

Constituency, Categories, and Phrase Structure Rules

1 Constituency

Beyond knowing that certain sequences of words 'are English':

- (1) The astronomer frequently gave some very long books about comets to her student.

and that certain others aren't:

- * Astronomer her the frequently books very comets about student to long gave.

we have an intuition that certain sequences of words go together:

- (2) a. the astronomer
b. some very long books about comets
c. to her student

but others don't:

- (3) a. astronomer frequently
b. comets to her
c. gave some very

This grouping of words that syntax imposes is called *constituency*.

- (4) *Constituent*: A group of words that functions together as a unit.

2 Categories

Another kind of knowledge that we have about sentences is that words can be grouped together according to 'what kinds of words they are'.

(5) Traditional Parts of Speech

- a. Nouns
- b. Verbs
- c. Adjectives
- d. Prepositions

Other categories that we might need:

(6) a. Determiners

- b. Adverbs
 - c. Degree
 - d. Complementizers
- (maybe also pronouns)

(7) Meaning versus Form

- a. The **eradication** of malaria was an important landmark.
- b. **Sincerity** seems to have become uncool.

(8) Multiple uses

- a. That **man** will **man** the watchtower.
- b. The **rich** are different.
- c. Verbing weirds language. (Calvin & Hobbes)

(9) New words:

The yinkish dripner blorked quastofically into the nindin with the pidibs.

3 Phrase Structure Rules and Trees

Basic Schema:

$$XP \rightarrow X Y Z$$

(10) Noun Phrases

- a. John, comets
- b. the astronomer
- c. the big box of crayons
- d. the big yellow box of cookies with the pink lid

(11) Adjective Phrases

- a. the thin exciting book
- b. the very exciting book

(12) Prepositional Phrases

- a. about comets
- b. with an axe
- c. in the garden

(13) Verb Phrases

- a. Ian [left].
- b. Ian [left quickly].
- c. Ian [often left quickly].
- d. Ian [read a book in the garden].
- e. Ian [read a book in the garden for an hour].

(14) Clauses

- a. Ian left.
- b. Fortunately Ian left.
- c. Ian might leave.
- d. Ian said that he might leave.
- e. That Ian has left is certain.