SYNTAX: THE ANALYSIS OF SENTENCE STRUCTURE

Syntax is the study of sentence formation; it is a system of categories and rules that allow words to form sentences.

Grammatical sentences: the native speakers of a language judge them as possible utterances.

...”The fundamental aim in the linguistic analysis of a language L is to separate the grammatical sentences which are sentences of L from the ungrammatical sentences which are not sentences of L, and to study the structure of grammatical sentences.” N. Chomsky. 1957. *Syntactic Structures.*

*Sylvia wanted George to go.*

*Sylvia George go want.*

Grammaticality does not depend on whether:

1. The utterance has been heard before

   *A pigeon-toed sloth won the beauty contest wearing a purple tutu.*

2. The utterance is false

   *My horse is a professor of mathematics.*

3. Semantically it does not make any sense

   *Colourless green ideas sleep furiously.*

   **ALL THE ABOVE SENTENCES ARE GRAMMATICAL!**

CATEGORIES AND STRUCTURE

The shared characteristics of words allow us to organize them into a relatively small number of groups, called SYNTACTIC CATEGORIES:

Lexical categories  Non-lexical categories
LEXICAL CATEGORIES:

NOUN (N)  
*John, box, girl, truth*

VERB (V)  
*come, see, receive*

ADJECTIVE (A)  
*nice, red, cheap, big*

PREPOSITION (P)  
*of, by, to, on*

ADVERB (Adv)  
*slowly, now, cleverly*

NON-LEXICAL CATEGORIES (=functional categories):

DETERMINER (Det)  
*the, a, this*

DEGREE WORD (Deg)  
*very, so, more*

QUALIFIER (Qual)  
*perhaps, almost*

AUXILIARY (Aux)  
*may, have, will*

CONJUNCTION (Con)  
*and, but, or*

---

STUDY *Table 5.1* on p. 168

How can we determine a word’s category?

There are *three criteria* that help to identify the syntactic category of a word:

1. **MEANING**

   Nouns  →  entities such as individuals (*John, Mary*), objects (*book, knife*), etc.

   Verbs  →  designate actions (*walk, speak*), sensations (*feel, hurt*), and states (*remain, be*)

   Adjectives  →  they designate properties or attributes of nouns (*small, white*)
Adverbs → they designate properties of verbs (slowly, loudly)

Problems: the meaning does not always have a direct relationship to the category of the word, for example:

a. abstract nouns (kindness, likelihood etc.) do not represent entities in the sense presented above
b. some verbs can be used as nouns (call, push etc.)
c. words of similar meaning may belong to different categories: like (V) fond of (A).

2. INFLECTION

Inflection is associated with a certain lexical category, see Table 5.2 (p. 170).

Problem: inflection does not always reveal the category, for example: not all adjectives in English can take Comparative or Superlative suffixes (*beautifulest); some nouns may not normally take the Plural suffix (bravery, thoughtfulness)

3. DISTRIBUTION

John saw ----------

a. the girl
b. the boy with the puppy
c. runs
d. had a drink
e. the accident

(a), (b) and (e) belong to the same category: they can be substituted for one another without loss of grammaticality.

**MEANING, INFLECTION AND DISTRIBUTION TOGETHER HELP TO IDENTIFY THE SYNTACTIC CATEGORY OF A WORD.**
PHRASE STRUCTURE

Sentences have a hierarchical structure in which words are grouped into successively larger structures.

Members of each lexical category share certain combinational properties: they form larger units (=phrases) with certain types of words.

NOUN PHRASE (NP):

```
NP
   Det   N
   the   man
```

VERB PHRASE (VP):

```
VP
   Qual        V
   never      talk
```

ADJECTIVE PHRASE (AP):

```
AP
   Deg   A
   quite   similar
```

PREPOSITIONAL PHRASE (PP):

```
PP
   Deg   P
   almost   in
```
**HEADS**: each phrase is built around a lexical category:

- NP: around N
- VP: around V
- etc.

The lexical category around which the phrase is built: HEAD of the phrase. It is not possible to have a VP without a V, a NP without a N, etc.

However, it is possible to have a phrase in which only the HEAD position is filled:

```
NP
  | N
  | (she loves) cats

VP
  | V
  | (babies) cry

AP
  | A
  | (I am) hot

PP
  | P
  | (he walked) out
```

**SPECIFIERS**: in addition to the HEAD, phrases may include a second word with a special semantic or syntactic role (determiners, qualifiers and degree words).

Specifiers make the meaning of the HEAD more precise: semantic role!

Specifiers mark a phrase boundary. In English, specifiers occur at the left boundary of the phrase.

- *the cats* (NP)
- *very fast* (AP)
- *almost in* (PP)
**the, very, almost : SPECIFIERS**

---

**STUDY Table 5.4 on p. 172**

**COMPLEMENTS**

Complements provide information about entities and locations whose existence is implied by the meaning of the head.

```
A vegetarian would never eat [a hamburger].
```

(head)

```
(naming the thing eaten)
```

(Complements are attached to the right of the head in English.)

```
never        eat        a       hamburger
```

(DIRECT OBJECT: The NP that is the complement of VP *(a hamburger* in this example).

```
almost      on      the roof
```

(Triangle: the internal structure of the phrase is not specified → space saving!)
**PHRASE STRUCTURE RULES**: a special grammatical device for ensuring that specifiers, heads and complements occupy the correct position in the phrase structure.

- the arrow means “consists of” or ‘branches into’
- The parentheses indicate optionality

NP → (Det) (AP) N (PP)
VP → (Qual) V (NP) (PP)
AP → (Deg) A (PP)
PP → (Deg) P (NP)

Generalizing the rules:

The structural similarities between NPs, VPs, APs, and PPs:
- **Specifier**: left of the head
- **Complement**: right of the head

Study Figure 5.4 and 5.5 on pp. 173-174.
$X = \text{N, V, A or P}$

```
XP
 /\   \
|   |
|   |
Specifier X Complement
```

The Phrase Structure Template

The XP Rule:

$XP \rightarrow (\text{Specifier}) X (\text{Complement})$