

# 20\_HOMEWORK3\_extending\_the\_left\_corner\_parser

May 2, 2021



## 0.1 Homework 3: extending the grammar and the left-corner parser

Extend our grammar left-corner parser in the same way you extended the top-down parser:

- with intransitive verbs like *sleeps*
- with sentential-complement taking verbs like *believe*

That is, add the following phrase-structure and lexical-insertion rules to the grammar:

$$\begin{array}{ll} \text{VP} & \rightarrow \text{V} \\ \text{VP} & \rightarrow \text{V CP} \\ \text{CP} & \rightarrow \text{C S} \\ \text{V} & \rightarrow \text{sleeps} \\ \text{V} & \rightarrow \text{believes} \\ \text{C} & \rightarrow \text{that} \end{array}$$

Add the new lexical items to declarative memory and add new production rules to procedural memory to encode the new phrase-structure rules.

Once your model is in place, parse the sentence *Mary believes that Bill sleeps*.

Also, parse the sentence *Mary likes Bill*, to show that you can still parse the original example we used.

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