Grammar 17

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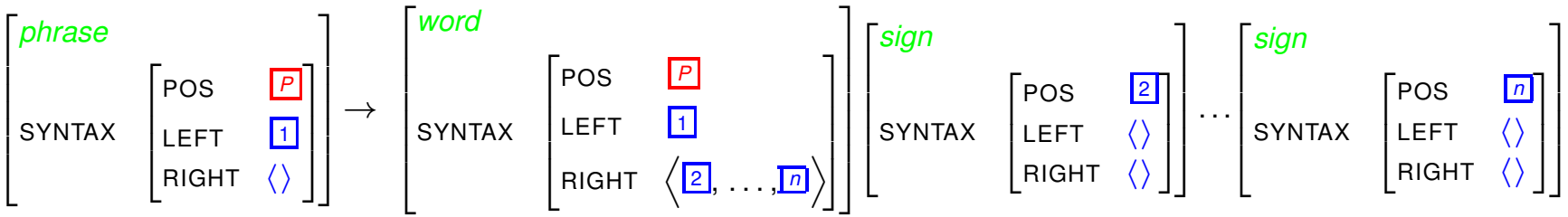
The grammar so far

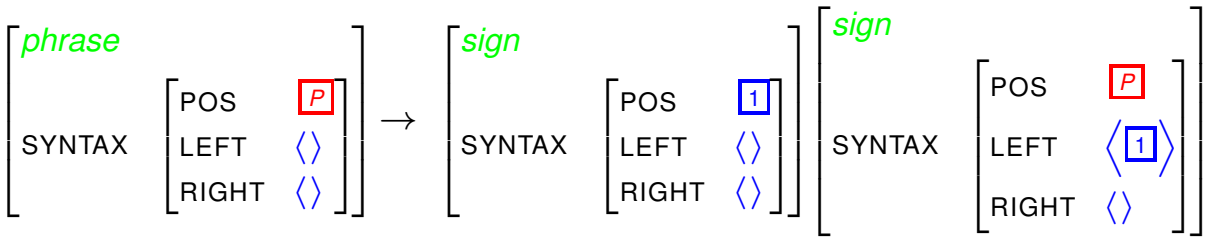
There are only two grammar rules:

The rules appear in the order in which they apply, from the bottom of the tree to the top.

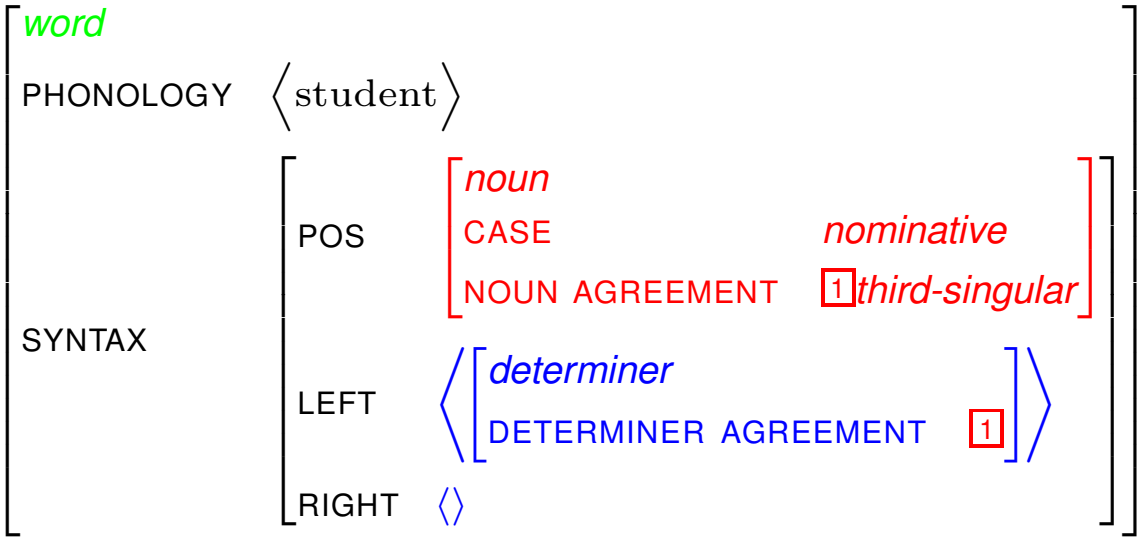
Complete-on-the-right-rule:

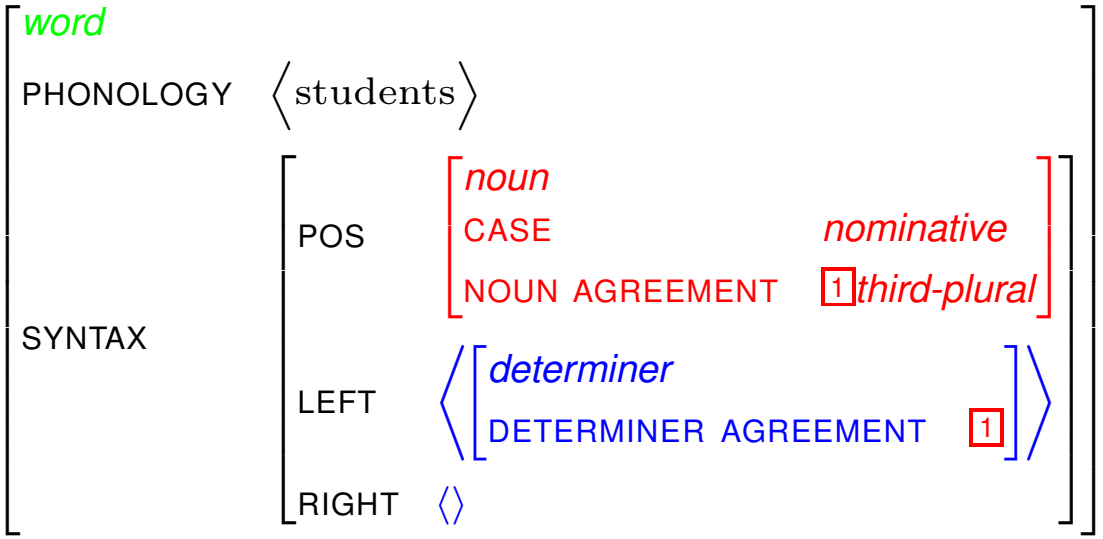


Complete-on-the-left-rule:

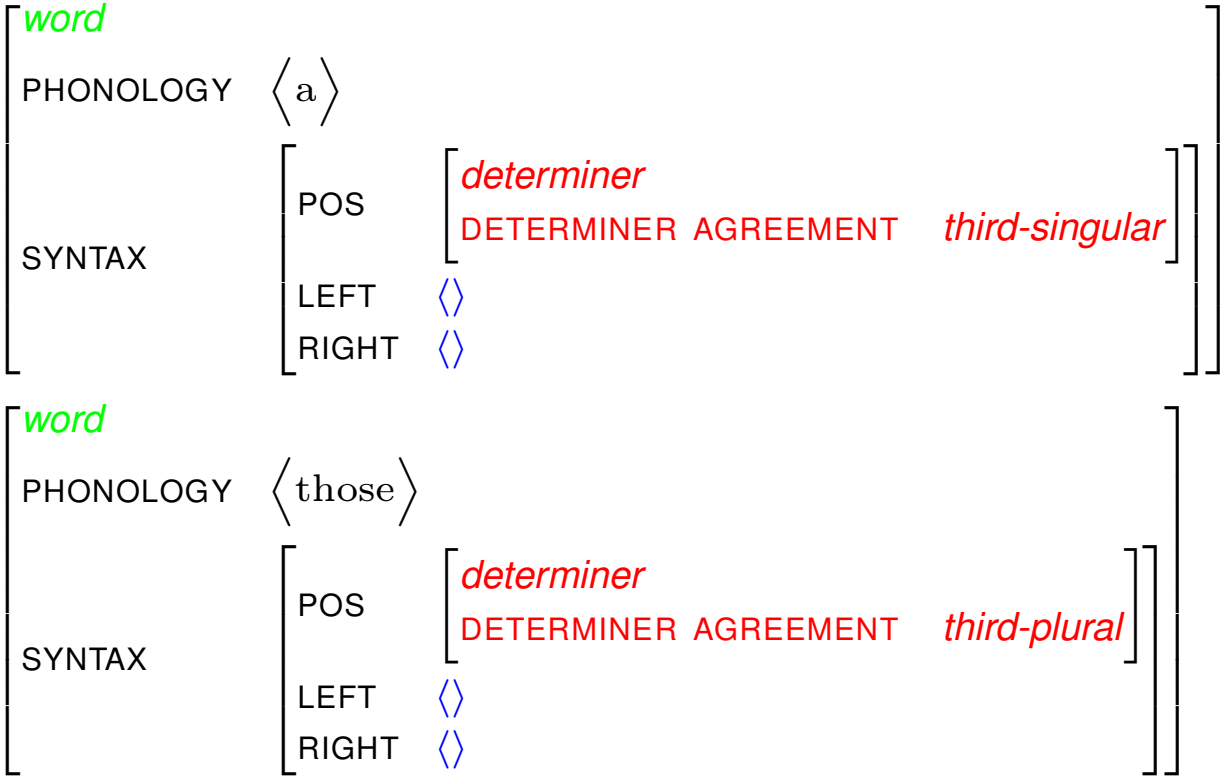


Lexical entries for typical nouns

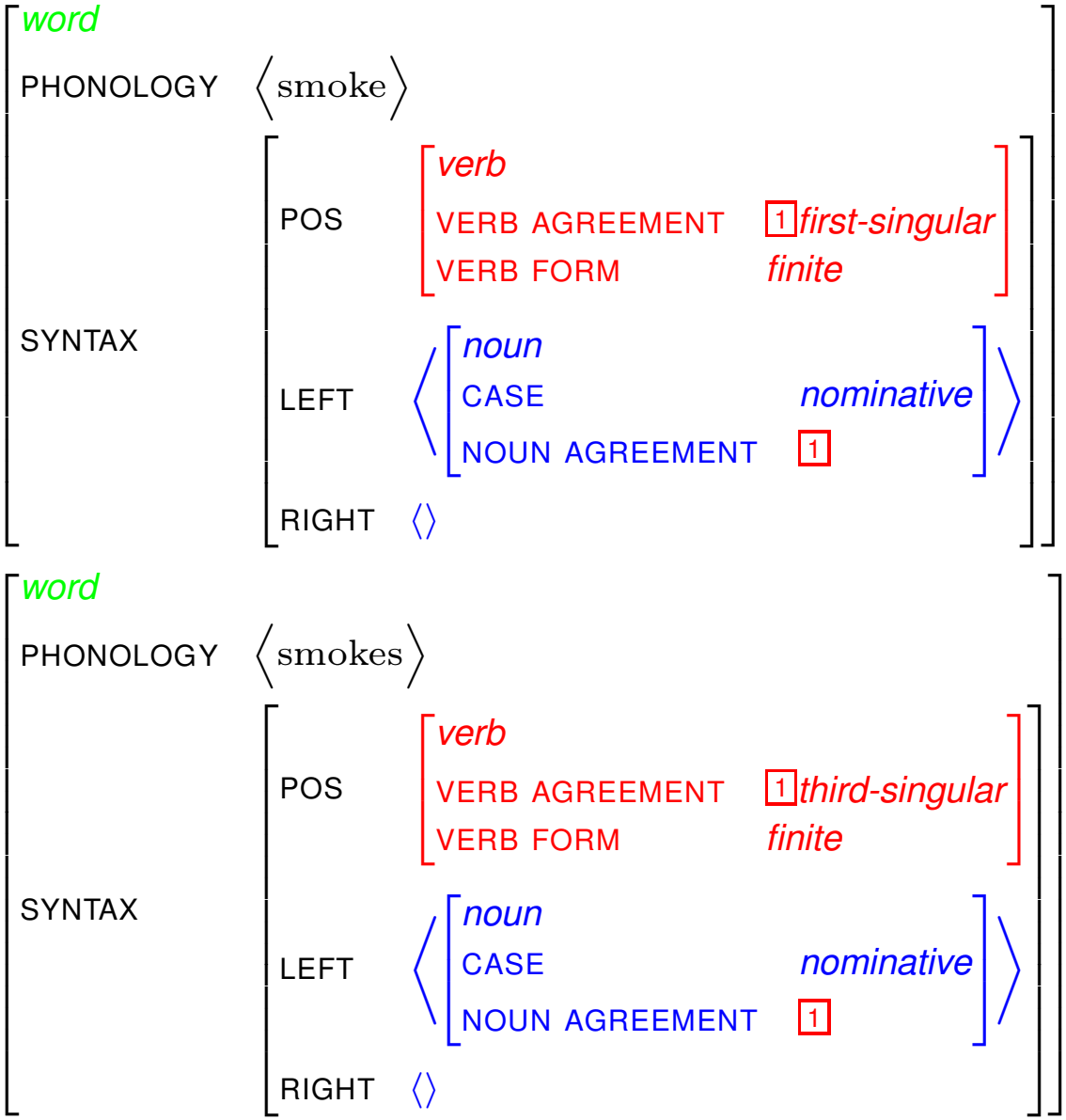




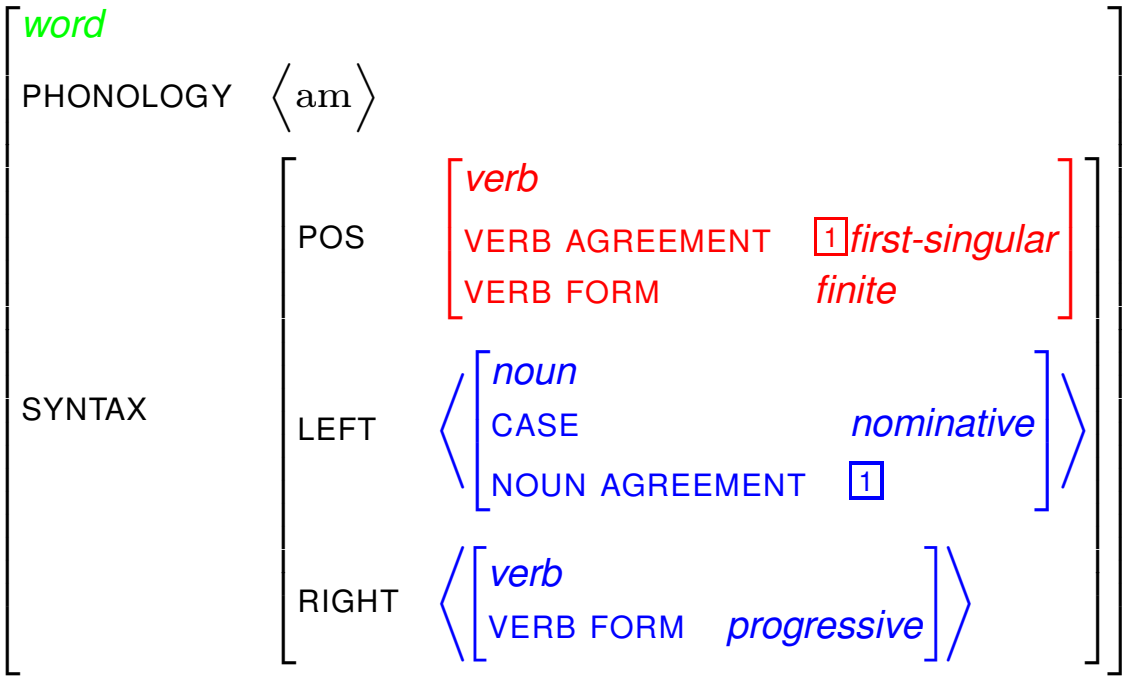
Lexical entries for typical determiners

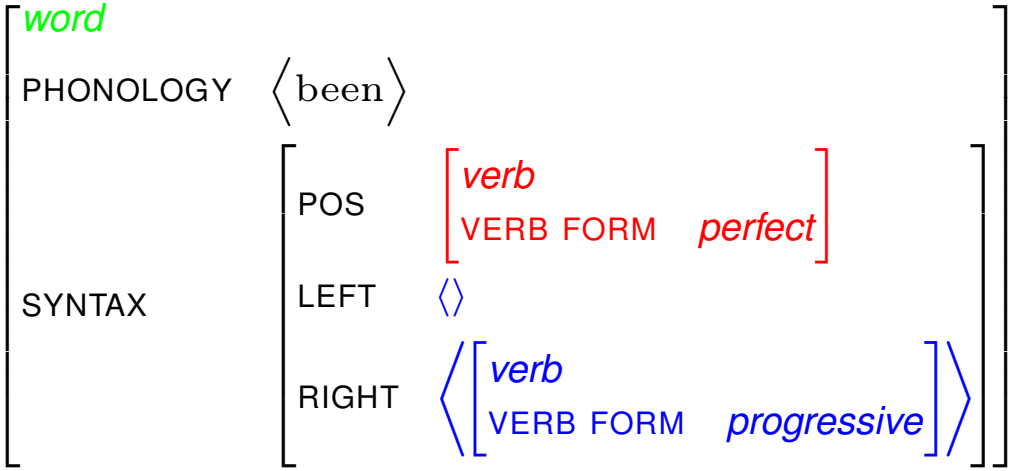


Lexical entries for typical verbs



Lexical entries for typical auxiliaries





The auxiliary *do* selects a VP with a bare verb form

(1) a. robin does eat an apple
b. * robin does eats an apple
c. * robin does ate an apple
d. * robin does eaten an apple
e. * robin does eating an apple

The auxiliary *do* has an interesting restriction that the other auxiliaries don't have

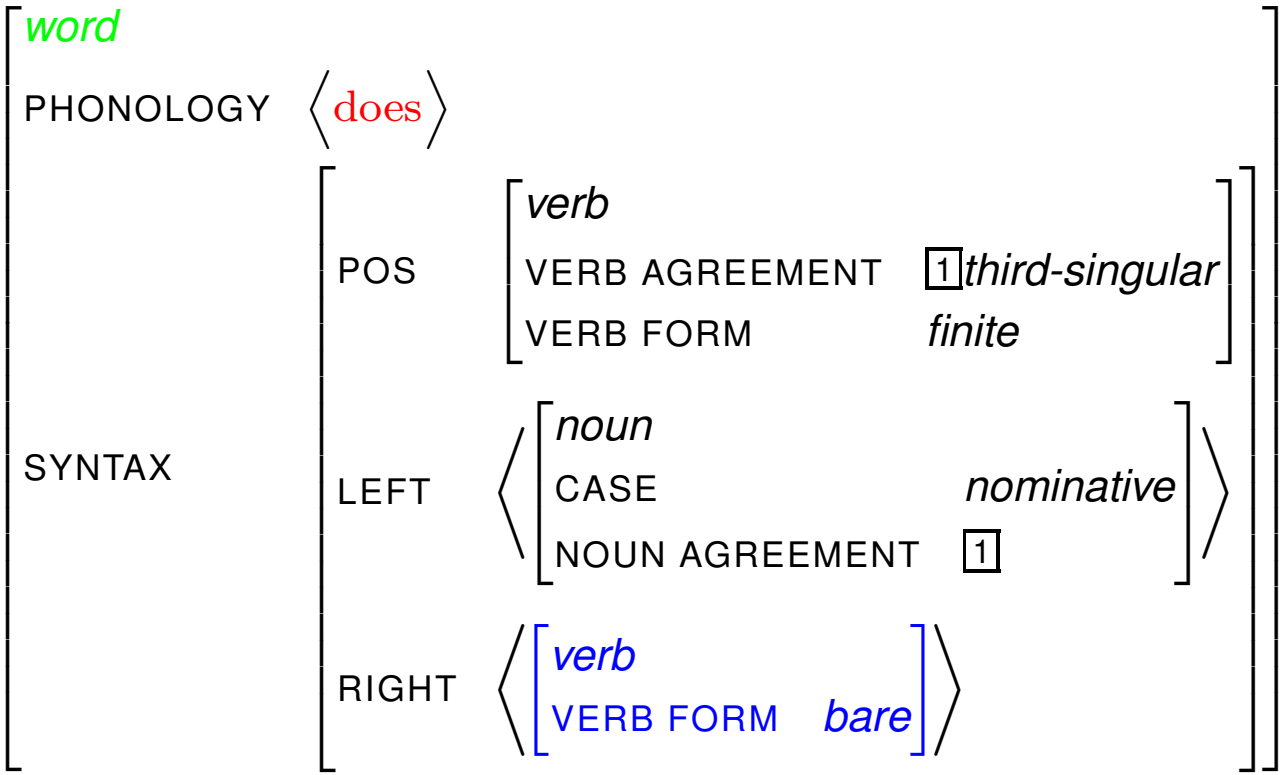
Certain verbs cannot appear after *do*, even though they have a bare verb form:

(2) a. * robin does be sad
b. * robin does be eating an apple
c. * robin does have eaten an apple

What the banned verbs have in common, is that they are auxiliaries.

☞ So: *do* only allows main verbs after it!

Problem: how to we capture this behavior in the lexical entry of *do*?



As can be seen on the following slide, our grammar does not distinguish between main verbs and auxiliaries.

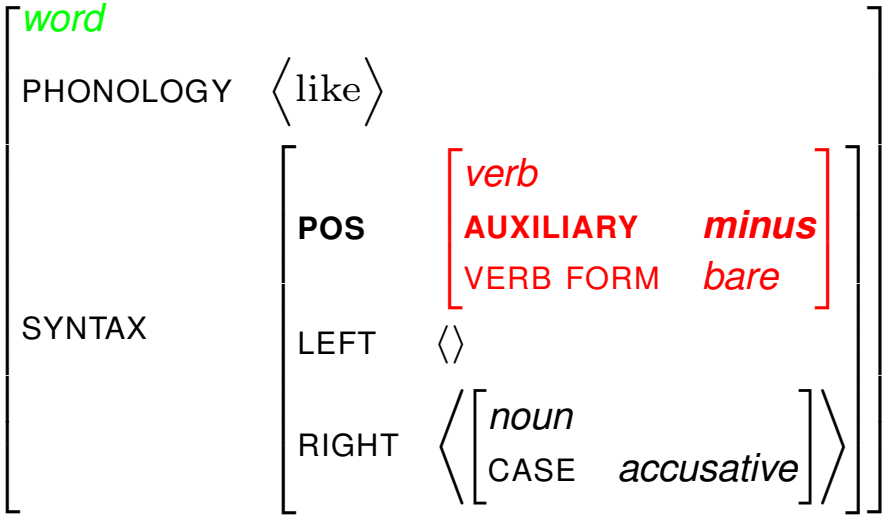
No distinction between main verbs and auxiliaries

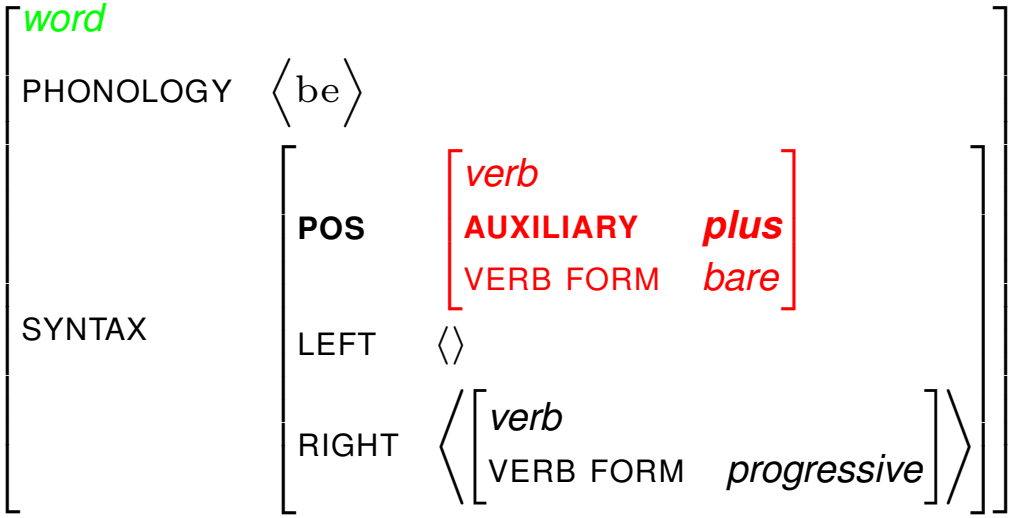
$$\begin{bmatrix} \textit{word} \\ \text{PHONOLOGY} & \langle \text{like} \rangle \\ \text{SYNTAX} & \begin{bmatrix} \text{POS} & \begin{bmatrix} \textit{verb} \\ \text{VERB FORM} & \textit{bare} \end{bmatrix} \\ \text{LEFT} & \langle\rangle \\ \text{RIGHT} & \left\langle \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{accusative} \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix}$$

$$\begin{bmatrix} \textit{word} \\ \text{PHONOLOGY} & \langle \text{be} \rangle \\ \text{SYNTAX} & \begin{bmatrix} \text{POS} & \begin{bmatrix} \textit{verb} \\ \text{VERB FORM} & \textit{bare} \end{bmatrix} \\ \text{LEFT} & \langle\rangle \\ \text{RIGHT} & \left\langle \begin{bmatrix} \textit{verb} \\ \text{VERB FORM} & \textit{progressive} \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix}$$

Where should the distinction be encoded?

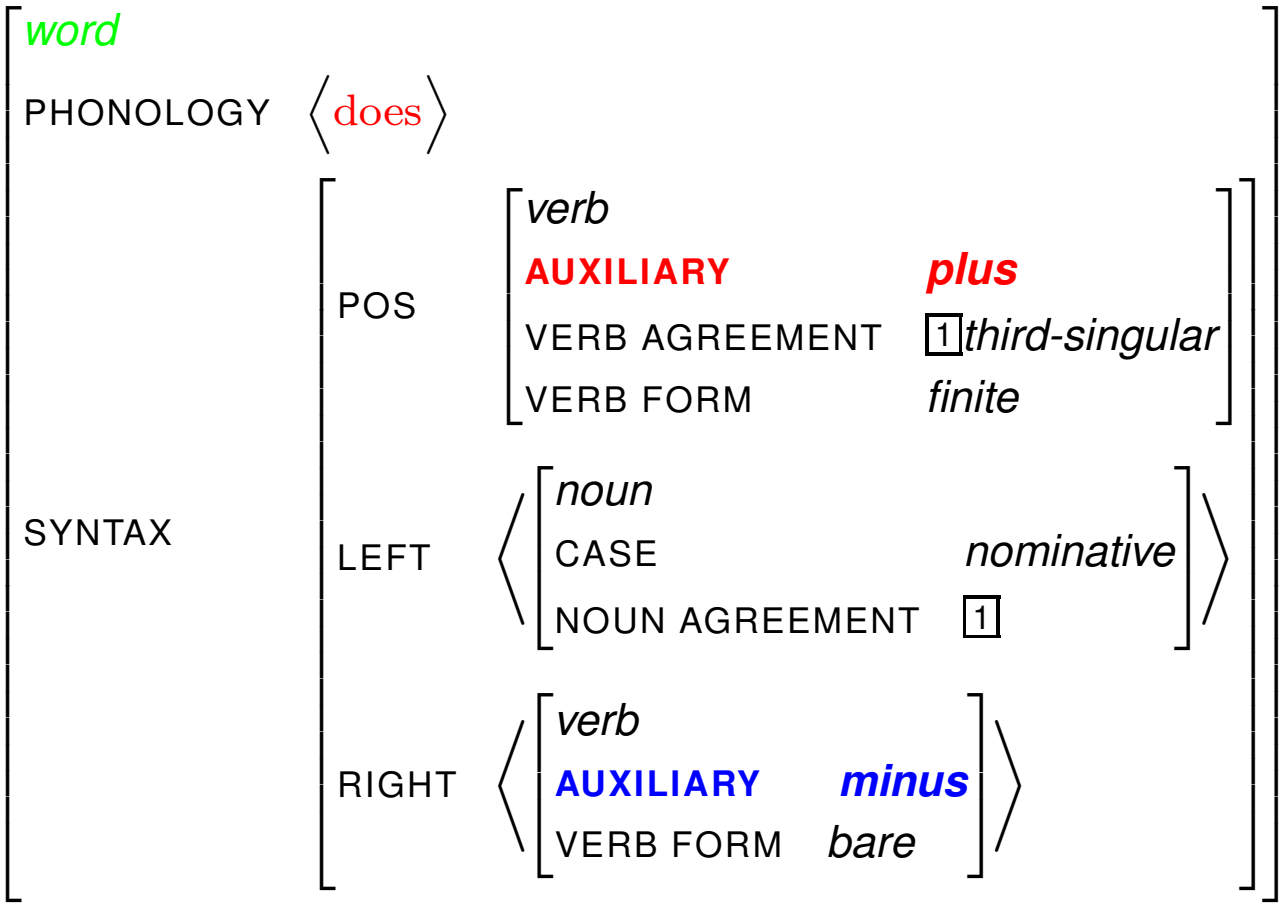
Answer: of course in the same place where we have encoded the other properties that are only relevant for verbs, namely in the part-of-speech value.



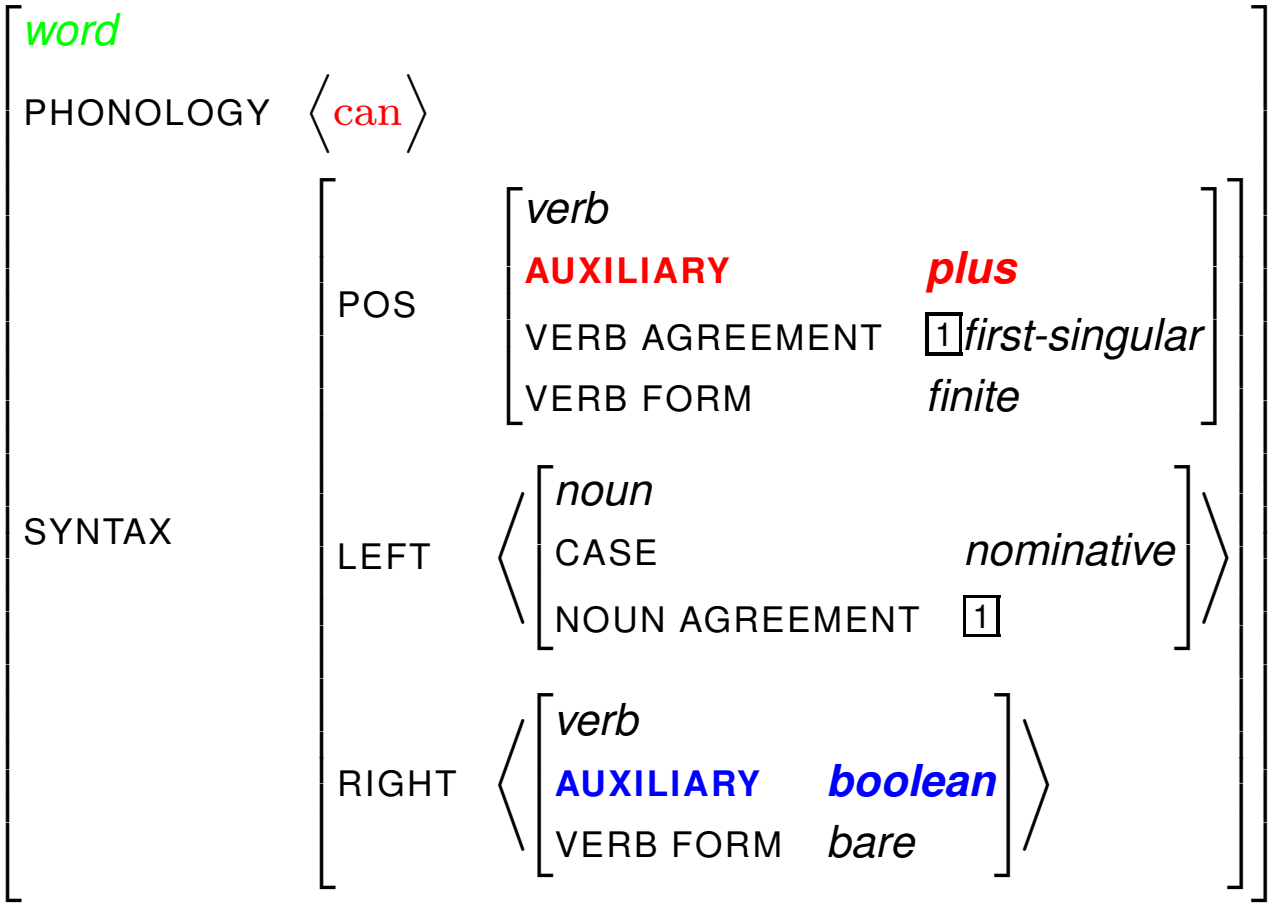


do only permits main verbs after it

Now, it is easy to encode in the lexical entry of the auxiliary *do* that it only permits main verbs after it:



can permits both main verbs and auxiliaries after it



The type *boolean* is neutral between the two types *plus* and minus in the same way that the type *sign* is neutral between the two types *word* and *phrase*.

Excercises

1. Parse the words “be”, “been”,“must” and “have” and look at the part of speech value of the output!
2. Parse the words “smokes”, “liked”, and “shown” and look at the part of speech value of the output!
3. Parse test items (223)-(230) and explain why you get the results you get!