Lecture 6: Syntax II

INDV 101 -- Mind, Self and Language
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Phrase Structure Rules

- You should be able to extend these rules into numerous individual rules.
- These rules can also be represented visually by **syntactic trees**.

Phrase-Structure Rules

- \( S \rightarrow NP \) (Aux) \( VP \)
- \( VP \rightarrow V \) (NP) (Adv) (PP) (Adv)
- \( NP \rightarrow (Det) \) (A) \( N \) (PP)
- \( PP \rightarrow P \) \( NP \)

How about the other interpretation of the sentence?

I saw the man in the park.

I saw the man in the park.
Another example:

What does **recursiveness** in language mean?

- When we apply the phrase structure rules, we could apply rules to elements in another rule, thus producing infinite possibilities of sentences.

Constituency tests—what words are grouped together?

- **Substitution**: If a string of words can get replaced by a pronoun (without altering the basic meaning of the sentence), that string is a constituent.
  - Pronouns: I, me, he, she, it, her, him, they, them...
  - *there, there…
  - *do/did so, did, too
  - *one [to be discussed later]

- **Movement**: If a string of words can get dislocate (without altering the basic meaning of the sentence), that string is a constituent.

- **Coordination**: If two strings can be conjoined with *and* or *or*, the conjuncts are constituents.

Tree diagrams for the following syntactic units:

A. The man walked slowly
B. the girl with a telescope
C. He wrote with a pencil.
D. He saw the girl with a telescope.

Follow these steps to draw trees: (From the bottom up.)

1. Determine the part of speech of each word.
2. Determine what the Subject is so that you know what the NP and VP are under S.
3. Group words into phrases based on phrase-structure rules.
4. Remember to choose the right categories for the phrases. (the category of the head)
5. If there is structural ambiguity, be sure to choose the right structure for your meaning!
Tree-drawing exercises

- I kept a book in the closet.
- I wrote a book about Mary.
- Time flies like an arrow.
- She hit the man with an umbrella.

Homework 4

Homework 4: Syntactic Analysis (Due on January 3, 2005 Monday) — This homework is worth 3% of your final grade.

SAAD

Refer to the following phrase-structure rules in English when you do the exercises:

1. \( S \rightarrow NP(Aux)\ V P \)
2. \( V P \rightarrow V (NP) \mid (Adv) (PP) (A Adv) \)
3. \( NP \rightarrow (Det) (A) (NP) \)
4. \( PP \rightarrow P (NP) \)

1. Draw a tree diagram for each of the following noun phrases (20 pts):
   - A. a search for cures
   - B. the timing (N) of the show

2. Draw a tree diagram for each of the following verb phrases (20 pts):
   - A. succeeds with dignity
   - B. put the book on the table

3. Draw a tree diagram for the following preposition phrase (10 pts):
   - in the store near a big park

4. Draw a tree structure for each of the following sentence:
   - A. The boy in the room threw the ball into a pool near the pond. (15 pts)
   - B. The professor put the book about linguistics on the table over the Shawlboard. (15 pts)

5. Draw tree diagrams for each interpretation of the sentence: Alice hit the kid with a bat. (20 points)