The
Syntactic Phenomena of English

Volume 2

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syntax

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JAMES D. McCAWLEY is the Andrew MacLeish Distinguished
Service Professor in the Departments of Linguistics and East
Asian Languages and Civilizations at the University of
Chicago. He is the author of *Adverbs, Vowels, and Other
Objects of Wonder* (1979), *Everything That Linguists Have
Always Wanted to Know about Logic—But Were Ashamed to
Ask* (1980), and *Thirty Million Theories of Grammar* (1982),
all published by the University of Chicago Press.

Abbreviations and Special Symbols

Abbreviations

A	Adjective
A	Adjective phrase
AD	Anaphoric device
ad-S	Modifier of S
Adv	Adverb
Adv	Adverb phrase, i.e., phrasal unit with Adv as head (do not confuse with "adverbial phrase")
ad-V	Modifier of V
ad-V	Modifier of $\bar{V}$
AE	Anaphoric epithet
An	Animator
AN	Adjectival noun
AP	Adjective phrase (replaced by A from chapter 7 on)
AT	Attraction to tense
Au	Author
CNPC	Complex Noun Phrase Constraint
Comp	Complementizer
Comp-del	Complementizer Deletion
Comp-pl	Complementizer Placement
Conj	(Coordinating) Conjunction
CR	Conjunction Reduction
CSC	Coordinate Structure Constraint
CSt	Comparative stripping
Deg	Degree expression
Det	Determiner
Equi-NP-Del	Equi-NP-Deletion
IMP	(marker of imperative sentence type)
ISD	Imperative Subject Deletion
N	Noun
N	Phrasal unit with N head (do not confuse with "NP")
NP	Noun Phrase

NPI	Negative polarity item
NR	Negative Raising
P	Preposition
$\bar{P}$	Prepositional phrase
PP	Prepositional phrase (replaced by $\bar{P}$ from chapter 7 on)
PPI	Positive polarity item
Pr	Principal
Ptcl	Particle
Q	(marker of interrogative sentence type)
Q-float	Quantifier-float
RCR	Relative clause reduction
RNR	Right Node Raising
RO	Raising to object
SpSC	Specified Subject Constraint
SSC	Sentential Subject Constraint
V	Verb
$\bar{V}$	Verb Phrase
VP	Verb Phrase (replaced by $\bar{V}$ from chapter 7 on)
X	(i) used as a variable category name, e.g., where X can stand for any part of speech, $\bar{X}$ will stand for the corresponding phrasal category; (ii) used in notation of early transformational grammar to mean "anything," e.g., "V X PP" would mean something that begins with a verb and ends with a prepositional phrase, irrespective of what intervenes between them)
0 (zero)	Lexical unit belonging to no part of speech
	Phrasal unit whose head belongs to no part of speech

Special Symbols

i. SYMBOLS RELATING TO ACCEPTABILITY

Unacceptability or awkwardness, decreasing in degree from ** to ?

Acceptability varies dialectically (also used for phrase boundary; see below)

Position that is empty both syntactically and semantically. Used in conjunction with * to indicate that there must be an "understood" element in the given position for the example to be acceptable (see 319, 414 n.17)

ii. ABBREVIATORY SYMBOLS

Used in presenting a set of examples in which different things fill a given position (see 10 n.3)

Used in presenting a pair of examples that differ with regard to whether a particular position is filled (see 10 n.3)

Where alternative positions for an item are contrasted, carets are sometimes used to mark those positions; stigmata written under the caret indicate the acceptability of that item in that position (see 632, 659 n.2)

Indicates a syntactic constituent made up of the material inside the brackets; the left bracket is often subscripted to indicate the category of that constituent, e.g., $[_S[_{NP}$ many birds$][_{\bar{V}}$ eat insects$]]$

Indicates a syntactic constituent made up of the material that appears at the bottom of the triangle (thus, indicates that something is a constituent without specifying what its internal structure is; see 44 n.2)

iii. MISCELLANEOUS SYMBOLS THAT APPEAR IN DIAGRAMS OF STRUCTURES AND IN DERIVATIONS

S_0, etc.

Numerical subscripts serve as an informal device for identifying nodes in a structure. The nodes usually are numbered with 0 at the top and numbers increasing as one goes down the tree (see 46 n.15).

he$_i$, etc.

Numerical subscripts are also used to indicate purported reference; thus, items with the same subscript are to be interpreted as coreferential.

$\emptyset$

Zero. Used (i) for morphemes that have no overt phonological form, such as the plural indefinite article in English, (ii) after an arrow, to indicate that the material before the arrow is deleted, and (iii) to indicate a position in which something has been deleted.

Passive$_1$, etc.

Numerical subscripts on a name of a transformation indicate the application of that transformation to the constituent corresponding to that subscript, here, the application of Passive to S_1 (see 153).

$\underset{\longrightarrow}{\text{Passive}}$

An arrow connecting two structures indicates that in the given derivation the first structure is the input and the second structure the output for an application of the transformation whose name appears above the arrow. When

no transformation is indicated over the arrow, it is assumed that it is clear what the relevant transformation is.

iv. STRESS AND INTONATION

báseball	primary stress on the syllable indicated
whôle	secondary stress on the syllable indicated
thĕ	the indicated syllable is unstressed
⁄baseball	the indicated word bears a high rising pitch (see 498 n.1)
／baseball	the indicated word bears a low rising pitch
⁄⁄baseball	the indicated word bears a pitch rising sharply from low to very high
\baseball	the indicated word bears a high falling pitch
ᴧbaseball	the indicated word bears a rise-fall contour pitch
%	phrase boundary (see 275, 288 n.12)

v. SYMBOLS FROM FORMAL LOGIC

Ǝ	"Existential quantifier," roughly "there is . . ."
∀	"Universal quantifier," roughly "for every . . ."
λ	"Abstraction operator"; derives a property from a propositional formula, e.g., (λx) (x resembles Stalin) means "the property of resembling Stalin" (see 462 n.16).

Contents

12. The Structure of Noun Phrases

a. Introductory Remarks

In the preceding chapters, I have assumed without much justification that NPs with a head noun (as contrasted with sentential NPs such as *for John to quit his job* or pronominal NPs such as *he*) have a constituent structure as in (1):

(1)
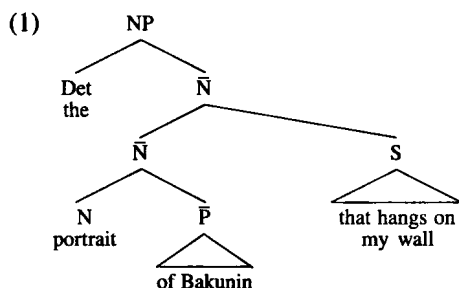
This chapter will be devoted both to providing support for the claims embodied in structures like (1) and to investigating aspects of the structure of NPs that have not yet been taken up here.

In (1) it is implicitly claimed that a NP can consist of a **determiner** and a phrasal unit having a noun as head. Later in the chapter I will devote some attention to the question of what constitutes a determiner. For the moment, however, let us be fairly uncritical in our use of the term and simply apply it arbitrarily to articles (*the, a*), demonstratives (*this, that*), genitives (*my, Bill's, that man in the corner's*), and quantifiers (*all, some, every, most*). Whether **numerals** (taken sufficiently broadly as to include not only *two* and *fifty* but also *several* and *many*) should count as determiners will be taken up later. They in fact constitute a rather problematic case that cannot be dealt with satisfactorily until we have clarified some of the details of NP structure that will turn out to be relevant.

Also embodied in (1) are the claims that combinations of noun and $\bar{P}$ such as *portrait of Bakunin* are syntactic constituents, that restrictive relative clauses[1] are adjuncts to such a constituent, and that the combination of

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a restrictive relative and what is called here an N is of the same syntactic category as the latter. These claims can be justified by showing that the constituents posited in (1) act as units with regard to grammatical phenomena and that combinations with a restrictive relative clause behave the same way as do combinations without a restrictive relative. The combinations claimed to be constituents in (1) in fact behave as units with regard to conjoining (2) and with regard to deletion or pronominalization of repeated material (3):

(2) a. Most [[linguists who play chess] and [philosophers who play poker]] find this book useful.
    b. Most [[theories of gravitation] and [accounts of diffraction]] are hopelessly inadequate.
    c. All [[[theories of gravitation] and [accounts of diffraction]] that have ever been published] are hopelessly inadequate.
(3) a. Newton proposed one theory of light in 1688 and a second (one) in 1703.
    b. The theory of light that Newton proposed was less successful than the one that Huyghens proposed.
    c. The theory of light that Newton proposed that everyone laughed at was more accurate than the one that met with instant acceptance.

These facts are exactly the predictions that follow from the following propositions: (i) a NP may consist of a determiner followed by an N; (ii) an N may consist of a noun and possibly a following P; (iii) an N may consist of an N̄ followed by a restrictive relative clause; (iv) a repeated N may be replaced by *one* or deleted;[2] and (v) all phrasal constituents (including Ns) may be conjoined.

Note that (iii) implies the possibility of **stacked** restrictive relative clauses, as in (3c): the inner N of an [N̄ N S] combination can itself be of the form [N S], and thus the rules of constituent structure paraphrased in (i, iii) imply that structures such as (4) should be possible:

(4)
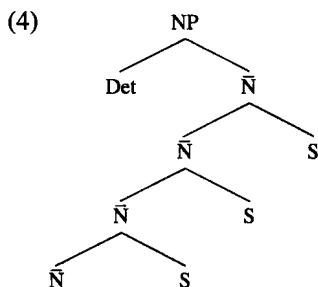
There are four conceivable ways that a determiner, a $\bar{\text{N}}$, and a restrictive relative might be grouped together, all of which have in fact been proposed seriously:

(5) a.
```
        NP
      / | \
    Det  N̄   S
```

b.
```
          NP
       /      \
     ?    N̄      S
      \  /
      Det
```

c.
```
        NP
      /    \
    Det      N̄
           /    \
          N̄      S
```

d.
```
        NP
      /    \
    NP       S
   /  \
  Det   N̄
```
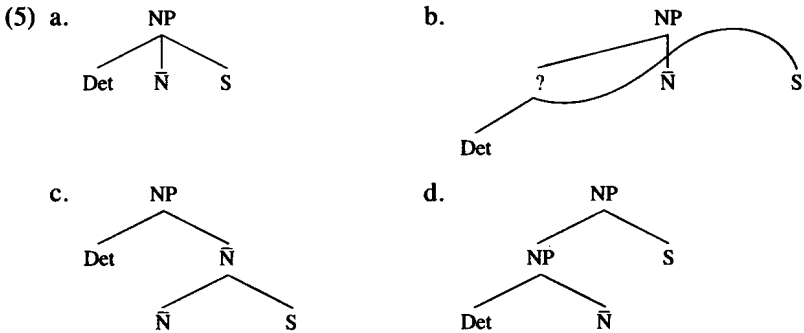
Two of these, namely, (5c) and (5d), have the S in a configuration that can be iterated ad infinitum, and thus imply the possibility of stacked relatives. One conceivable version of (5b), namely, that in which the [Det S] constituent is assigned to the category Det, also implies the possibility of iterated relative clauses, though to my knowledge no advocate of (5b) has adopted that category assignment. Those linguists who have adopted analyses embodying (5a) or (5b) have generally denied that there is such a thing as stacking of restrictive relatives (in which a restrictive relative is an adjunct of a constituent containing another restrictive relative) and have accommodated what are here treated as stacked restrictive relatives by formulating their rules so as to allow for arbitrarily many Ss in the position where one S is given in (5).

While the facts cited in (2)–(3) argue for (5c) and against (5d) (since (5d) does not allow for constituents consisting of $\bar{\text{N}}$ and S such as (2a, 3c) seem to demonstrate the existence of), there is another class of NPs that appear to call for a structure as in (5d) rather than (5c), namely, those as in (6), where the relative clause is combined not with a noun or $\bar{\text{N}}$ but with a word that elsewhere makes up a whole NP:

(6) a. I want to be with somebody who I can trust.
    b. You should do anything that Fred suggests to you.
    c. Our product is available everywhere that paperclips are sold.
    d. Who that you know is likely to come to the concert?

The one alternative to assigning to these NPs a structure of the (5d) type, as in (7a), is to allow syntactic boundaries to clash with word boundaries (7b), though in cases like (6d), where a relative clause is combined with an interrogative pronoun, even that is possible only at the price of recognizing constituents that do not even constitute morphemes (7c):

(7) **a.**

```
              NP
         ┌────────┴────────┐
        NP                 S
         │              ╱─────╲
      somebody      who I can trust
```

b.

```
              NP
         ┌─────┴─────┐
        Det          N̄
       some-     ┌────┴────┐
                 N·        S
               -body    ╱─────╲
                     who I can trust
```

c.

```
              NP
         ┌─────┴─────┐
        Det          N̄
         ?       ┌────┴────┐
          ╲      N         S
           ╲     ?      ╱─────╲
            who       that you know
```
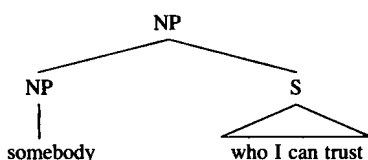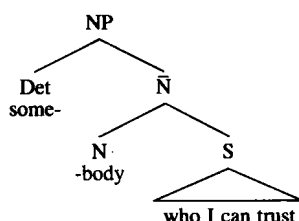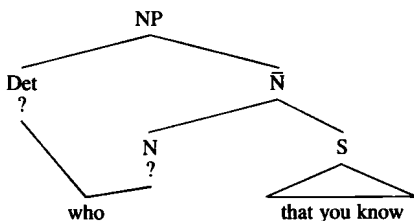
For the bulk of this chapter, I will in fact ignore examples like (6) and will assume the (5c) structure for the relative clause constructions that will be taken up; in §13a I will return to the problem that NPs such as those in (6) pose for a uniform analysis of NP structures.

N̄s can be modified not only by restrictive relative clauses but also by preceding adjectives and by following adjective phrases and P̄s:

(8) a completely new theory of light
     the portrait of Bakunin on my bedroom wall
     any person capable of murder

It will be argued below that at least some of these modifiers are reduced forms of restrictive relative clauses (cf. *a theory of light that is completely new*). Those NPs that can be given that sort of analysis should then have surface structures involving the syntactic configurations that are obtained by deleting material from a relative clause and, in the case of adjectives, reversing the order of the remnant of the relative clause and the N̄ that it modifies, i.e., under such an analysis, the surface structures of the NPs in (8) should be as in (9):

(9)

```
              NP                              NP
         ┌─────┴─────┐               ┌─────────┴─────────┐
        Det          N̄              Det                  N̄
         a       ┌────┴────┐        the            ┌──────┴──────┐
                Ā         N̄                        N̄             P̄
             ╱─────╲   ╱─────╲                  ╱─────╲       ╱─────╲
          completely  theory of              portrait of    on my
             new        light                 Bakunin     bedroom  wall
```

NP tree:
```
            NP
          /    \
       Det      N̄
       any     /  \
             N̄     Ā
             |    /\
             N   capable of
           person  murder
```
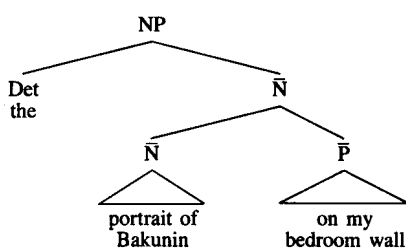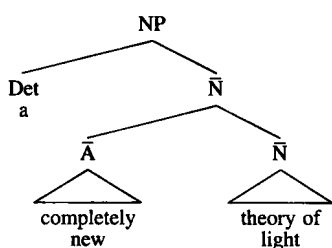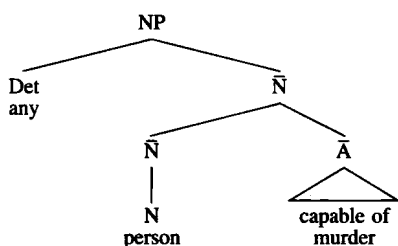
I will in fact argue below that some instances of the [A N] sequence involve reduced relative clauses and some do not. Regardless of whether the configurations in (9) are derived from underlying restrictive relative clauses, however, if those are in fact the surface structures of the NPs in question, they imply that it should be possible to combine N̄s with diverse modifiers in fairly complex NPs, and such a range of NPs does in fact occur:

(10)

```
            NP                                    NP
          /    \                                /    \
       Det      N̄                            Det      N̄
       the     /  \                          an      /  \
             N̄     S                              N̄       P̄
            / \    /\                            / \      /\
           Ā   N̄  that I've just               Ā   N̄   near Detroit
           |   /\  read about                  |    / \
          new theory of                       old  Ā    N̄
              light                            |    |    |
                                            deserted mansion
```

```
                    NP
          /                    \
       Det                       N̄
       the                     /    \
                             N̄        S
                           /    \     /\
                         N̄       P̄  that I was reading
                       /    \    /\      yesterday
                     N̄       P̄  with the
                    / \     /\  green cover
                   Ā   N̄  on my desk
                   |   |
                  big book
```
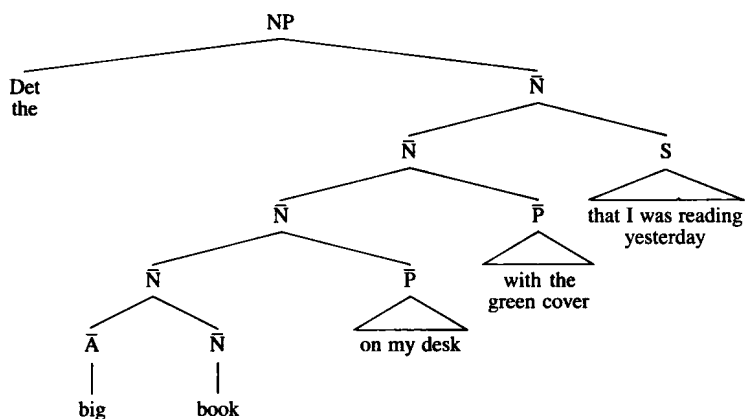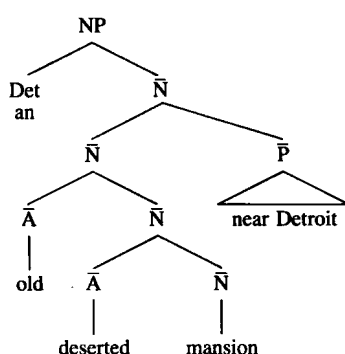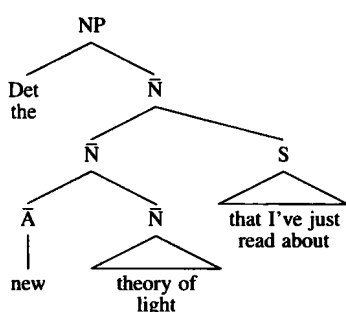
Near the beginning of this section, I indicated that it was not fully clear what the syntactic role of numerals was. One possibility mentioned there

was that they were determiners. A second possibility deserving considerations is that they are adjectives modifying an N̄ and occurring in the same configuration as other prenominal adjectives. Under these two alternatives the structure of *two cats* would be respectively (11a) or (11b):[3]

(11) a.

```
          NP
         /  \
       Det    N̄
       two    |
              N
             cats
```

b.

```
          NP
         /  \
       Det    N̄
        ø    /  \
            Ā    N̄
            |    |
           two   N
                cats
```

One difference between numerals and (other?) determiners that provides some reason for taking them not to be determiners is that numerals can be preceded by definite determiners, whereas a determiner cannot in general be preceded by another determiner:[4]

(12) a. the three children
     b. his two cars
     c. those five idiots
     d. our many faults
(13) a. *the our children
     b. *his the cars
     c. *those all idiots
     d. *our most faults

Taking numerals to be adjectives rather than determiners would fit the fact that they can appear in an environment (12) in which adjectives are otherwise possible but determiners are excluded. Combinations of numeral and N̄ can in fact be conjoined the way that N̄s normally can, and furthermore the combination of numeral and N̄ can support a restrictive clause or even, under restricted conditions, a preceding adjective:

(14) the two boys and three girls
     his wife and three children

(15)

```
                    NP
                   /  \
                 Det    N̄
                 the   /  \
                     N̄     S
                    /  \    \
                  N̄    N̄    that Lenny keeps in
                 / |   / \      his garage
            two cars and three motorcycles
```