

# Grammar 7

Gert Webelhuth

University of Frankfurt

# The phrase structure rules of Grammar 6

Phrase structure rule for sentences:

$$\begin{bmatrix} \text{phrase} \\ \text{SYNTAX} \quad \text{sentence} \end{bmatrix} \rightarrow \begin{bmatrix} \text{word} \\ \text{SYNTAX} \quad \text{noun} \end{bmatrix} \left[ \text{SYNTAX} \begin{bmatrix} \text{verb} \\ \text{RIGHT} \langle \rangle \end{bmatrix} \right]$$

Phrase structure rule for verb phrases:

$$\begin{bmatrix} \text{phrase} \\ \text{SYNTAX} \quad \begin{bmatrix} \text{verb} \\ \text{RIGHT} \langle \rangle \end{bmatrix} \end{bmatrix} \rightarrow \begin{bmatrix} \text{word} \\ \text{SYNTAX} \quad \begin{bmatrix} \text{verb} \\ \text{RIGHT} \langle \boxed{1} \rangle \end{bmatrix} \end{bmatrix} \begin{bmatrix} \text{word} \\ \text{SYNTAX} \quad \boxed{1} \end{bmatrix}$$

The last rule says: a verb phrase consists of a verb word that wants the category C after it + a word of that same category C.

# Not only verbs can select complements

- (1) a. Verb: *likes Kim*  
b. Preposition: *in Hessen*  
c. Noun: *pictures of Kim*  
d. Adjective: *fond of Robin*

To capture this, we make two changes to the grammar.

# 1. We give more internal structure to the SYNTAX-attribute

- Our *old* system was based on the distinction between transitive and intransitive verbs and thus *only allowed verbs to select another expression on the right*.
- In the *new* system, the SYNTAX-attribute introduces two new attributes for **all** parts of speech: PART-OF-SPEECH (POS) and RIGHT.
- In this way, **all** words can be specified for part of speech and for selection to the right.

Old

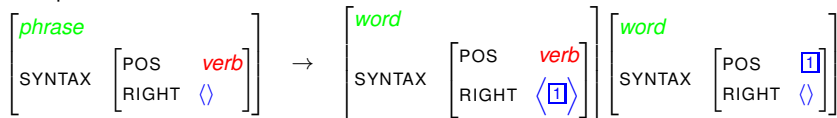
$$\left[ \text{SYNTAX} \left[ \begin{array}{l} \textit{verb} \\ \text{RIGHT} \quad \textit{list} \end{array} \right] \right]$$

New

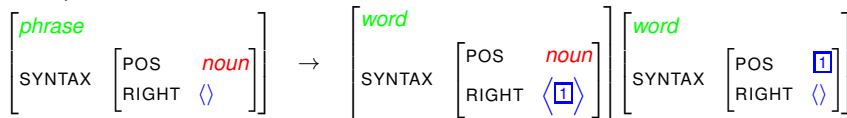
$$\left[ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \quad \textit{pos} \\ \text{RIGHT} \quad \textit{list} \end{array} \right] \right]$$

## 2. We add rules for NPs, APs, and PPs; these rules are similar to the VP-rule

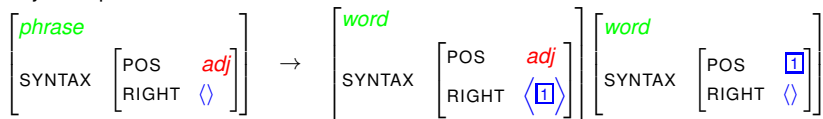
Verb phrases:



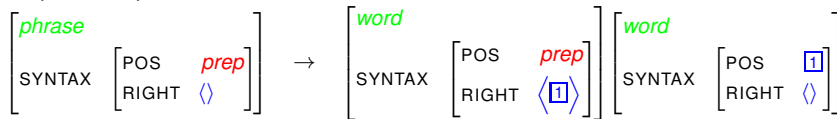
Noun phrases:



Adjective phrases:



Prepositional phrases:



# Excercises

- 1 Parse the new test items (18)-(29) of Grammar 7!
- 2 Notice carefully which rules are used to combine the head and the element it selects to its right!