latin patterns are traditionally taken for a high style model (see 18b).

However, the ordering A+N in this work does present a standard and productive ordering in Czech. If the existence of English expressions like Princess Royal cannot be used to argue for the N+A character of the English DP, the postnominal adjectives like those in (18) do not show it either, though more frequent and easier to form in Czech than in English.

Since all postnominal adjectival elements show the same agreement pattern as the prenominal ones, a similar structure can be presumed. The example (19) still suggests that the (partial?) N⁰ movement may be the right analysis for many of (a bit poetical) structures with postnominal adjectives. In (19a) sister can (in highly marked structures) appear at any position with respect to the adjectivals, as far as their mutual ordering is kept.

(19)  (a)  (sestra) ta     (sestra) tvoje (sestra) milovaná
  (sister) the (sister) your (sister) beloved
  'the beloved sister of yours'

23 With respect to the relation between prenominal APs and postnominal thematic subjects, there is no more discussion in Cinque (1993). The topic is mentioned below in more detail in Section 6.2., however. For a different solution see e.g. Corniles (1993).
The unacceptable (19b) demonstrates that if the ordering of modifiers is changed, the structure cannot pass within a range of 'poetic'. When in (19c) a larger element than the noun alone is fronted before the possessive or demonstrative, the ungrammaticality argues against any possible phrasal movement.

(19) (b) * sestra tvoje (sestra) milovaná (sestra) ta
        sister your (sister) beloved (sister) the

         (c) * (tvoje) milovaná sestra (ta) tvoje (ta)
             (your) beloved sister (the) your (the)

Given the marginal felicity of (19a) above one can still claim that a N-to-D is available as an option in Czech grammar. Such an option would then be evidently utilized for some other reason than e.g. Cinque's partial N movement in Romance. I will not accept this possibility here, assuming that head movement is not simply a stylistic option. Also, in (19a) above there is a noticeable pause in pronunciation between the noun and the following adjectives. Therefore I will consider all Czech postnominal adjectives as having the structures briefly introduced below, i.e. as postnominal modifiers or predicative adjectives or adjectives resulting from an underlying small clause structure.

Cardinaletti and Giusti (1991) discuss the "Modifier Hypothesis" (following Cinque 1990a), which claims that AP can modify the NP also in the structure exemplified in (20).

(20)

```
NP
  +---------------------+
  |                      |
  | AP modifier          |
  +---------------------+
```

The authors argue that postnominal APs modifying NP share the characteristics of the predicative APs with respect to their complexity and ability to appear following the copula. They claim that scheme in (20) is also the structure of relative clauses and therefore needed independently.

Postnominal (predicative/modifying) APs share properties with adjectives used in a postcopular predicative structures. They both show some properties distinct from the adjectives which precede the noun. While the predicative/modifying APs are clearly maximal projections which can be modified and which can take their
own complements, the prenominal APs show all the restrictions related to the assumed left branch position inside the DP structure.\(^{24}\)

The following (21a/b) exemplify the 'heavy' character which is typical (often required) for postnominal APs. Notice that modification does not exclude APs from prenominal position as long as the AP modifier belongs to a restricted class of modifiers (which in Czech show no agreement with the head N\(^0\)). Notice that with respect to the observed phenomena the restrictions in Czech are exactly as those in English.

<table>
<thead>
<tr>
<th>(21)</th>
<th>PRENOMINAL ADJECTIVES</th>
<th>PREDICATIVE ADJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>nesmírně pyšný muž</td>
<td>muž *(nesmírně) pyšný</td>
</tr>
<tr>
<td></td>
<td>the enormously proud man</td>
<td>a man *(enormously) proud</td>
</tr>
<tr>
<td>(b)</td>
<td>zbitý a ztýraný muž</td>
<td>muž zbitý a ztýraný</td>
</tr>
<tr>
<td></td>
<td>a bruised and battered man</td>
<td>man bruised and battered</td>
</tr>
</tbody>
</table>

(21c) illustrates some idiosyncratic restrictions on modification of prenominal APs.

<table>
<thead>
<tr>
<th>(21)</th>
<th>(c)</th>
<th>*(tak) akorát stejk</th>
<th>stejk tak akorát</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td>(just) right steak</td>
<td>a steak just right</td>
</tr>
</tbody>
</table>

In (21d) the prenominal adjective is exemplified to be unable to take a complement which is standardly allowed in predicative structures.

<table>
<thead>
<tr>
<th>(21)</th>
<th>(d)</th>
<th>*pyšný na svého syna muž</th>
<th>muž pyšný na svého syna</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td>proud of his son man</td>
<td>the man proud of his son</td>
</tr>
</tbody>
</table>

Since predicative exhibit all the properties of complex phrasal elements they plausibly are some kind of phrasal modifiers of the noun, and Cardinaletti & Giusti show they should be analyzed as XP modifiers of the maximal category NP. The occurrence of APs following the noun thus cannot be an argument for N-to-D raising.

The puzzling restrictions on the complements of the adjectives (in (21d), however, are often used to claim non phrasal structures for prenominal adjectives, which seem to have limited phrasal properties.

\(^{24}\) More about left branch phenomena is mentioned in section 5.5 where I discuss the extraction of adjectives out of DP.
5.3.2.4. The Categorial Status of the Adjectives

Given the distinct properties of prenominal and predicative adjectives, as mentioned above, Abney (1987) argues that the prenominal adjectives are heads of APs dominating NP. I cited Abney's proposed structure in section 5.2. above in (6) and formalized here as (22).

(22) (a) \[DP \rightarrow D, AP \]
    \[AP \rightarrow A, NP \]

(b) \[a \quad \text{proud} \quad \text{man} \]
    \[\text{[DP[D[a[AP[A\text{proud}[NP[N\text{man}]]]]]]]} \]

Abney's analysis, however, conflicts with the assumed subcategorizational properties of e.g. English determiners, since determiners select nominal phrase and not APs. Therefore Abney has to introduce a process of dual labelling: he allows the NP categorial features to percolate to the higher APs: the AP above NP becomes at the same time also NP, and thus it can be selected by D. This otherwise unattested procedure makes Abney's proposal less attractive and it therefore not discussed here.

Cinque (1993) claims phrasal categorial status for adjective pre-modifiers because of otherwise similar characteristics of prenominal and postnominal adjectives (the latter are \(X^\text{max}\)). Second, the XP character of the adjectives is derived from theory internal assumptions: Only as phrasal elements can the prenominal APs occur in SPEC positions and become 'invisible' for the head-to-head movement of the \(N^0\): in other words, if the adjectives can be skipped by a head (\(N^0\)), they cannot be heads themselves.

Similar reasoning can also be used against an analysis which would situate prenominal adjectives in some adjoined positions: the ordering of adjectives is cross-linguistically fixed.25 Cinque (1993) cites the following ordering for event nominals (23a) and for object-denoting nominals (23b).26

---

25 In e.g. Stavrou (1995), Greek data show various phenomena which can obscure the assumed universal strict order: conjoined readings of a series of APs, and a scope reading which reflects the pragmatic reorderings. As for alternative specific rules concerning the ordering of adjectivals, an interested reader is referred to the literature cited above or e.g. to Giorgi and Longobardi (1991), Zamparelli (1994) and works cited there. Most of these works refer to a thematic hierarchy, scopal characteristics or semantic concepts like 'closeness vs. absoluteness' of the adjectival meaning.

26 Other authors use other classifications which result in other orderings, naturally. For English, the descriptively instructive pedagogical English grammars give the ordering: number > opinion > size > weight > age > shape > colour > participle > origin > nationality > material. Alternatively e.g. M.A.K. Halliday (1985) argues for the English scale: numerative > epithet 1 (evaluative/attitudinal) > epithet 2 (objective property/experiential) > classifier.
(23) (a) possessive > cardinal > ordinal > speaker-oriented >
> subject-oriented > manner > thematic

(b) possessive > cardinal > ordinal > quality > size >
> shape > color > nationality

Under hypotheses assuming that adjectives are adjoined to some maximal projection (e.g. Picallo 1991), the ordering of the adjectives remains in fact unexplained, since adjunction is free with respect to the ordering of adjoined elements. The SPEC hypothesis, on the other hand, derives the order from the base order of the FHs. It predicts a strict order under the concept of Relativized Minimality: the XP (=AP) in SPEC cannot be skipped by another XP (=AP), since the closer SPEC element would interfere the antecedent relation of the removed element with its trace and the resulting structure would violate the ECP.27

Thus the ordering of pre-modifiers is better explained under the assumption that the adjectives appear in the SPEC position of some FH dominating NP. Such a position in the same time allows the prenominal adjectives to reflect the features of the nominal FHs via a standard process of SPEC-head agreement.

Still, although the above arguments are convincing, it is not clear to me how to characterize the FHs containing semantically heavy APs in their SPECs. The number and properties of these FHs remain to high an extent stipulative and not so obviously similar to the characteristics of other FHs.

On the other hand, I accept the SPEC position of adjectival premodifiers as fully justified in the initial structures of the DP, where among (a restricted number) of syntactically relevant elements like quantifiers, determiners, and possessives the ordering is very fixed. For the lower adjectives some more semantic ordering may also be a plausible alternative, as more freedom is attested cross linguistically.

5.4. Agreement inside the DP

The following noun phrase in (24a) illustrates the standard ordering inside the Czech DP. (Inflection is capitalized.)

(24) (a) tEN tvŮJ milovanÝ mladší bratr
    the  your beloved  younger brother
    'the beloved younger brother of yours'

27 Cinque (1993) cites examples of adjectivals which seem to have a head status, and those show the predicted blocking effect for N-to-D movement. For more data see the cited work.
All the elements preceding noun are inflected for Number, Gender, and Case. As one can see comparing (24a) with (24b) below, changing e.g. the gender of the noun, the whole structure.

(24)   (b) **ťA tvOJE milovanĂ mladšÍ sestra**
       the your beloved younger sister
       'the beloved younger sister of yours' 

The agreement on the adjectivals above is of twofold character, reflecting thus the two-way percolation of features inside DP: First the agreement reflects uniformly the ‘nominal categories’: e.g. Number, Gender, Animacy, presumably features of some low Phi FHs (if not of the N₀ itself). Secondly, the agreement reflects the features assigned to the DP from the external relation: e.g. Case. As claimed section 5.3 above (following the discussion in Chapter 2), as long as no FH is lexically present, all the features get realized on a noun since the N₀ is the only lexical head present in the appropriate position. The DP agreement system reflects the LF N-to-D movement. Therefore the features which appear on the noun appear repeatedly through the whole structure on any relevant number of the structure.²⁸

The following scheme in (25) exemplifies the suggested process for DP agreement: FH₅ stands for any nominal FH, i.e. for the FH within the extended projection of the noun. FH₆ is a top functional projection of the AP in the SPEC(FH₅).²⁹  FH₅ and FH₆ are in a SPEC-head relation, which is suggested here to result in overt agreement morphology in Czech.

(25)   DP Agreement

²⁸ The ‘relevant member of the structure’ here means a head of the lexical phrase in the SPEC position. See below.
²⁹ For the same proposal and some more discussion see also Giusti (1992a).
N-to-D Movement takes place plausibly universally but in Czech not sooner than at LF. FH^N is the assumed LF position of N^0 (or of the trace of N^0 resulting from the N-to-D Movement). Therefore FH^N 'contains' all the features reflected by a noun. These 'nominal features' are marked in (25) as [+N,+F]. Through the SPEC-head relation these features are shared with the head of FH^A and consequently by an element appearing in SPEC(FH^NP).  

The question remains, how do the nominal features get into the A^0, since the agreement is realized on the head of the AP, on A^0. One possibility is to claim that analogically to N^0, A^0 also raises to the top FHA at LF and checks its features. Alternatively the whole AP can raise to SPEC(FH^A) and the checking can be more complex. As I am not aware of any argument in favour of any of the proposals, I assume the former process, which is more simple. 

The rich DP agreement system requiring all the features to appear repeatedly through the whole structure seems to be in some sense non-economical. On the other hand, the feature-sharing property of the DP elements can be directly related to the ability of any Czech adjectival to replace the DP in elliptical structures. As exemplified in (26a), in the English equivalent a substantive formative one in (26b) is required presumably to carry the syntactically relevant features of the DP (cf. Lobeck, 1995, Chapters 2/3/4). The same function may be attributed to the Czech agreement features which appear on the adjectival element.

(26) Which of them did he see?

(a) - Tento. - (Ten) zelený. - Nejmenší. - První. // - Svůj.
    this     (the) green     smallest     first     self's

(b) - This one. - The green - smallest - first one //  His own.

---

30 It is not obvious, however, that the presence of FHs is necessary for overt agreement. Some alternative structural relation may be a plausible variant as well. However, in as much the 'relational' role of FHs was accepted here, the system requires a compatible adjectival FH as well. Following the logic: morphology signals a FH -> adjectives have 'morphology' -> adjectives signal FHs.

31 This analysis, however, predicts that there may be a language with overt syntactic A raising. The result would be something like the example below which is ungrammatical for prenominal APs (with the exception of structures like English ‘long enough bridge’ or so).

* FHNP [FHAP dlouhý'A [Adva metry [Adv]]] NP pěříkop ]
* long  two meters  ditch
All the Czech elements in (26a) are marked for ACC, SG, MASC, [-human] - therefore they in fact provide more information than the obligatory English one or the article alone. The Czech adjectives in (26a) therefore license the presence of \(N^0\) by overt adjectival inflection. However, it is not only \(N^0\) which is realized in the overt inflection of the adjective. The adjectives in (26a) are able to license the whole DP, i.e. being in the SPEC of \(FH^N\) they can license the presence of the empty NP complement of the \(FH^N\) together with all the others nominal FHs which are assumed to appear above the NP. In the following section I am going to show examples of lexical/nominal elements that precede AP modifiers in order to support the analysis suggested in this Chapter.

5.5. Some Examples of N-to-D Movement

Although in the preceding sections I argue that there is no syntactic movement of N in either English or Czech DPs, there are special structures where a nominal element precedes adjectival modifiers. Given their position with respect to AP modifiers, such nominal elements are plausibly analyzable as located in the higher projection, e.g. \(D^0\). In this section I am going to show some examples with modified pronouns.

Pronouns are since Postal (1968) analyzed as representatives of the Determiner category in English, and their resistance to modification is one of the supporting arguments. In the examples below, the personal pronoun cannot either precede or follow modifiers which can be used with nouns.32

(27)  
(a) Takový velký muž / *on
    such      big    man / *he

(b) *On/ten muž takový velký
    *he/the  man such    big

---

32 In Longobardi (1992) other examples are given with proper names which in some languages seem to instantiate an overt N-to-D raising. As the following example shows, this is not the case in Czech (and in English). (i)  
Ten váš hloupý Honza
the your silly Johnny

The only example with a postnominal modifier appears to be the form of feminine family names derived from nominal masculine names and which have a form close to the possessive. The possessive morphology, however, is not identical; the ordering of the elements is more traditional than required by any syntactic rule (it can be changed) and the postnominal position is therefore better related to postnominal (predicative) adjectivals discussed in section 5.3.2.4. below.

(ii)  
Jan Tesař  =>  Sylva Tesařová  => Tesařova žena
John Tesař Sylva Tesař-OVA  => Tesař-OVA(=poss) woman
Some indefinite pronouns, however, can be used with modifiers without any pause which may signal some kind of extraposition. Compare (28) below with examples of indefinite, negative and free choice pronominals in (27) above. Notice that modifiers are not acceptable preceding the pronoun.

28 (a)  *Takový velký někdo /nikdo /kdokoli
     such big somebody/nobody/whoever

(b)  Někdo /Nikdo /Kdokoli takový velký
     somebody/nobody/whoever such big

All the pronouns are derived from the form used as interrogative. (In (28) above kdo 'who'. (29) shows that interrogatives are also to precede the AP modifiers.

29 (*Takový velký) kdo takový velký
     (*such big) whONOM suchONOM bigONOM

The pronouns just exemplified above show characteristics of an element which appears in the high functional projection of the DP, since the ordering of modifiers follows the standard pattern (demonstrative-modifying AP). Notice that the pronouns reflect the Phi features which are assumed to appear in lower functional projections (animacy). Therefore I suggest that the pronominal forms in (28/29) are generated in a lower (N0) position and raise in syntax. If the analysis is correct, this again shows that the AP premodifiers can be skipped by a raising head element and thus are best analyzed as appearing in SPEC positions.33

The importance of the feature content of the pronominal element appears to be highly relevant. In (28/29) the modifiers reflect the features of the pronoun which, at least with [+HUMAN] are not so clearly default. They also reflect the Case of the pronoun, as marked in (29).

In (30) the same pronouns are given in [-HUMAN] forms to show that agreement in Case is not common to all the forms. In (30a) the forms corresponding to (29) above are shown to be unacceptable. The structure exemplified in (30b) exemplifies rather the agreement pattern typical of quantifiers followed by a partitive genitive.34

33 The incompatibility of some premodifiers (demonstrative pronouns in (i)) can be explained by feature content of the element - the modifier is arguably [+DEF] while the pronouns are not.

(i)  *Někdo /nikdo /kdokoli ten
     somebody/nobody/whoever the

34 For more discussion concerning genitive case and quantifiers see Chapters 6 and 7 respectively.
Chapter 5: Determiner Phrase (Overview)

(30) (a) *Co /něco /nikdo /cokoli takový velký
*what/something/nothing/whatever NOM suchNOM bigNOM

(b) Co /něco /nic /cokoli takového velkého
what/something/nothing/whatever NOM suchGEN bigGEN

The examples thus suggest that while for N, [+HUMAN] is unmarked, for D the unmarked form in [-HUMAN].

To capture this distinct agreement pattern\(^{35}\) I suggest that in (28/29) the [+HUMAN] pronominals are generated inside NP and to reach their high position they pass all potential FH\(^N\)s (most of them with default features only). As long as the traces of this [+HUMAN] pronominal element appear in the FH\(^N\), the premodifying APs can reflect the relevant Case agreement.

Contrary to this analysis, the [-HUMAN] pronouns are equivalent to quantifiers in a sense that they are base generated above NP and do not pass the FH\(^N\)s: they reflect default features only and the APs in the SPECs of FH\(^N\) cannot show agreement with them. The suggested structures are schematically exemplified below in (31).

(31) (a) N-to-D Movement

(b) \(\Sigma^0/D^0\) co-occurring with 0 N\(^0\)

\(^{35}\) The agreement pattern exemplified in (29/30) appears in other languages as well (German including).
(31a) is the proposed structure for [+HUMAN] pronouns in e.g. (28/29),
and (31b) is for [-HUMAN] forms given in (30) above.\textsuperscript{36}

The proposed analyses support the availability of N-to-D Movement in Czech,
and therefore it is plausible to assume it at LF and make it responsible for the DP
internal agreement as I argued in 5.3.3. above. It also supports the position of APs
in SPEC positions. Notice that the above proposal clearly supports the hypothesis
proposed in this work: i.e. the hypothesis claiming that a lexical head element
blocks relevant morphology on a head in a lower position. In the same time it
shows that agreement patterns reflect the structure of the constituent in a way
which cannot be captured by simple ordering of the elements within the string.

In the following section I am going to discuss in more detail possibilities of
extraction of some elements from complex DP structures, in order to support the
phrasal character of prenominal APs and the DP structure as it was demonstrated
in the above sections for Czech.

5.6. Extraction out of DP and [PP,DP]

5.6.1. Left Branch Condition in the English DP

All the adjectival elements preceding the Czech N\textsuperscript{0} are represented above as
occurring in the left branch of the DP projection. Already Ross (1967) noticed
some specific properties of the left branch constituents. The same phenomena is
discussed also in Emonds (1976), who shows e.g. that the left branch constituents
are not able to take complements. (Examples see above in (23)). Another property
of the left branch constituents is their frozen character with respect to extraction
and reordering processes.

Ross's Left Branch Condition given below in (32) the first of several
formalisations referring to the phenomena.

(32) The Left Branch Condition

\textsuperscript{36} In (31) the highest FH\textsuperscript{N} is in both cases labeled (following Laka 1989, 1990) as \( \Sigma P \) related to
a head with negative/positive features, since all the pronominals reflect such a feature. Given
that demonstratives follow the pronominals, \( \Sigma P \) is to precede the DP. For similar claim about
\( \Sigma P \) being the top DP projection see also discussion in Chapter 7.
No NP which is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule.

Within Ross’s categorial system NP in (32) reads as NP, AP, or PP today. The Condition given above therefore refers to more general phenomena than extraction of elements from the left branch of DP. In this section, however, only the DP extractions are going to be discussed.

The examples below show restrictions which occur in English DP.37 (33/34) exemplifies the impossibility of extraction: topicalisation in (33) or Wh-questioning in (34), of a left adjectival modifier in English.

(33) (a) John bought [\text{DP} a [(very) expensive [picture by Dali]]].
(b) * That expensive did John buy [\text{DP} t, [picture by Dali]]!

(34) (a) * Which did John buy [\text{DP} t, [picture by Dali]]?
(b) * How expensive did John buy [\text{DP} t, [picture by Dali]]?
(c) Which picture by Dali did John buy [\text{DP}_{t/d}]?
(d) How expensive picture by Dali did John buy [\text{DP}_{t/d}]?

In (34e-h) below similar restrictions are evidenced with English possessive NPs appearing on the left branch of DP.

(34) (e) John saw [\text{DP} the minister's [wife's [dog]]].
(f) * Whose, did John see [\text{DP} t, [wife's [dog]]]?
(g) * Whose wife's did John see [\text{DP} t, [dog]]?
(h) Whose (wife's) dog did John see [\text{DP} t]?

Both (33) and (34) show that, although it is possible to extract the whole DP in (33a) and (34a/e), a part of the DP cannot be extracted in English.

Ross’s Constraint (32) incorrectly refers to the leftmost constituent only. Later reformulations of similar constraints attempted either to enlarge its application to any left constituent (e.g. Emonds’s (1985) Generalized Left Branch Condition) or to express the restriction in structural terms (e.g. Chomsky’s (1973) Specifier Constraint, or May’s (1977) Condition on Analyzability).

The above mentioned constraints, however, often conflict with the otherwise more general availability of peripheral positions and they never seem to be able to capture the data cross linguistically. Moreover, in the latest framework, constraints referring to specific positions are preferably replaced by some more general principles. E.g. instead of referring to the properties of positions which are not

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37 The examples (34/32/33) are adopted from Corver (1990) and all generally retain his evaluation (and analysis).
affected by reordering rules, the alternative explanation for the Left Branch Condition can be formalized as a restriction resulting from a property of the extraction domain.

In Corver (1990) the Left Branch Condition is discussed in the framework of Barriers, as it is argued for in Chomsky (1986a/b), combined with Abney's DP Hypothesis. Corver claims that the non-extractability of attributive adjective phrases in English can be explained in terms of the ECP and Subjacency Condition.

The proposal can be briefly summarized as follows: Adjective phrases are sisters to N', i.e. they appear inside the NP which is a complement of $D^0$. $D^0$ does not L-mark its NP complement and therefore NP is a blocking category and L-barrier.38

Since NP does not permit adjunction, being a potential argument, the L-barrierhood of NP cannot be circumvated by adjunction. Thus crossing the NP L-barrier results in violation of subjacency. Moreover, since DP may inherit a barrierhood from NP, if SPEC(DP) becomes unavailable for the moving element, crossing DP will result in another violation of subjacency.

Irrespective of a subjacency, extraction of an adjectival from a position lower than the lexically present $D^0$ also violates the ECP. It is because the $D'$ becomes an M-barrier,39 containing the potential trace, a maximal projection containing a trace (i.e. NP, or any XP dominating the A+N elements) and a closer lexical head governor for the trace (i.e. $D^0$). The structure is schematically given in (35).

\[
(35) \quad * \quad D' \quad D^0 \quad [\text{AP}] \quad [\text{NP}] \quad [\text{NP}] \quad [\text{N'} \quad N^0] \\
\text{DP} \quad \text{L-barrier} \\
\text{NP}_{\text{max}} = \text{blocking category (not L-marked)} \\
\text{D'} = \text{M-barrier (by inheritance)}
\]

Given the M-barrierhood of $D'$, i.e. that the lexical $D^0$ in English that is a closer potential governor for any lower trace, the reasoning above can be used to explain

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38 An L-barrier (Lexical Barrier) is a barrier resulting from the absence of L-marking of a maximal category. An L-barrier constrains movement and bounding relations - it is a violation of a subjacency. For more detailed discussion of the concepts used here an interested reader is referred to Chomsky (1986a) and Corver (1990:2.7.).

39 M-barrier (Barrier by Minimality) is a barrier resulting from the presence of a closer governor and it is relevant for government relations: its violation results in the trace of moved element not being governed, i.e. in a violation of the ECP.
the restricted extractions demonstrated in (33/34). M-barrierhood is enough to prevent extraction of the English adjectivals no matter whether they are argued to occur inside the NP (as Corver, 1990 does) or inside any lower maximal functional category (as assumed here). 40

On the other hand, the frozen character of elements occurring in $D^0$ or in $\text{SPEC(DP)}$ (e.g. possessors as exemplified in (35) above) cannot be accounted for in the same way. Direct object DPs are L-marked and therefore they are not L-barriers. Yet (36) is not possible in English.

(36) (a) * The/that I saw $[t_i] \text{picture of Mary}$.
(b) * Which/Whose did you see $[t_i] \text{picture of Mary}$.

Since Corver (1990) accepts a narrow definition of M-barrier, 41 extraction of the possessors and determiners does not violate the ECP either, because D is not a potential governor c-commanding the trace. Therefore Corver explains the impossibility of the extraction of determiners by the fact that they are $X^0$.

Consequently, first, their movement is restricted by the Head Movement Constraint, and, second, the target position for $X^0$ cannot be a phrasal position - i.e. SPEC position (which it is in (36)). Corver argues that English possessive pronouns like whose appear in $D^0$ and therefore the extraction is excluded by The Head Movement Constraint similarly to that of determiners. As for NPs with 's possessive marker, Corver claims that they do not form a constituent (only 's appears in $D^0$) and therefore cannot be removed.

Like many other authors including already Ross (1967), Corver (1990) notices that the restrictions which appear severe in English DP are more relaxed in e.g. many Slavic languages. Corver shows examples from Czech and Polish similar to some of those which are given in the following section 5.6.2. He argues that the evident relative freedom of extraction is caused by the lack of the D category in both Czech and Polish.

According to Corver's analysis, having no $D^0$, Czech and Polish have no DP either. Therefore NP is directly L-marked by a verb and not an L-barrier. Having no $D^0$, moreover, neither Czech nor Polish have any potential closer head.

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40 If English adjectives are not within the NP projection, there is no NP L-barrier. The top DP projection may be L-marked and therefore no L-barrier either. Neither do count for barriers the nominal FHs assumed above the adjectives because contrary to LexHs they are not potential L-barriers.

41 "a is a M-barrier for b iff a includes g and d, where g is a maximal projection (not necessarily distinct from a) including b, and d a head c-commanding b." (Corver's citation of Chomsky's class lectures 1986-Fall).
governor for the trace, and therefore there is no M-barrier inside the DP-less NPs either.

Notice, however, that even in the framework used in Corver (1990) it is not necessary to claim the absence of the DP projection in Czech. The hypothesis followed in this work, i.e. the claimed absence of the lexical element identified as FH:D dominating the lexical projection of NP in Czech, together with a distinct position of the AP prenominal adjectivals, i.e. their position above the NP^max, provide the same results and can explain the distinct properties of the English and Czech DPs with respect to extractions.

Since a universal bar notation is to be preferred to any language-specific structures, the conceptualization allowing us to keep the same structures for both English and Czech DPs is to be preferred. In the following section I am going to exemplify the data concerning extractions from the Czech DP in more detail including structures which remain problematic under Corver's analysis.

5.6.2. Left Branch Extractions from the Czech DP

5.6.2.1. Adjectives, Demonstratives, Possessives

In (34a) below examples of wh-questioned adjective modifiers (and possessives) are shown in Czech. (34b) shows topicalization of an adjective modifier /demonstrative /possessive, i.e. a movement of the topicalized (contrastively focused) phrasal element, presumably to the SPEC(CP) position.

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42 I am not going to discuss here in detail the theoretical background given in Corver (1990). In this Chapter, however, in the previous sections I repeatedly demonstrated that the Czech DP is a close equivalent to the English DP with respect to most of the observed properties. Therefore I assume that the similarity between English and Czech includes also the existence of the projection of D in both languages.

43 In Chomsky (1986a) the proposal is made that empty heads do not create M-barriers and this proposal is accepted in Corver (1990) with respect to prepositions. Therefore, as it was already done in the text above, the d "head c-commanding b" is assumed to be lexical in the definition cited in the footnote (41) above.

44 It should be noticed, however, that all the Czech examples below with extracted adjectivals are marked options. In all cases the pied piping of the rest of DP (as it appears in the English equivalents or in the Czech (41a)) would be taken for more salient/frequent variant also in Czech. The movement of only a part of the DP is probably motivated by special pragmatic reference to the modifier adjective (i.e. topicalization or contrastive focusing of the adjective only) which in English would be marked by a phonetic stress. The possibility of pied piping of the rest of the DP in Czech (i.e. the movement parallel to English grammatical Wh-movement or Topicalization) is a counterargument to any hypothesis which would take the removed adjective element for a non-constituent with respect to the rest of the DP, since as long as the complex appears in SPEC(CP) it is to represent a single constituent of some kind. Notice also that the extraction possibilities apply in the same way to WH elements and topicalized elements. This similarity supports the fairly uncontroversial
Notice that both demonstratives and possessives (both of them carrying agreement morphology) are to be analyzed in a similar way. (See the following Chapters 6.7.)

(37)  (a)  **Jakou/Kterou/Čí, jsi viděla [DP t, knihu ]?**  
what /which /WhoseACC AUX-2S saw-SF t bookACC  
'WHAT/WHICH/WHOSE book have you seen?'

(b)  **Takovou/Velikou/Tvoji jsem viděla [DP t, knihu ].**  
that /large /yourACC AUX-1S saw-SF t bookACC  
'I have seen THAT/LARGE/YOUR book.'

In (37a/b) above the DP is an accusative (ACC) direct object argument. In (34c/d/e) structures with oblique cases are given to show that APs from oblique case DP arguments can also be extracted in Czech.

(37)  (c)  **Kterému /Vašemu to poslala [ t chlapci]?**  
whichDAT / yourDAT itACC sent-3SF t boyDAT  
'To WHICH boy did she send it?' - 'She sent it to YOUR boy.'

(d)  **Jakým to napsala [ t perem]?**  
whichLOC itACC wrote-3SF t penLOC  
'WHICH pen did she write it with?'

(e)  **Jakého se bojíte [ t strašidla]?**  
whichGEN Refl afraid-2P t ghostGEN  
'WHICH ghost are you afraid of?'

In the Barriers framework used in Corver (1990), in all the examples in (37) above the DPs are arguably L-marked by the predicates. Since I argued in the previous sections that attributive adjectives appear in the SPEC positions above the NP, and since there is no lexical closer head governor for the traces of the extracted adjectives in Czech, there is no M-barrier either which could block the extraction adjective element from the Czech DP preventing an antecedent governing relation between the trace and its antecedent (or intermediate trace).
5.6.2.2. Extractions of the Adjectives from PPs

The relevance of the presence of a potential lexical head governor is supported by the following (38), where a modified DP follows a lexical preposition. (38a/b) demonstrate that no adjective extractions are possible in Czech from DPs following an overt preposition.

(38) (a)  * Kterém, hráli ([PP na t, kur tu]) tenis ([PP na t, kur tu])?
* which t played-3PM [PP on t court] tennis [PP on t court]
  cf. 'On WHICH court did they play tennis?'

(b)  * Největším, hráli ([PP na t, kur tu]) tenis ([PP na t, kur tu])
* largest t played-3PM [PP on t court] tennis [PP on t court]
  cf. 'On the LARGEST court they played tennis.'

The PPs above are L-marked by a verb which selects them. The DPs are L-marked by the prepositions which assign overtly morphologically realized Case to them. Therefore the presence of a lexical governor (P₀) creating the M-barrier for government of the trace seems to remain the only explanation.

Because I have no explanation for this restriction I will leave the question open. What remains a fact is that some extractions are fairly acceptable also with oblique case arguments even in a presence of another argument. On the other hand, the above example shows that the stranded noun is clearly not dislocated to the right edge of the clause. Therefore I am not going to pursue any analysis suggesting a movement of the whole DP into SPEC(CP) and a consequent rightward movement of the noun: First because no right movement is acceptable within the accepted framework, and second because of the examples like (i) above.

The following examples illustrate the strict adjacency requirement for prepositions and the following DP in Czech showing that the structure [PP P t] is ungrammatical in Czech. The examples below exemplify that neither preposition stranding (d/e) nor extraction of the preposition only (c) is allowed in Czech, although the whole PP can be wh-questioned or topicalized easily (a/d).

(a)  [Pro Petra] to napsal tᵢ
(b)  * Petra to napsal pro tᵢ
(c)  * Proᵢ to napsal tᵢ Petra
    for PeterACC itACC wrote-3S (for Peter)
    'He wrote it for PETER.'
(d)  [Pro koho] to napsal tᵢ?
(e)  * Kohoᵢ to napsal pro tᵢ?
    for whoACC itACC wrote-3S (for tᵢ)
    'WHO did he write it for?'

The explanation referring only to M-barrierhood arising from the presence of a lexical P can be used for Czech and similar languages. English allows preposition stranding; therefore the presence of a lexical governor represented by a preposition apparently can be voided.
Notice, moreover, the fully grammatical extractions in Czech of prepositions together with the adjectivals of the lower DPs, as exemplified in (39) below.\footnote{The \([PP t_i N]\) structure in (39) is suggested with respect to the assumed ordering of elements. In the text below, however, I am going to argue for another structure of the extraction site.}

(39) (a) \([Do jakého]_i jste šli [PP ti lesa]?\)
into which\(_{GEN}\) AUX-2P went \(_{t_i}\) forest\(_{GEN}\)
'Into WHICH forest did you go?'

(b) \([Pro kterého]_i to přinesla [PP ti chlapce]?\)
for which\(_{DAT}\) it\(_{ACC}\) brought-3S \(_{t_i}\) boy\(_{DAT}\)
'For WHICH boy did she bring it?'

(c) \([Za číli]_i jste bojovali [PP ti práva]?\)
for whose\(_{ACC}\) AUX-2P fought \(_{t_i}\) rights\(_{ACC}\)
'For WHOSE rights did you fight?'

In (39) the adjectivals are extracted together with prepositions, leaving nouns behind. In the following (39d) I give an example of topicalised preposition with an AP modifier (possessive).\footnote{Such examples are more difficult to find in, but the reason seems to me to be more pragmatic than syntactic. The same applies to quantifying elements discussed in the following Chapter, Chapter 8.}

(39) (d) \([Pro svoje]_i to přinesla [PP/DP ti děti].\)
for self's\(_{ACC}\) it\(_{ACC}\) brought \(_{t_i}\) children\(_{ACC}\)
'She brought it for HER children.'

Corver (1990) takes the prepositions in Czech and Polish for proclitics cliticized on the heads of the extracted elements. The structure suggested by Corver (1990:337) is given below in (40). He refers to a similar analysis of Hebrew complementizer še as it is claimed in Shlonsky (1988). Following the same author, Corver stipulates that such surface cliticization does not result at LF in a trace of the cliticized P inside PP. Such a trace would violate the ECP since with no movement it occurs higher than its antecedent. The proposed process of cliticization, however, is able to void the barrierhood of P and therefore allows the extraction from a lower DP. (Corver (1990) does not give a precise specification of which element is being extracted. Given the preceding discussion I assume it should be the AP with the cliticized preposition.)

It is well known that prepositions in Czech (as well as in many Slavic languages) show phonetic properties which may be analyzed as a result of their being proclitics: they are inseparable from their following complement and also

\begin{itemize}
\item \text{The \([PP t_i N]\) structure in (39) is suggested with respect to the assumed ordering of elements. In the text below, however, I am going to argue for another structure of the extraction site.}
\item \text{Such examples are more difficult to find in, but the reason seems to me to be more pragmatic than syntactic. The same applies to quantifying elements discussed in the following Chapter, Chapter 8.}
\end{itemize}
the word stress is assigned to the whole PP: in a PP it is the preposition that carries the main word-stress instead of the following nominal.\footnote{Although the last property - stress shift into the Prep in a \[P+N\] complex - argues in my view more against than for a clear clitic characteristic of the prepositions. As discussed in detail in Chapter 7, clitics combined with words usually form a phonological unit. Still, clitics themselves are obligatorily unstressed and their presence does not result in any main change of the existing stress pattern.}
(40) (Corver, 1990:337)

Yet, the structure (40) requires some other specification of the position of the cliticized preposition. Preposition is probably a head $P^0$ category and an equivalent $X^0$ host is therefore the only theoretically plausible option. However, as exemplified below in (41), it is not so clear what counts as the 'head' which is used by a preposition to cliticize on.

(41) [Přes dva metry vysoký], přeskočil Petr tři plot.

[across [two metersNOM] highACC jumped Peter fenceACC

'Peter jumped over a TWO METER HIGH fence.'

In (41) the preposition precedes the measure phrase, showing that what is extracted is not $A^0$ but the whole AP containing its modifier. As marked in the glosses in (41), the non-agreement of the measure phrase suggests that the measure phrase is a part of the AP and not an element appearing in a separate SPEC position of some nominal FH. Therefore the preposition cannot be claimed to cliticize to $A^0$.

The examples in (42) (not discussed in Corver (1990)) demonstrate the extraction possibilities more clearly. In (42a) the whole PP is extracted showing that it (at some level) forms one constituent with the following [DP,PP].

(42) (a) Na jak vysoký strom jsi vylezl?
(b) Na jak vysoký jsi vylezl strom?
In (42b) the preposition together with the modified adjective is extracted leaving the noun behind. In (42c) it is only the preposition and a measure phrase which appear in SPEC(CP), while both the adjective and the noun remain in a postverbal position.

The examples above suggest that the extracted element(s) must be those which occur first within the DP. This claim is confirmed in the example (43) below.

In (43a) a possible extraction of [P + possessive] is exemplified (recall that possessives precede adjective modifiers in the Czech DP). In (43b) the extracted element is not the 'first' following the preposition since it is to follow the possessive. (43c) exemplifies further on that it is to be only one element (i.e. the constituent which can appear in a unique SPEC position) which can be extracted.

The examples (42) and (43) above show that the element which can be extracted is initial within the complex DP.51

With respect to (42c), recall that measure phrases modifying adjectives do not show overt agreement with a noun. Therefore they show no agreement in Case either. Given the agreement pattern and the fact that measure phrases modify only the adjective, they are plausibly inside the AP which appears in the SPEC of a

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51 The marginal (more marked) possibility of extraction of the non-initial elements suggested by (43b/c) can be explained by the scopal rules which apply on the ordering of the adjective prenominal modifiers. Alternatively some more complex 'restructuring' of the DP preceding the extraction can apply. Recall also the possibility of prenominal modifiers combined with postnominal predicative adjectives and AP small clause structures. For an analysis of some postnominal adjectives related to the small clause hypothesis see e.g. Starke (1994), where some Slovak data are exemplified.
nominal FH. (42c) thus shows that it is not complete SPEC of a nominal FH which is extracted but its part only.

This conclusion is supported by the next example where the extracted element is only preposition and a part of a measure phrase. In (43d) the case is assigned by a preposition. Notice again that if the extracted element contains only a (part of a) measure phrase, the overt case marking appears only on the stranded part of the DP although the preposition must appear with the moved element.52

(43) (d)

(i) [Na kolik], vylezl [PP t, metrů vysokou věž?
[on how-many], climb [PP t, meters\textsubscript{GEN} high\textsubscript{ACC} tower\textsubscript{ACC}
'How many meter high tower has he climbed on?'

(ii) * [Kolik], vylezl [PP na [DP t, metrů vysokou věž?
* [how-many], climbed [PP on [DP t, meters\textsubscript{GEN} high\textsubscript{ACC} tower\textsubscript{ACC}
'How many meter high tower has he climbed on?'

(43dii) indicates that the preposition must be fronted together also with a non-case marked wh-word. The reason for the preposition fronting cannot be claimed to be a result of any Case requirements of the extracted element: neither 'how many' nor the 'meters' are marked for ACC (the 'meters' are in GEN required by a quantifier). The adequately (ACC) case marked adjective and noun appear both to the right.

Given that the position SPEC(CP) is phrasal position I assume that all the extracted elements must be constituents. Since the possibility of fronting the whole PP in (42a) shows that the constituent structure is at some level of derivation a standard [DP,PP] pattern I propose that the movements demonstrated in (41/42/43) are not one step movements. I suggest the following structures (44/46) as a three-step process restructuring of the [DP,PP] which allows the extractions exemplified above.53

32 The following examples show that to extract the non-initial part of the measure phrase is ungrammatical, supporting thus the above observation that it must be 'the first' (phrasal) element of the DP which can be extracted together with a preposition. (Compare with (43b) above.)

(a) * Na čeho jsi vylezl [PP dvacet ti vysokou věž?
* on what AUX-2S climbed twenty high\textsubscript{ACC} tower\textsubscript{ACC}
'You have climbed up twenty of WHAT high tower?'

(b) * Na jakou jsi vylezl [PP dvacet metrů ti věž?
* on which AUX-2S climbed twenty meters\textsubscript{GEN} tower\textsubscript{ACC}
'You have climbed up twenty meters WHAT tower?'

53 The same analysis for all examples containing prepositions, i.e. for adjectives (APs) as well as for (part of) measure phrases (MPs) is in my view a preferable alternative.
Chapter 5: Determiner Phrase (Overview)

The following (44) shows a measure phrase (MP) (or any other 'first' phrasal element in a SPEC position regardless of how deeply embedded) to raise into a SPEC of some projection (XP) between the positions of $P^0$ and the following DP.

(44)

The step illustrated in (44) above is motivated by the required presence of a preposition which was shown above as obligatory with any extracted element. Otherwise, at least the measure phrase which needs no case marking could be extracted further on without the preposition, which as shown above in (36) and (43d) is ungrammatical.54

Assuming that $P^0$ is the only potential governor for the trace inside DP, the first step in (44) does not cross any barrier. The restriction concerning the initial element of the DP may be predictable if any other phrasal element in the SPEC of

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54 Notice that (39-43) suggest that in the complex $P+DP$ structure which is inseparable in Czech (see footnote 47 above) it is the preposition which requires the complement, since in (39-43) the stranded nouns are apparently OK with no preposition immediately preceding them as well.
a nominal FH is defined as impossible intervening governor because of its distinct nature (distinct feature content).

In the following (45) a DP containing the trace of the removed element moves above the PP.

(45)  YP
     SP(YP)      Y'
     DP
     Y^0      PP
     P^0     XP
     SP(XP)   X'
     MP
     X^0
     tDP
     tMP

In (45) the trace of the MP (or AP) cannot be governed by its antecedent, which occurs lower. However, (45) is an intermediate step and both in the base position and in the final stage the trace is antecedent-governed. As for the trace of the DP, in (45) it is arguably lexically governed by the preposition.

The existence and character of the YP above PP in (45) is not obvious. I suggest that it should be related to the position which is required independently for the scrambling of DPs within the Czech clausal structure, although such a position is not obviously related to PP structures.

And finally in (46) the PP moves into the SPEC(CP) leaving the DP 'behind' in SPEC(YP). The motivation for this step is a standard motivation for overt Wh Movement (and here also Topicalization Movement in Czech which the elements move to SPEC(CP) to get the contrastive stress interpretation).
Chapter 5: Determiner Phrase (Overview)

(46) (a)  

\[
\begin{array}{c}
\text{YP} \\
\text{SP(YP)} \\
\text{DP} \\
\text{Y}^0 \\
\text{tPP}
\end{array}
\]

The resulting structure would thus be derived as follows in a still simplified (46b) below.

(b)  

\[
\begin{array}{c}
\text{SPEC(CP)} \\
\text{PP} \\
\text{P}^0 \\
\text{XP} \\
\text{SP(XP)} \\
\text{MP} \\
\text{X}^0 \\
\text{tDP}
\end{array}
\]

What remains to be explained is the character of the XP in (44) between the PP and the DP\textsuperscript{55} and the motivation for this complex procedure. For the former I want to suggest that XP is a part of the PP structure since the movement of the DPs

\textsuperscript{55} With respect to the scrambling of elements within DP some phrasal position above DP is probably needed anyway. Notice that the adjectives modified by measure phrases certainly belong to the ‘heavy’ adjectives which can occur also postnominally. In such cases the measure phrase is also standardly able to follow the adjective in Czech

(a)  

\text{Viděla jsem [DP dva metry vysokého chlapce.}

\hspace{1cm} \text{saw-PF AUX-1S two meters high\_acc boy\_acc} 

\hspace{1cm} \text{I saw a two meter high boy.'}

(b)  

\text{Viděla jsem [DP chlapce (vysokého) dva metry (vysokého).}

\hspace{1cm} \text{saw-PF AUX-1S boy\_acc high\_acc two meters high\_acc} 

\hspace{1cm} \text{I saw a two meter high boy.'}
standardly presents the movement of the whole projection and therefore XP is not plausibly a functional projection of the DP.\textsuperscript{56}

As for motivating the complex process, recall that preposition stranding is ungrammatical in Czech. With respect to this prohibition, the fact that the preposition fronted \textit{obligatorily} presents a kind of puzzle. I want to propose that the first step illustrated in (44), i.e. extraction of the MP or adjective into the position below the preposition is in fact required so that the step two (45) can apply. Notice that without (44) the resulting structure after the DP moves above PP would be as in (47), which is ungrammatical in Czech.

(47) \[
\begin{array}{c}
\text{YP} \\
\text{DP}_i \\
P^0 \\
t_i \\
\text{* PP}
\end{array}
\]

Assuming \(P^0\) an M-barrier, the extracted MP or adjective cannot cross the PP projection. Neither can the DP move above the PP. Therefore the movement of the MP or adjective into a projection between PP and DP is motivated by the attempt to avoid the structure in (47) replacing it instead by (48).

I have no explanation for why (48) should be any better than (47) in Czech, especially when the opposite is apparently true for English. It is implausible to refer to some FH relevant for agreement and providing a proper governor for the trace of the extracted DP in (48), since measure phrases do not agree and a presence of any FH related to the DP would be unmotivated.

(48) \[
\begin{array}{c}
\text{YP} \\
\text{DP}_i \\
\text{PP} \\
P^0 \\
\text{MP}/\text{AP} \\
\text{XP} \\
X^0 \\
0_P \\
t_i \\
X'
\end{array}
\]

\textsuperscript{56} Assuming the projection of PP to be as complex as any other structure of a lexical category, in (48) below PP can be considered a FH of a PP and XP as the lexical PP. The movement may then be due to the movement of \(P\) into FH\textsuperscript{0}.
Moreover it is more likely the head \( X^0 \) in (48) which creates a required relation. Therefore I can only suggest that the distinction may follow from distinct internal structures of PPs in English and Czech. I will leave this topic, however, for a further research.

5.7. Summary of Chapter 5

In this Chapter I have discussed an overall structure of the Czech DP. In 5.3.1. I discussed a theoretical overview concerning the structure of DP which I suggested in (9) and which is used throughout the Chapter. Following Cinque's (1993) framework, I exemplified Czech and English data in sections 5.3.2. to show that the noun in neither English nor Czech leaves NP, i.e. they do not exhibit overt syntactic N-to-D Movement.57

In sections 5.3.2. I have argued that Czech prenominal modifiers are of phrasal character and are located in the SPEC positions of the FHs, of which NP is a complement. The presence of the FHs dominating NP explains the fixed ordering of the prenominal modifiers. Additionally, attributive adjectives always follow the demonstratives, possessives and numerals, and precede the noun. Therefore I proposed that the nominal FHs are to be specified for features related to elements in their SPECs, even though their head positions are lexically empty at PF. At LF the N-to-D movement applies via a series of head-to-head substitutions to check the relevant features of FHs and N^0.

The standard DP structures in both English and Czech with respect to semantically heavy modifiers are (AP) - N - (DP)(PP). Therefore I suggested that the FHs hosting the prenominal semantically heavy adjectives appear immediately above NP. In the scheme (9) I took the (possibly recursive) FH containing Phi features as plausible candidate: the modified part of (9) is repeated below as (49).

57 Recall, however, that this analysis was justified with respect to the ordering of prenominal adjectival elements: N standardly does not precede any adjectival element nor any element analyzable as signalling of the presence of a lexical FH dominating NP. This conclusion still depends on the analysis of postnominal genitives. As long as the postnominal genitive is argued to be a result of N moving over the 'subject' NP in its SPEC into some higher FH (i.e. as far as genitive Case is proved to result of an overt partial N-to-D movement), then N movement must be assumed as well. For simplicity, in examples with no GEN DPs interpreted as thematic subjects I will assume the latter variant, i.e. N is a lexical head of NP which remains in its base position at S-Structure in Czech as well as in English.
Whether the SPEC(FH) is the base-position where prenominal adjectives are generated or whether it is the place where they appear removed from some theta related position within the NP is not going to be addressed here either.

The relatively fixed ordering of prenominal attributive adjectives has only been briefly mentioned. Citing other works, I suggested that the ordering can be either ruled by some conceptual and pragmatic constraints (a violation would not result in ungrammatical structure), or alternatively the FHs hosting adjectivals are specified simply with respect to their scope properties or semantic contents.\(^{58}\)

In section 5.3.2.3. I briefly mentioned postnominal APs. I argued that postnominal modifiers are not plausibly a result of N-to-D movement and followed the analysis of Cardinaletti & Giusti (1991) which takes them for either modification/predicative structures or small clause structures.

In 5.3.3. above I proposed a highly stipulative formalization of the agreement of Czech adjectives, repeated here as (50). I suggested that it is a SPEC-head relation between the nominal and adjectival functional projections which explains the the twofold percolation of nominal and Case features inside the DP.

\(^{58}\) For discussion, again see e.g. Cinque (1993). For the comparison between the requency and ordering of Czech and English adjectivals see Peprník (1976), where the similarity between the two languages is exemplified on a wide range of data. Cross linguistic comparison can be found elsewhere (cf Sproat and Shih (1990), Crisma (1990), Bernstein (1993).
In 5.4, I used the structure I propose for the Czech DP to analyze some examples of overt syntactic raising of pronominal elements into a higher FH^N. Using a distinct agreement pattern as the main diagnostics for the structure I argued that [+HUMAN] indefinite/negative/free choice pronouns are to be analyzed in a distinct way from [-HUMAN] pronouns.

In the last sections 5.6 of this chapter, the possibilities of extraction from the Czech DP structures were illustrated based on the analysis of left branch condition discussed in Corver (1990). In section 5.6.2, I exemplified more descriptive data and in 5.6.3, discussed in detail extraction of embedded specifiers in Czech from the [DP,PP].

The extraction movements in Wh-question or Topicalization structures assumes SPEC(CP) - a phrasal position - as the landing site. Therefore the data argue for the phrasal character of the extracted elements (i.e. prenominal APs, demonstratives, possessives, measure phrases and quantifiers within measure phrases).

I argued that the contrast between extraction of elements from DP and from [DP,PP] demonstrates that a framework using barrierhood caused by minimality is an indicator of a presence of a head governor within a given structure. Applying this principle to Czech data in section 5.6., the complex processes of extraction from [DP,PP] confirms the claim that there is no lexical head element above NP in the Czech DP structure, since the presence of any such element would result in restricted extraction possibilities which are evidenced with [DP,PP].

Some of these data and observations are going to be used again in the following Chapters 6, 7, and 8, where I discuss in more detail the elements which occur in the high periphery of the Czech DP.