

Syntax: More Rules and More Trees

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Syntax: Words \Rightarrow Phrases \Rightarrow Sentences

Syntax studies how words are combined together to form sentences..

One of the fundamental insights of syntax is that the rules that assemble sentences largely care about what **category** each word belongs to. Additionally, words are first grouped into subunits that we call **phrases**, and then phrases are what sentences are made of.

Practice ambiguity

- Draw trees for the following sentences. If any are ambiguous, please provide a tree for each possible meaning.

- (1) a. The company sells fish from Sweden.
b. Josh arrived at Jericho on a bus.
c. Camille drew a woman with a pen.

Rules:

- | | |
|--|--|
| a. $S \rightarrow NP VP$ | c. $PP \rightarrow P (NP)$ |
| b. $NP \rightarrow (D) (A^*) N (PP^*)$ | d. $VP \rightarrow V (NP) (NP) (PP^*)$ |

Phrase structure rules

Let's revise the **phrase structure rules** you have seen in the lectures.

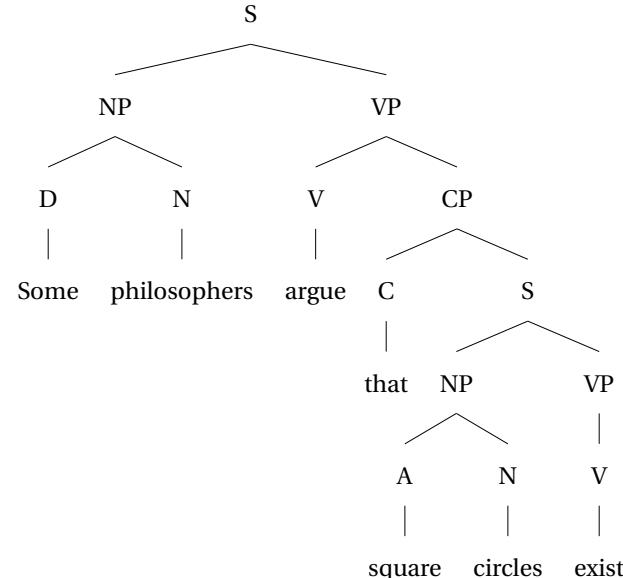
- (2) a. Sentences: $S \rightarrow \{NP, CP\} VP$
b. Noun Phrases: $NP \rightarrow (D) (A^*) N (CP) (PP^*)$
c. Preposition Phrases: $PP \rightarrow P (NP)$
d. Verb Phrases: $VP \rightarrow V (NP) \{(NP), (CP)\} (PP^*)$
e. Complementizer Phrases: $CP \rightarrow C S$

Where,

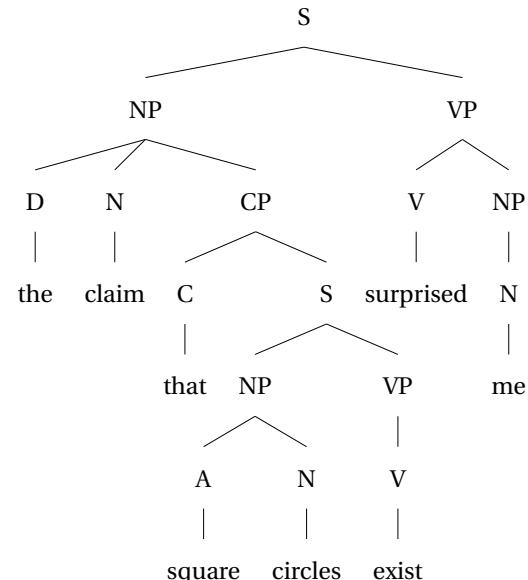
- Parentheses “(...)" indicate that an item is optional;
- Curly brackets “{.....}" indicate that there has to be one and only one of two items;
- The star “*" indicates that an item can be repeated;
- Order matters:** $VP \rightarrow V (NP) \neq VP \rightarrow (NP) V$

We added three possible positions for CPs

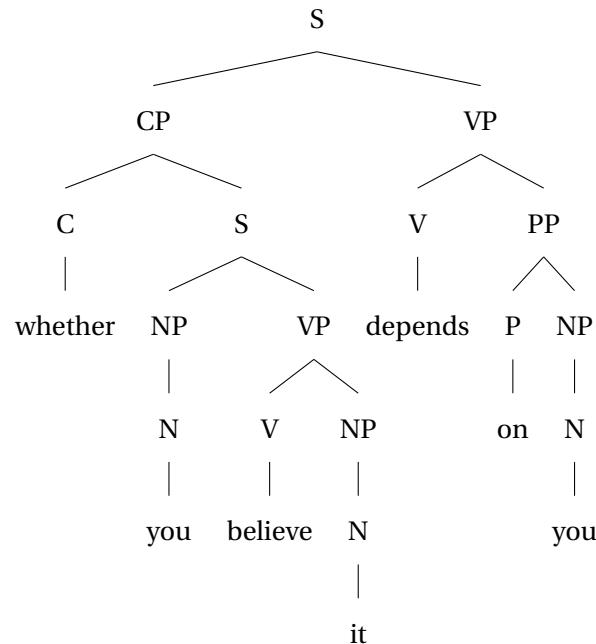
- (3) (i) Some philosophers argue that square circles exist. (*inside a VP*)



- (ii) The claim that square circles exist surprised me. (*inside an NP*)



(iii) Whether you believe it depends on you.

(right under S)**Practice**

- Draw trees for the following sentences. If any are ambiguous, please provide a tree for each possible meaning.
- (4)
- Petra thinks that the neighbors invited them for lunch.
 - That Bill stinks surprised Mary.
 - Heidi asked whether I hate my TA.
 - The lie that Roger danced inspired Kenta.
 - The minister wrote a declaration that the government closed the borders on Monday.
 - Peter told his daughter that Mary read the book that he wrote on Tuesday.

Rules:

- | | |
|---|---|
| a. $S \rightarrow \{NP, CP\} VP$ | d. $VP \rightarrow V (NP) \{(NP), (CP)\}$ |
| b. $NP \rightarrow (D) (A^*) N (CP) (PP^*)$ | (PP^*) |
| c. $PP \rightarrow P (NP)$ | e. $CP \rightarrow C S$ |