

Syntax Constituents

Activity 1: Consider the following English sentences

- (1) The boy read the book.
- (2) The boy left.
- (3) The girl ate an apple.
- (4) The girl eats an apple for breakfast on a daily basis.

1. Can you identify how many constituents there are in each of the sentences above?
2. Can you label these constituents?
3. Can you work out arguments that sentences do in fact have internal constituents?

Syntax Constituents

Constituent: is a word or a group of words that functions as a single unit within a hierarchical structure.

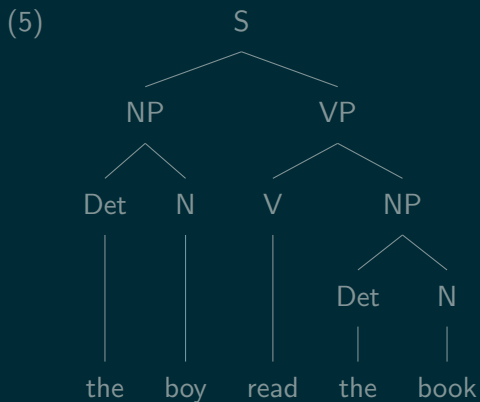
We can represent constituents through 2 ways:

- ▶ Labeled bracketing.
- ▶ Tree diagrams.

Remark: we use *constituency tests* (question-formation, replacement...) to verify whether a word or group of words function as a constituent/single unit.

Structure Representation

Tree diagrams



Labeled bracketing notation (skip this)

(6) [_S [_{NP} [_{Det} the] [_N boy]] [_{VP} [_V read] [_{NP} [_{Det} the] [_N book]]]]]

Phrase-Structure Rules (1)

Phrase-structure rules: the rules that determine the basic constituent structure of sentences are called phrase-structure rules. They state what every constituent can be composed of.

- ▶ **Claim:** the grammars of all languages have phrase-structure rules because all sentences in all languages conform to certain constituent structures.
- ▶ Our knowledge of syntax consists of knowledge of such rules.
- ▶ Phrase-structure rules **generate** trees (generative grammar).

Phrase-Structure Rules (2)

- ▶ Phrase-structure rules have the following form:

$$XP \rightarrow \dots X \dots$$

Where all material in “...” is optional and X is a variable ranging over lexical categories (N, P, V, Adj,), i.e. it is possible for a phrase to consist only of its head.

Examples

S → NP VP

NP → (Det) (Adj) **N**

VP → **V** (NP)

PP → **P** NP

AdjP → (Adv) **Adj**

AdvP → (Adv) **Adv**

Lexical Insertion Rules

Lexical insertion rules: A sentence is obtained only when the lexical entries of the appropriate category are inserted into the bottom of a tree. Lexical insertion rules are expressed in PS-rules:

e.g.

$V \rightarrow \{walk, drink, sleep, forgive, dream...\}$

$N \rightarrow \{tree, freedom, bread, house, woman...\}$

$A \rightarrow \{weak, big, hot, evident, short...\}$