Phrase Structure Rules, trees

Constituents

Recursion

Conjunctions

http://faculty.washington.edu/wassink/LING200/lect14_syntax2.pdf

Phrase Structure

1) Every word belongs to a *lexical category*

2) Lexical categories form heads of *phrases*

3) The way phrases are formed is governed by rules: ***phrase structure rules***

Phrase Structure Rules

- Rules that determine…
- ✓ …………what goes into a phrase (constituents)
- ✓ …………how the constituents are ordered

- **Constituent** : a word or group of words that function as a unit and can make up larger grammatical units

Noun Phrase NP

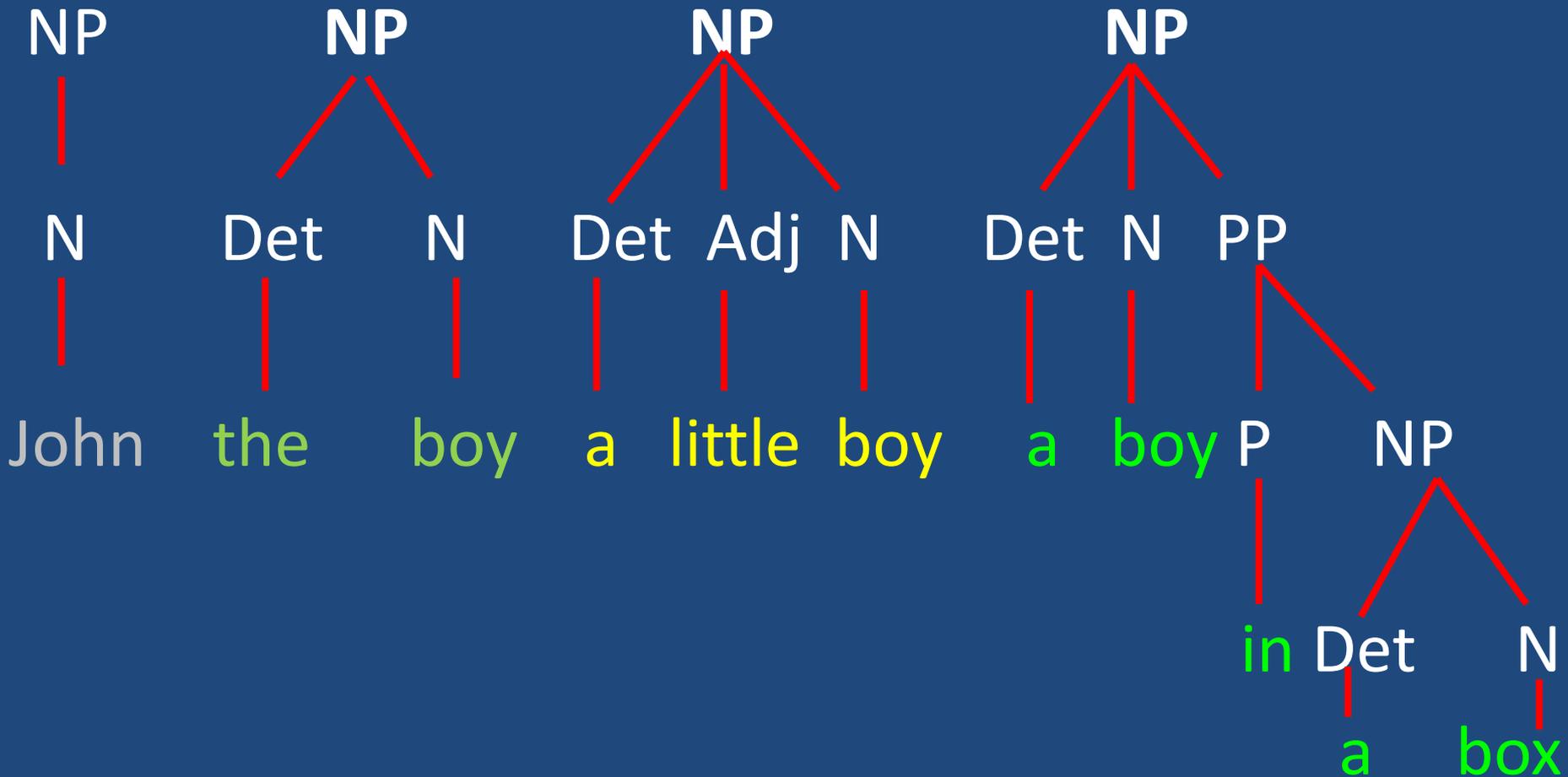- John   N
- the boy   Det N
- a little boy   Det Adj N
- a boy in a box   Det N PP

Phrase Structure Rule for NPs:

NP ⟶ (Det) (Adj) **N** (PP)

Where ( ) indicate optionality
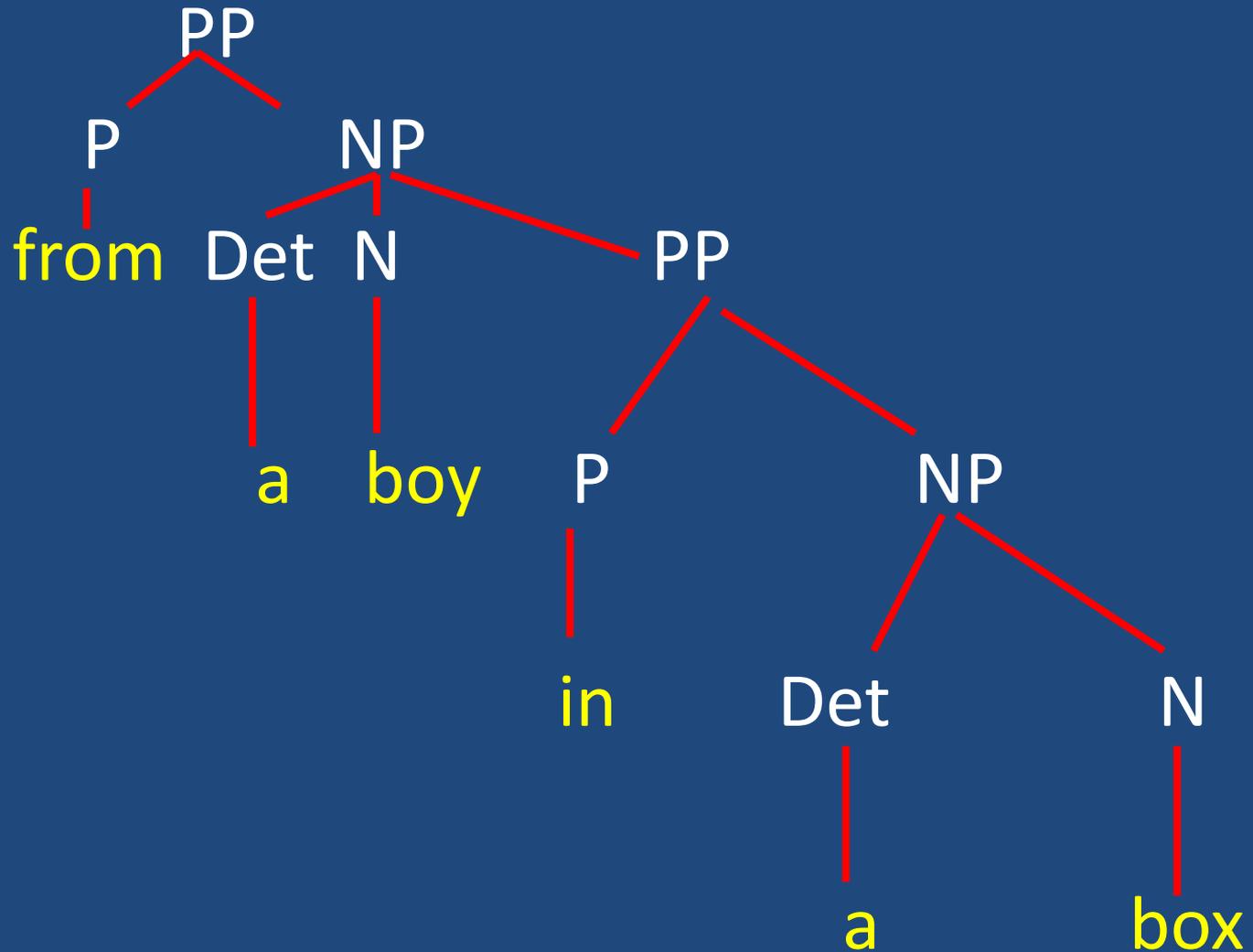
Phrase Structure Trees

Prepositional Phrase (PP)

- in   P
- from a boy in a box   P NP

Phrase Structure Rule for PPs

PP ⟶ **P** (NP)

Phrase Structure Trees
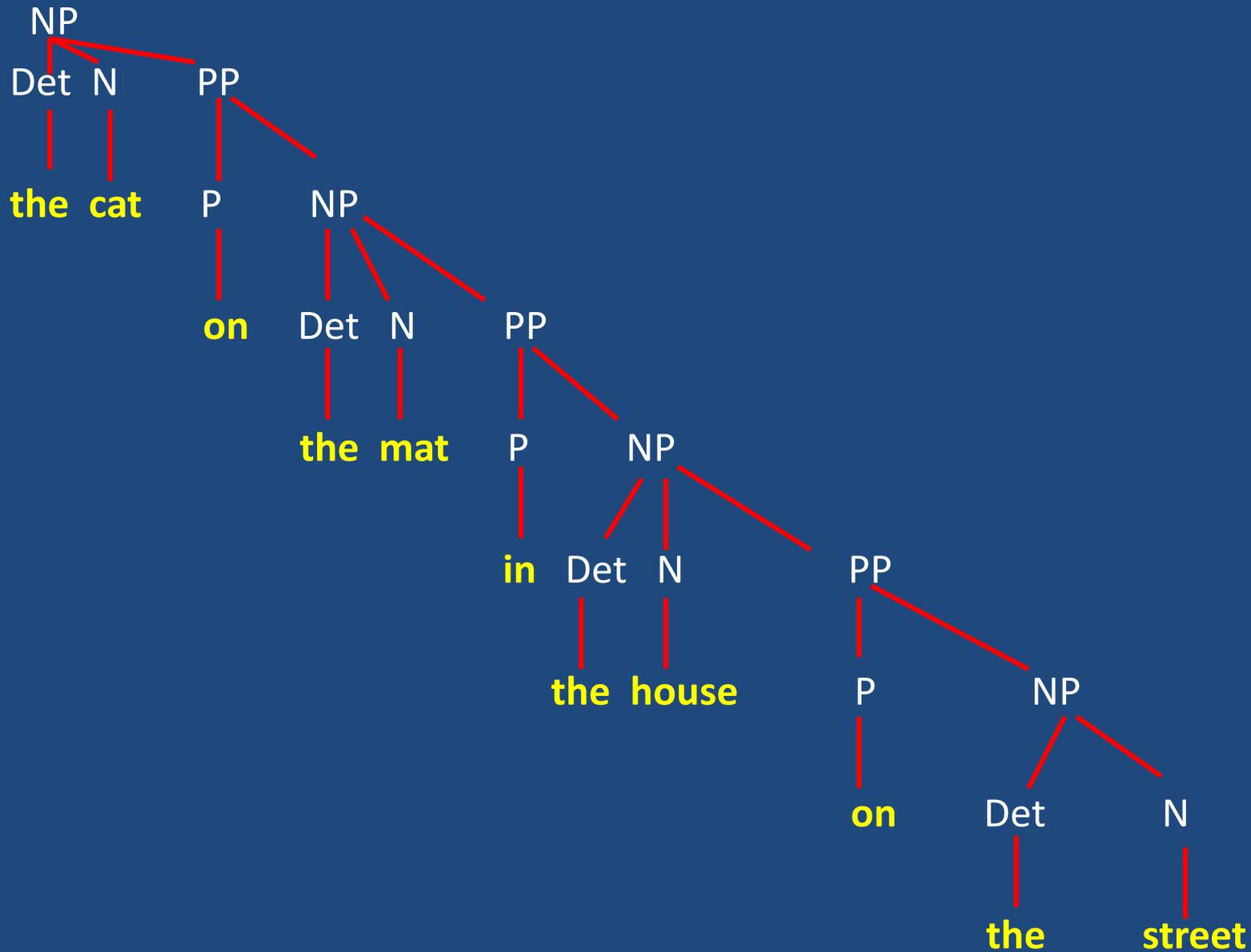
RECURSION

✓ Some phrasal categories may appear to the left or right of the arrow

NP   ⟶   (Det) N (PP)

PP   ⟶   P (NP)

✓ **Recursion**: the property of language that allows for the embedding of categories (which can yield infinitely long phrases)

The cat on the mat in the house on the street
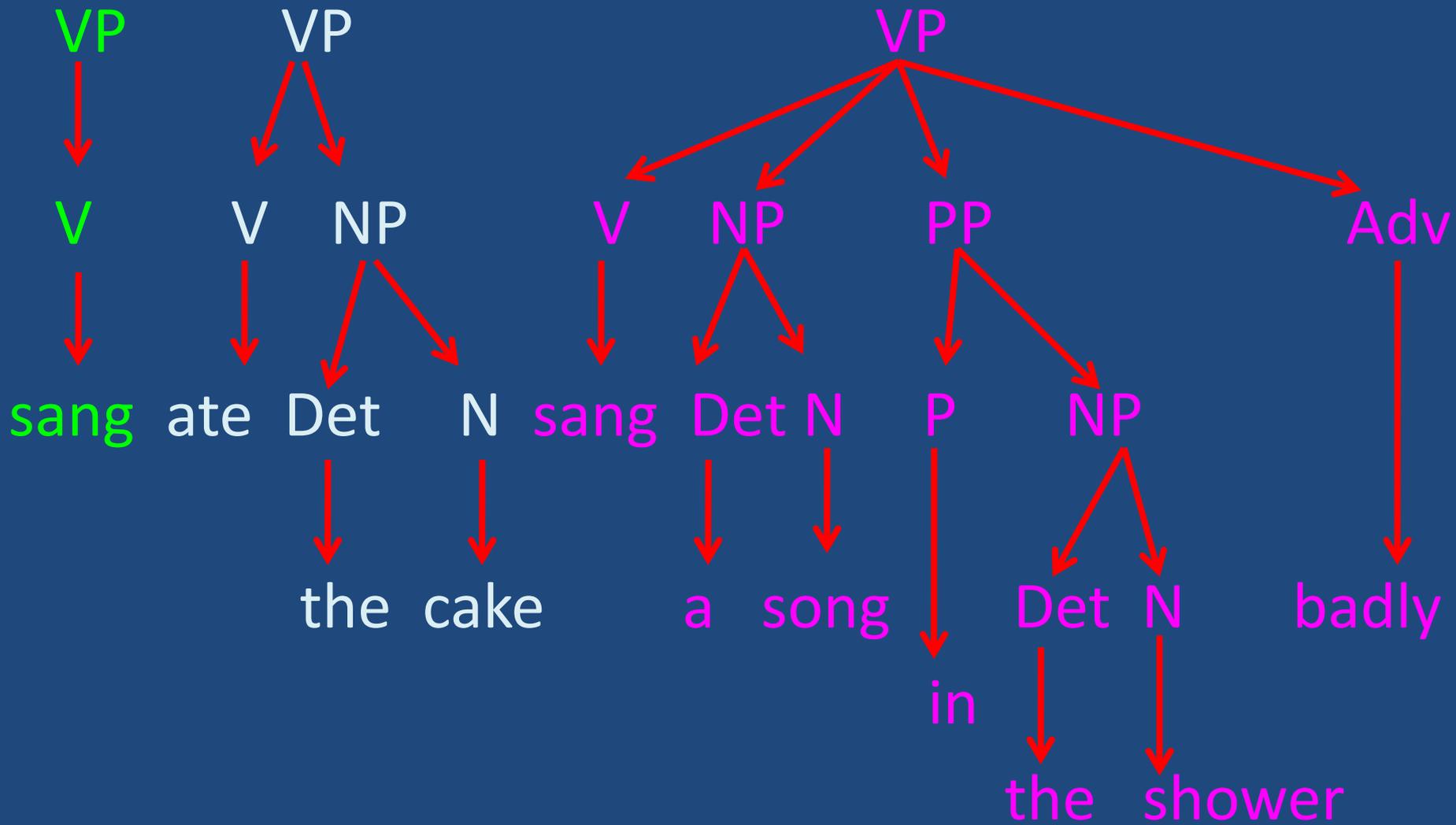
VERB PHRASE (VP)
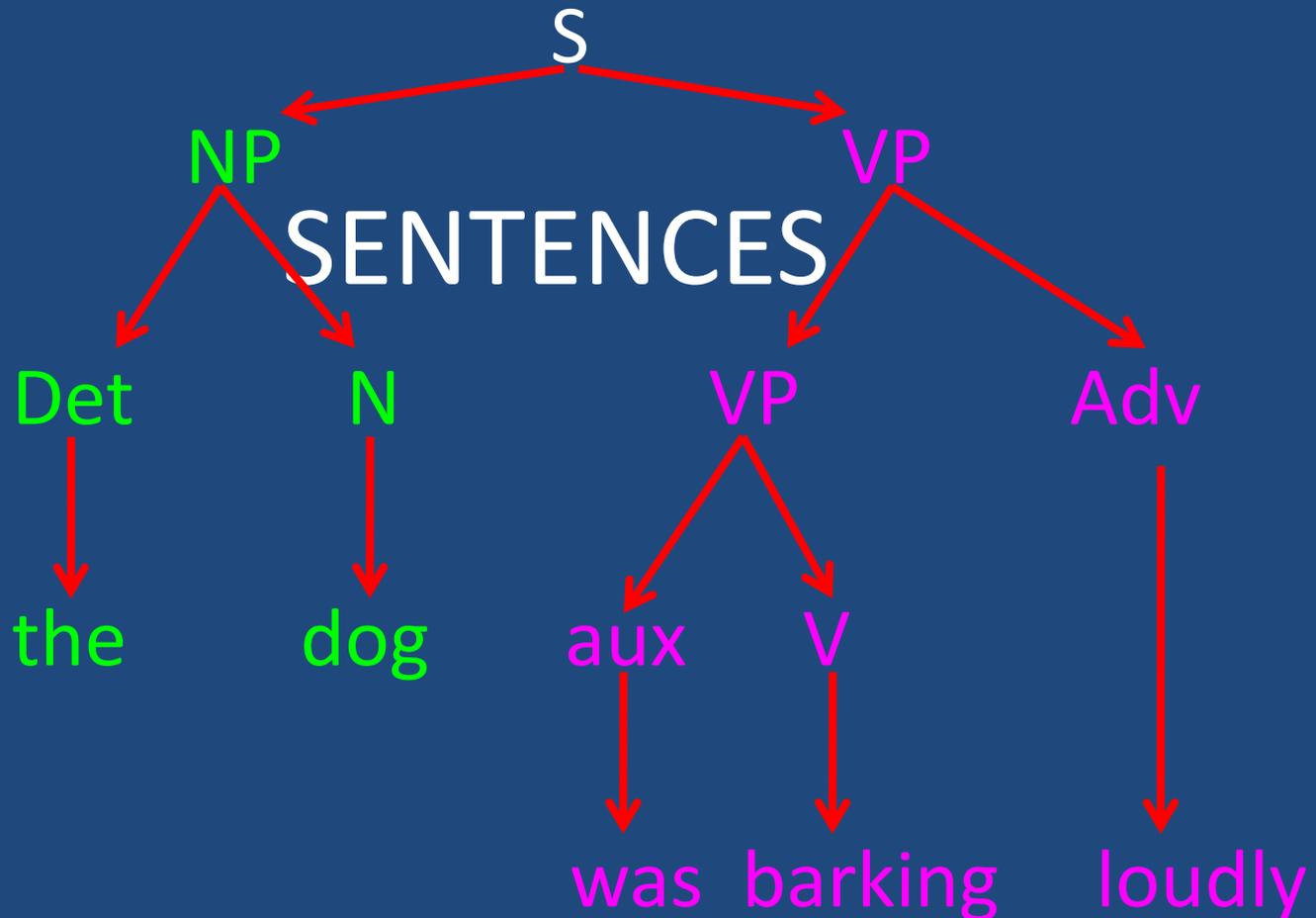
- sang   V
- ate the cake   V NP
- ate the cake hungrily   V NP Adv
- sang a song in the shower   V NP PP
- fell into the pond slowly   V PP Adv

Phrase structure rulefor VPs:

VP   ⟶   V (NP) (PP) (Adv)

A sentence must contain an NP and a VP e.g

SENTENCES

```
                        S
                   /         \
                 NP           VP
               /    \        /    \
             Det     N      VP     Adv
              |      |     /   \     |
             the    dog  aux    V    |
                          |     |    |
                         was barking loudly
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SENTENCES

A sentence must contain an NP and a VP   e.g

S

NP   VP

Det   N   VP   Adv

the   dog   aux   V   loudly

was barking