

# Grammar 9

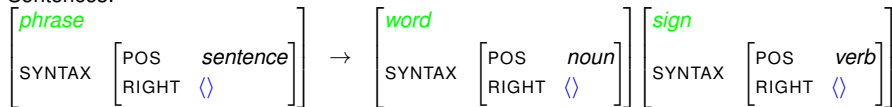
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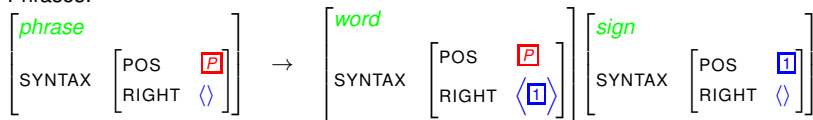
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# The phrase structure rules of Grammar 8

Sentences:

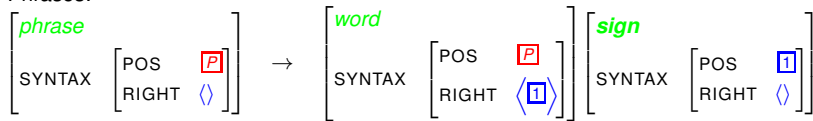


Phrases:



## Grammar 8 can handle verbs with maximally 1 complement

Phrases:

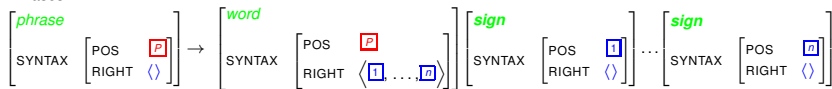


But there are verbs that co-occur with 2 complements, e.g. *show*:

- (1) a. Kim shows [NP Robin] [NP Hessen]  
b. Kim shows [NP Hessen] [PP to Robin]

Conclusion: We need to make the phrase rule more general:

Phrases:



# The phrase structure rules of Grammar 9

Sentences:

$$\left[ \begin{array}{l} \textit{phrase} \\ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \\ \text{RIGHT} \end{array} \right] \textit{sentence} \end{array} \right] \rightarrow \left[ \begin{array}{l} \textit{word} \\ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \\ \text{RIGHT} \end{array} \right] \textit{noun} \end{array} \right] \left[ \begin{array}{l} \textit{sign} \\ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \\ \text{RIGHT} \end{array} \right] \textit{verb} \end{array} \right]$$

Phrases:

$$\left[ \begin{array}{l} \textit{phrase} \\ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \\ \text{RIGHT} \end{array} \right] \boxed{P} \end{array} \right] \rightarrow \left[ \begin{array}{l} \textit{word} \\ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \\ \text{RIGHT} \end{array} \right] \langle \boxed{1} \dots \boxed{n} \rangle \end{array} \right] \left[ \begin{array}{l} \textit{sign} \\ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \\ \text{RIGHT} \end{array} \right] \boxed{1} \end{array} \right] \dots \left[ \begin{array}{l} \textit{sign} \\ \text{SYNTAX} \left[ \begin{array}{l} \text{POS} \\ \text{RIGHT} \end{array} \right] \boxed{n} \end{array} \right]$$

# Excercises

- 1 Parse test items (6)-(33) of Grammar 9 and convince yourself that with just two syntactic rules—one for sentences and one for phrases—that grammar can handle verbs with 0, 1, and 2 complements!