1.1 A phone book
Prescriptive approaches to grammar judge usage and recommend or even tell speakers which version of a given construction is correct, e.g. the rule “no split infinitives in English”. But syntax is neutral in terms of what is correct or incorrect English (Miller, 2001).

1.1.1 About nouns and Noun Phrases (Greenbaum and Quirk, 1990, Quirk et al. 1972)

Classes of nouns

<table>
<thead>
<tr>
<th>Proper</th>
<th>Common</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noncount</td>
<td>Count</td>
</tr>
<tr>
<td>Concrete</td>
<td>Abstract</td>
</tr>
<tr>
<td>milk, iron</td>
<td>freedom</td>
</tr>
<tr>
<td>dog, pencil</td>
<td>experience</td>
</tr>
</tbody>
</table>

Number: Singular: ‘one’ for count nouns, the unique referent of most proper nouns and the mass of noncount nouns. Plural: ‘two or more’ for count nouns, the unique referent of some proper nouns and individual units that reflect plural composition.

Gender and Case:
Gender in English relates to the meaning of nouns.

- inanimate
- animate

- personal
- non-personal

Case in English is divided into common case (unmarked on nouns) and genitive case:

(i) common case: nominative and accusative, marked on personal pronouns
(ii) genitive case: premodifying genitive (the Saxon genitive ‘s) and the postmodifying of-phrase

Genitive meanings:

- possessive: my sister’s son
- attributive: John’s mother
- partitive: some of his friends
- subjective: the prisoner’s escape cf. the prisoner escaped
- objective: the prisoner’s release cf. the prisoner was released
- genitive of origin: the girl’s story
- descriptive genitive: a women’s magazine
- appositive genitive: Dublin’s fair city, city of London

Double-genitive (post-genitive): one of Mary’s brothers – a brother of Mary’s
Partitive constructions: These denote part of a whole with both count and noncount nouns: a slice of cake, a piece of furniture.

Noun Phrases are phrases whose head (main part) is typically a noun. In a sentence they can act as subject, object, complement, adverbial. They can also function as complements of prepositions.

The structure of the English Noun Phrase:

<table>
<thead>
<tr>
<th>Determiner(s)</th>
<th>Premodifier(s)</th>
<th>Head</th>
<th>Postmodifier(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>all those</td>
<td>happy</td>
<td>students</td>
<td>of Physics with long hair</td>
</tr>
</tbody>
</table>

1.1.2 About pronouns

Subclasses of pronouns (Greenbaum and Quirk, 1990:108-109)

<table>
<thead>
<tr>
<th>central</th>
<th>reflexive</th>
<th>possessive</th>
<th>relative</th>
<th>interrogative</th>
<th>demonstrative</th>
<th>indefinite</th>
</tr>
</thead>
<tbody>
<tr>
<td>personal</td>
<td>reflexive</td>
<td>possessive</td>
<td>relative</td>
<td>interrogative</td>
<td>demonstrative</td>
<td>indefinite</td>
</tr>
<tr>
<td>he, him</td>
<td>herself</td>
<td>your, theirs</td>
<td>who, which</td>
<td>what, who, which, where</td>
<td>this, that, these, those</td>
<td>positive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>universal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>assertive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>non-assertive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no, neither</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>each, every</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>some, one</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>any, either</td>
</tr>
</tbody>
</table>

Central pronouns

<table>
<thead>
<tr>
<th>Person</th>
<th>number and gender</th>
<th>nominative</th>
<th>accusative</th>
<th>reflexive</th>
<th>possessive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>singular</td>
<td>I</td>
<td>me</td>
<td>myself</td>
<td>my</td>
</tr>
<tr>
<td></td>
<td>plural</td>
<td>we</td>
<td>us</td>
<td>yourself</td>
<td>our</td>
</tr>
<tr>
<td>2nd</td>
<td>singular</td>
<td>you</td>
<td>you</td>
<td>yourself</td>
<td>your</td>
</tr>
<tr>
<td></td>
<td>plural</td>
<td>you</td>
<td>you</td>
<td>yourselves</td>
<td>your</td>
</tr>
<tr>
<td>3rd</td>
<td>singular masculine</td>
<td>he</td>
<td>him</td>
<td>himself</td>
<td>his</td>
</tr>
<tr>
<td></td>
<td>singular feminine</td>
<td>she</td>
<td>her</td>
<td>herself</td>
<td>her</td>
</tr>
<tr>
<td></td>
<td>singular nonpersonal</td>
<td>it</td>
<td>it</td>
<td>itself</td>
<td>its</td>
</tr>
<tr>
<td></td>
<td>plural</td>
<td>they</td>
<td>them</td>
<td>themselves</td>
<td>their</td>
</tr>
</tbody>
</table>

1.2 Fun facts

- If the order of Demonstrative + Numeral + Adjective + Noun is considered, they yield twenty-four possible orderings. However, out of that twenty-four, some orderings are frequent while some do not actually occur. The orders Dem + Num + A + N and Dem + Num + N + A are found in very many languages while the orders Dem + N + Num + A and A + N + Dem + Num are attested in very few languages. Furthermore, for instance the orders Num + N + Dem + A and N + Num + Dem + A do not occur in any language (Cinque, 2005).
- In English there are two demonstrative pronouns, this and that (and their plural counterparts). In Japanese there are three: kono – near the speaker, sono – near the hearer and ano – distant from both (in time or space).
Languages can express plurality in the nominal construction in a variety of ways, for instance English generally exhibits morphological marking on nouns (and some determiners), while in Mandarin Chinese plural is not expressed morphologically either on nouns or on determiners. Moreover, nouns in Chinese are not marked for definiteness. Thus, the sentence in (0) is ambiguous in four ways:

0 wǒ kànjiàn māo le
1sg see cat LE
I saw (a/the) cat(s).

(Vinet, M-T. and Liu, X. 2008:358)

2 The Structure of Noun Phrases

2.1 The starting point: Radford (1988)

In what follows Radford’s (1988) account of the structure of NPs is discussed. It serves as a starting point because it provides a detailed analysis of the structure of NPs and, at the same time, highlights issues that this approach does not address, thereby introducing other relevant aspects of the analysis of nominal constructions. This section describes a comprehensive approach to modification inside an NP and it introduces structural notions such as ‘complement’, ‘adjunct’ as well as it highlights main points related to the syntactic behaviour of these constituents in relation to the N head and in relation to each other.

2.1.1 Postmodifying complements and adjuncts

For Radford there exist so-called ‘word-level categories’, e.g. N – Noun, V – verb, Adj – Adjective, M – Modal, D – Determiner, etc… and so-called ‘phrase-level categories’, e.g NP-Noun Phrase, VP – Verb Phrase, etc… However, there is a third type of constituent, N-bar, which represents an intermediate level between the two, i.e. it is a constituent larger than N but smaller than the full NP, see (1):

1 a Who would have dared defy the [king of England] and [ruler of the empire]?
 b The present [king of England] is more popular than the last one.
 c *The [king] of England defeated the one of Spain.

(p. 174-175)

In (1a) the full NP is ‘the king of England’ as that is used as an answer to a wh-question such as *Who would they have not dared defy?*, however, part of that constituent can be coordinated with another sequence that does not contain the determiner. In (1b), again, the full NP the present king of England is the equivalent of the last one, and these are larger than the constituent replaced by the pronominal one, which is reduced to king of England. The pronoun one is assumed to replace constituents which are larger than just the head, cf. (1c). Thus, coordination and pronominalisation seem to support the idea that there exists an intermediate level between the word-level and the phrase-level constituents: N-bar.

First, the various structural levels inside the NP are discussed. The following Phrase Structure Rules are introduced:

2 a N’ → (D) N’ (Determiner Rule)
b N’ → N’ (PP) (Adjunct Rule: optional)
c N’ → N (PP) (Complement Rule)

(p.183)
As they stand, the rules capture the following basic generalizations: determiners expand N-bar into N-double-bar, adjuncts extend N-bar into N-bar, while complements extend N (the head, a word-level category) into N-bar. In addition, it must be noted that as opposed to the other two the adjunct rule is recursive, i.e. the same constituent is found on both sides of the arrow. The brackets indicate the optionality of the given constituent. The examples in (3) demonstrate that the two PPs inside the NP are not on the same structural level, the examples in (4) show that PP complements are closer to the head than adjuncts.

3  a the student of Physics with long hair
   b *the student of Physics and with long hair
   c the student of Physics and of Mathematics
   d the student with long hair and in jeans

The ungrammaticality of (3b) is readily explained if it is assumed that the two PPs of Physics and with long hair do not have the same structural status: the former is a complement, the latter is an adjunct. The examples containing co-ordinated PPs are grammatical as two constituents on the same structural level are conjoined in them.

4  a the student of Physics with long hair
   b *the student with long hair of Physics
   c the student with long hair in jeans
   d the student in jeans with long hair

Again, the ungrammaticality of (4b) stems from the mismatch in the structural status of the two PPs. In (4c) and (4d) the order of the PPs can be reversed without loss of grammaticality as both those PPs assume an adjunct status, i.e. both of them are sisters of N-bar. Further differences between complements and adjuncts are that the number of the former is limited while that of the latter is not, it is possible to extrapose an adjunct but not a complement and it is grammatical to prepose the complement of a P heading a complement but not an adjunct, see, (5).

5  a the student with long hair in jeans
   b *the student of Physics of Mathematics
   c a student came to the office with long hair
   d *a student came to the office of Mathematics
   e which branch of Physics was he a student of?
   f *what kind of hair is he a student with?

In addition, there are so-called co-occurrence restrictions imposed by particular nouns on which P may head the PP complement but no such restrictions are imposed on an adjunct, as shown in (6).

6  a a student of Physics
   b *a boy of Physics
   c *a punk of Physics
   d a student with long hair
   e a boy with long hair
   f a punk with long hair

It is not only PPs that may function as postmodifiers inside a NP, cf. (7).

7  a the claim [that he made]
   b the claim [that he made a mistake]
In (7) the postmodifying construction is a clause but while in (7a) the type of clause is a so-called restrictive relative clause\(^1\), in (7b) it is a Noun Complement Clause. The terminology already suggests that the two clauses do not share their syntactic status: the restrictive relative clause is analysed as an adjunct (hence, it can be used recursively) whereas the other type of clause functions as a complement. This difference is reflected in the syntax of these clauses: with a restrictive relative clause exemplified in (7a) it is grammatical to use a wh-pronoun (called a relative pronoun) instead of the complementiser *that\(^2\)*, or even to leave out both. On the other hand, the Noun Complement Clause in (7b) is only grammatical if it includes the complementiser.

2.1.2 Premodification

Premodifiers inside an NP include prenominal NPs and APs (also termed attributes). The distinction between postnominal modifiers in terms of whether they function as complements or adjuncts carries over to pronominal modifiers as well, see (8).

\[
\begin{align*}
8 & \quad \text{a student of Physics at Cambridge} \\
   & \quad \text{b *a student at Cambridge of Physics} \\
   & \quad \text{c a Cambridge Physics student} \\
   & \quad \text{d *a Physics Cambridge student}
\end{align*}
\]

Just as the ungrammaticality of (8b) is accounted for in terms of the structural status of postmodifying complements and adjuncts, the ungrammaticality of (8d) can be explained if it is assumed that one of the NPs is an adjunct (*Cambridge*) the other is a complement (*Physics*). Often a postmodifying complement PP can have a premodifying NP counterpart, as in (9).

\[
\begin{align*}
9 & \quad \text{a an appeal for charity} \\
   & \quad \text{b a charity appeal} \\
   & \quad \text{c a campaign against drugs} \\
   & \quad \text{d a drugs campaign\(^3\)}
\end{align*}
\]

Premodifying APs are the most frequent type of attributes. In Radford (1988) these are analysed as adjuncts, since, for instance, they are recursive, see (10).

\[
\begin{align*}
10 & \quad \text{a a tall stranger} \\
   & \quad \text{b a tall dark stranger} \\
   & \quad \text{c a tall dark intelligent stranger}
\end{align*}
\]

The ambiguity of examples that contain premodifying NPs and/or APs can be explained in structural terms if the distinction between premodifying complements and adjuncts is considered.

\[
\begin{align*}
11 & \quad \text{a a French teacher} \\
   & \quad \text{b a foreign language teacher}
\end{align*}
\]

---

\(^1\) It should be noted that there are two other types of relative clause, so-called non-restrictive (non-defining) and free relative clauses. A non-restrictive relative provides extra information and is only grammatical if it is introduced by a relative pronoun (*my sister, who lives in Paris, has two cats*) and a free relative can also be grammatical with the relative pronoun *what* (*what he said was true*) and lacks the antecedent noun present in the other types of relatives. The structure of relative clauses is not discussed in detail here.

\(^2\) That the elements introducing restrictive relative clauses do not belong to the same category, i.e. they are relative pronouns or complementisers, is shown in (i) below.

\[
\begin{align*}
\text{(i)} & \quad \text{a the house in which he lives} / \text{*the house in that he lives} \quad \text{(Pied Piping)}
\end{align*}
\]

For further arguments in favour of their distinct categories, see Radford (1988).

\(^3\) Notice that with the postmodifying complement PP the meaning of the phrase is not ambiguous whereas with the premodifying NP it is not entirely clear whether it is a campaign *for* or *against* drugs.
In (11a) the premodifying NP can refer to the nationality of the teacher in which case it is an adjunct or the subject taught in which case it is a complement and the difference between them is made explicit in the tree-diagram associated with the two interpretations. Similarly, in (11b) the premodifying AP adjunct can refer to the NP ‘language’ or ‘teacher’.

In sum, Radford (1988) provides a detailed analysis of the internal structure of NPs: first he demonstrates that there is a structural difference between the various types of modifiers that may occur inside an NP, i.e. between determiners (which, in his early analysis, are assumed to occupy the specifier position), complements (which are sisters of the N-head) and adjuncts (which are sisters of the intermediate constituent N-bar). It is demonstrated that both postmodifying PPs and clauses can act as complements or adjuncts and that premodifying NPs can function both as complements or adjuncts while premodifying APs are adjuncts.

Radford’s claims have been revised since then especially those related to the structural position of adjuncts inside the NP. Later attempts to provide a uniform approach to adjuncts across categories have tried to establish a parallelism between adjuncts in verbal constructions and those in nominal constructions. Therefore similarly to VP-adjuncts, which initially were assumed to occur inside the VP (i.e. adjoined to V-bar) but later to be adjoined to VP (thereby forming a VP-extension), e.g. PP-adjuncts in nominal constructions have been seen as added to a minimal NP-projection. However, one type of clausal adjunct has retained its structural position inside the NP given the difference between restrictive and non-restrictive relative clauses which are both analysed as adjuncts but given the difference between the two, the point of adjunction is assumed to be different (adjoined to N-bar or to NP) (see Newson, 2006). This issue is not explored below in further detail. Another point that merits discussion is the approach to determiners, which are far less uniform a category than what Radford (1988) implicitly suggests. Approaches to the analysis of determiners are presented in the next section.

2.2 The dawn of the Determiner Phrase
X-bar Theory has explicitly striven to provide uniform structures across categories, therefore, as inside a VP, for instance, there has been only one specifier position made available, the same has been applied to the structure of the NP. Jackendoff’s three-level system has made an attempt to account for the apparently grammatical sequences of multiple determiners, that is, the grammatical sequences of two or even three determiner-like elements inside a nominal construction. That analysis has paved the way for Abney (1987), who has laid down the foundations for assuming the existence of a functional nominal category, the Determiner Phrase, thereby allowing for the introduction of yet another prenominal position for hosting determiner-like elements that can appear preceding premodifying attributes inside an NP.

Building on data from languages other than English including Hungarian, Abney points out that in quite a few languages the NP exhibits a much more obvious structural parallelism with the sentence in that it has one or both of the following properties: (i) a possessed noun agrees with the possessor in the same way the subject agrees with a verb and (ii) the possessor receives the same case as the subject of the clause instead of being marked by some special genitive case. Consider the examples in (16) which illustrate both phenomena.

16  
a  az én könyv – em
   the I – Nom book – possd 1sg
   the my book
b  a te könyv – ed
   the you – Nom book – possd – 2sg
c  a Mari könyv – e
In the Hungarian possessive constructions illustrated in (16) the possessed noun bears a possessive suffix which agrees in person and number with the possessor and subjects of finite clauses receive nominative case (16d). Since for the verbal projection a functional projection, the Inflection Phrase headed by Inflection has been assumed to be erected on top of the thematic verb, this, and other considerations not discussed here, have led Abney to the conclusion that an Inflection-like element heads the NP, probably universally, which he terms Determiner.

The question of whether the nominal functional head Determiner can actually be filled by members of the class known as Determiner is addressed as follows. Abney points out that when determiners stand alone, i.e. they are not followed by an NP complement, they continue to behave like an NP, which is only expected if they are nominal projections. Further, determiners that cannot stand alone are likened to members of other categories like *complementisers or prepositions* in that they cannot stand alone either: *if* must obligatorily be followed by a clause, *of* must obligatorily be followed by an NP. Thus, determiners such as *the* or *a(n)*, which strongly require that they be followed by an NP, do not exhibit any special behaviour that is not attested by other categories. In addition, those determiners that can stand alone, e.g. *this, that, which*, even if they are not followed by an NP-complement, retain the distribution of a nominal. Again, that supports the assumption that they are, indeed, nominal, members of a nominal functional category.

The status of pronouns is also discussed. Abney notes that it has been generally assumed that pronouns are nouns, however, if that were so, there would be no explanations as to why sequences of nominal modifiers and pronouns are excluded. In other words, pronouns cannot co-occur with noun specifiers, determiners, possessors, adjectives, quantifiers, etc…, consider (17).

17  
  a  *[the she that I talked to]* was nice  
  b  *[my she]* has always been good to me  
  c  *[dependable them]* are hard to find  
  d  *[many they]* make house-calls

The ungrammaticality of the examples in (17) suggests that pronouns do not belong to the category N, instead it is plausible to assume they are members of the category determiner. A property determiners and pronouns have in common is that both seem to be the site for carrying the basic grammatical features (called phi-features) such as person, number, gender of the NP. The difference between the interpretation of the expressions *the man* vs. *a man* is that the former is definite while the latter indefinite and that property is encoded not in the feature-set of the noun itself but rather in that of the determiner, thus, in this respect determiners can apparently be grouped with other type of functional heads that carry grammatical or syntactic information. In many languages it is determiners that exhibit the largest variation in the form of their declensions, not adjectives or nouns. Also, e.g. in present-day English or French, the pronouns are the only elements which still show a case distinction. All the above considerations point towards the direction of the assumptions that the nominal constituent is in fact headed by the determiner and that the category Determiner

4 It is interesting to note that in actual fact certain personal pronouns can, indeed, co-occur with adjectives, as in *silly me/us, despicable me, lucky you*. However, the phenomenon seems to be restricted to 1sg pronouns.
includes articles, demonstratives, personal pronouns, etc... The trees in (18) depict Jackendoff’s (1977:105) structure and the structure proposed by Abney (1987:52).

\[\text{also, by using the DP analysis to account for a special characteristic of English gerunds, namely that they exhibit both nominal and verbal properties (see 19), Abney is bound to discuss the status of possessors.}\]

\[\text{In English determiners and possessors cannot co-occur, (*John's / the / that / some book p. 172). According to standard approaches to the issue at the time, they do not co-occur because they are generated in the same position (Spec, NP). However, given the DP-analysis, Abney places full-DP possessors in the Spec, DP position in a structure associated with a poss-} \text{ing gerund (as shown in 20), thus that assumption would have to generalise to other nominal constructions containing a full-DP possessor, so the D-head is theoretically available for other determiners.}\]

\[\text{Abney’s way round the problem that lexical determiners and possessors mutually exclude each other is to assume that if a possessor occupies Spec, DP, the D-head position is occupied}\]
In sum, Abney (1987) takes a giant leap forward in the analysis of nominal constructions. Through the introduction of the Determiner Phrase, a functional nominal projection erected on top of the thematic nominal projection, not only does he set the course for future approaches to nominal structures, he also manages to maintain the then much desired parallelism between verbal and nominal structures. Further, the nominal functional projection introduced could replace Jackendoff (1977)’s three-level structure in such a way that the two specifier positions made available have been retained in line with the rest of the theory, and an additional position, the D-head position is also established, thereby allowing for space for as many as three determiner-like elements appearing prenominally in a nominal construction (as in, e.g., all his many friends).

Also, he brings possessors into the discussion since they also play a part in establishing the argumentation for the DP-analysis. The nominal functional projection he terms DP is headed by members of the category Determiner, which includes items that are obligatorily followed by an NP complement, e.g. the articles, items that are not obligatorily followed by an NP complement, e.g. demonstrative pronouns and certain quantifiers, and it is also established that personal pronouns, which generally obligatorily lack an NP complement, belong to the category D as well.

References


