A Short Introduction to Psycholinguistics:

Garden-Path Sentence

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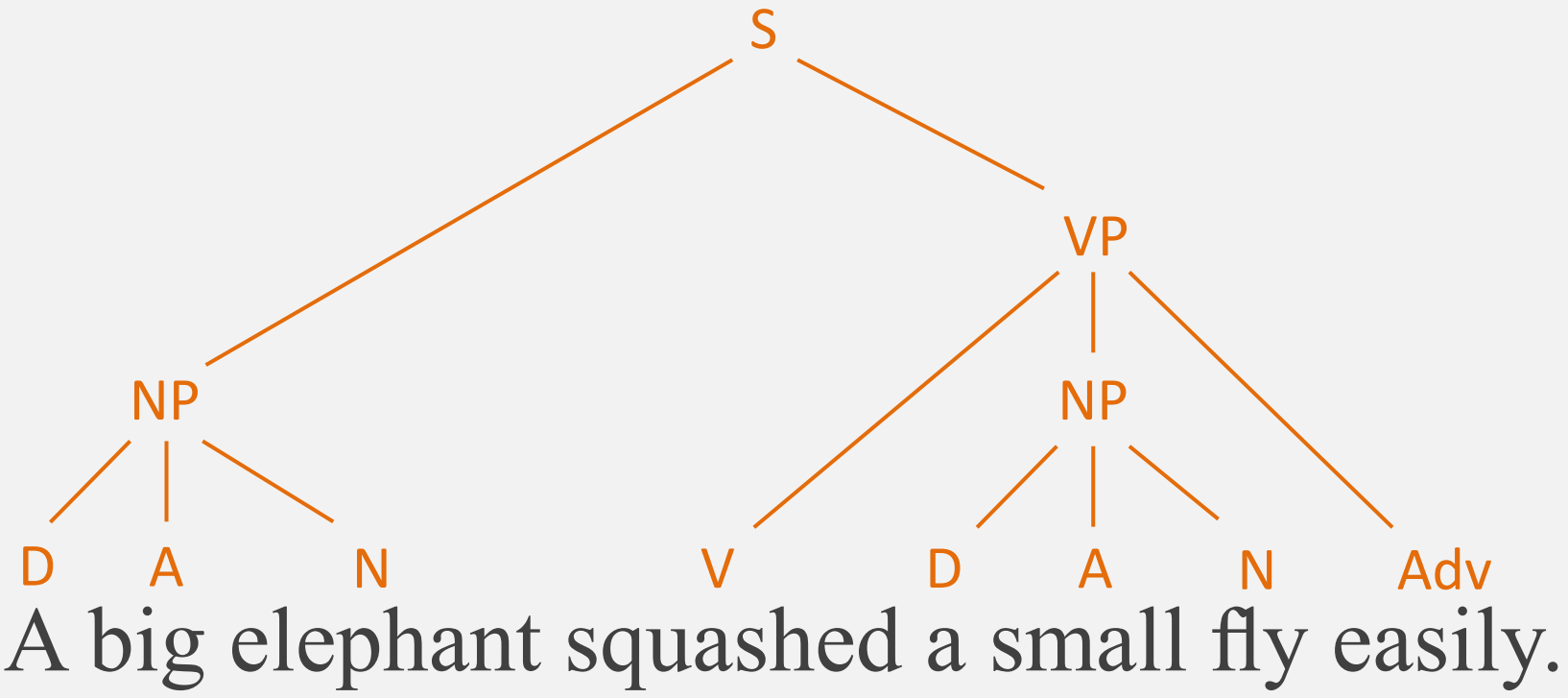
Basic Concepts – Syntax and Parsing

A big elephant squashed a small fly easily.

Basic Concepts – Syntax and Parsing

Syntax tree: structure of sentence



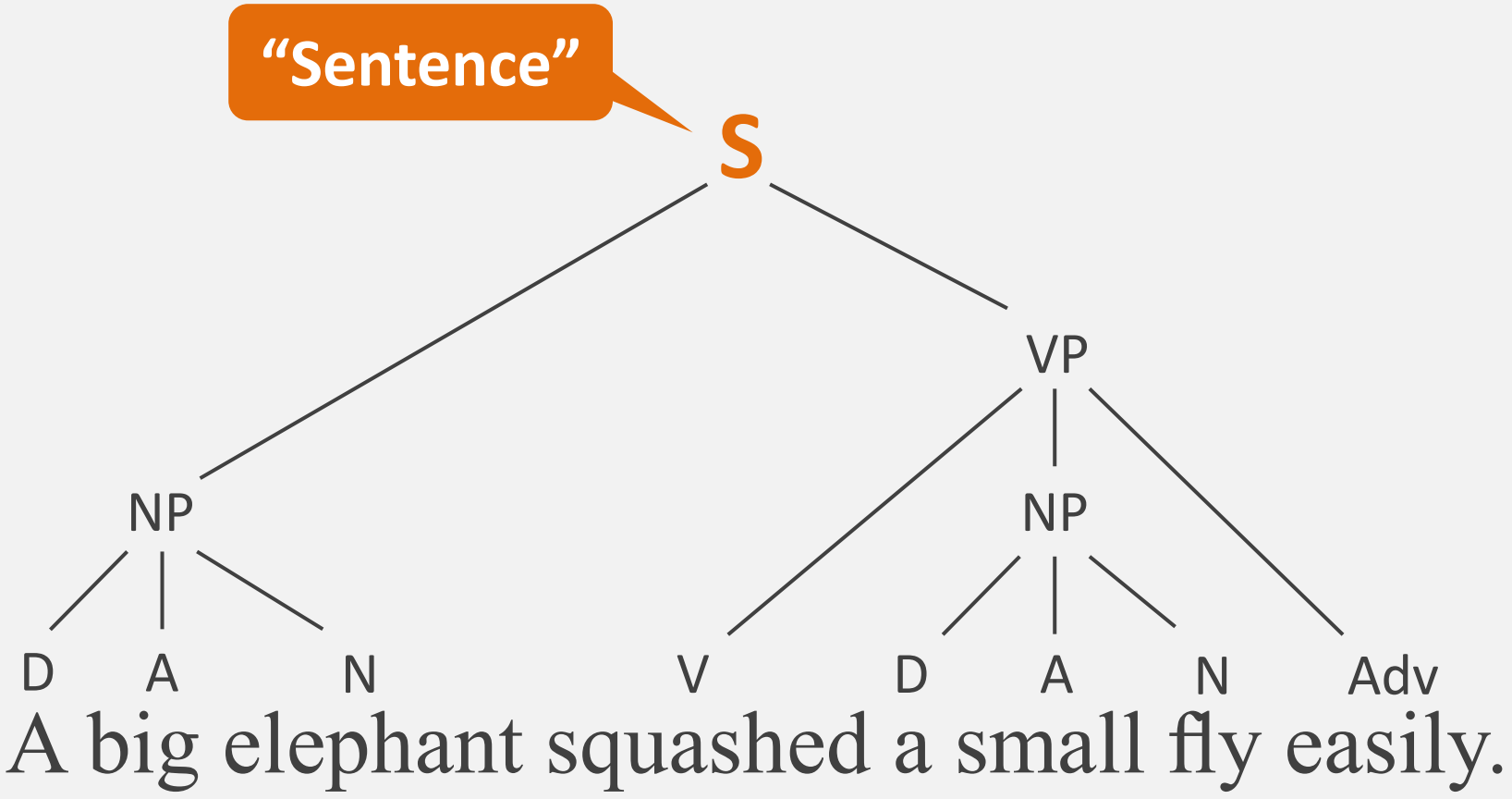
Basic Concepts – Syntax and Parsing

Lexical category:

classification for grammatical roles of words

D	A	N	V	D	A	N	Adv
A	big	elephant	squashed	a	small	fly	easily.

Basic Concepts – Syntax and Parsing



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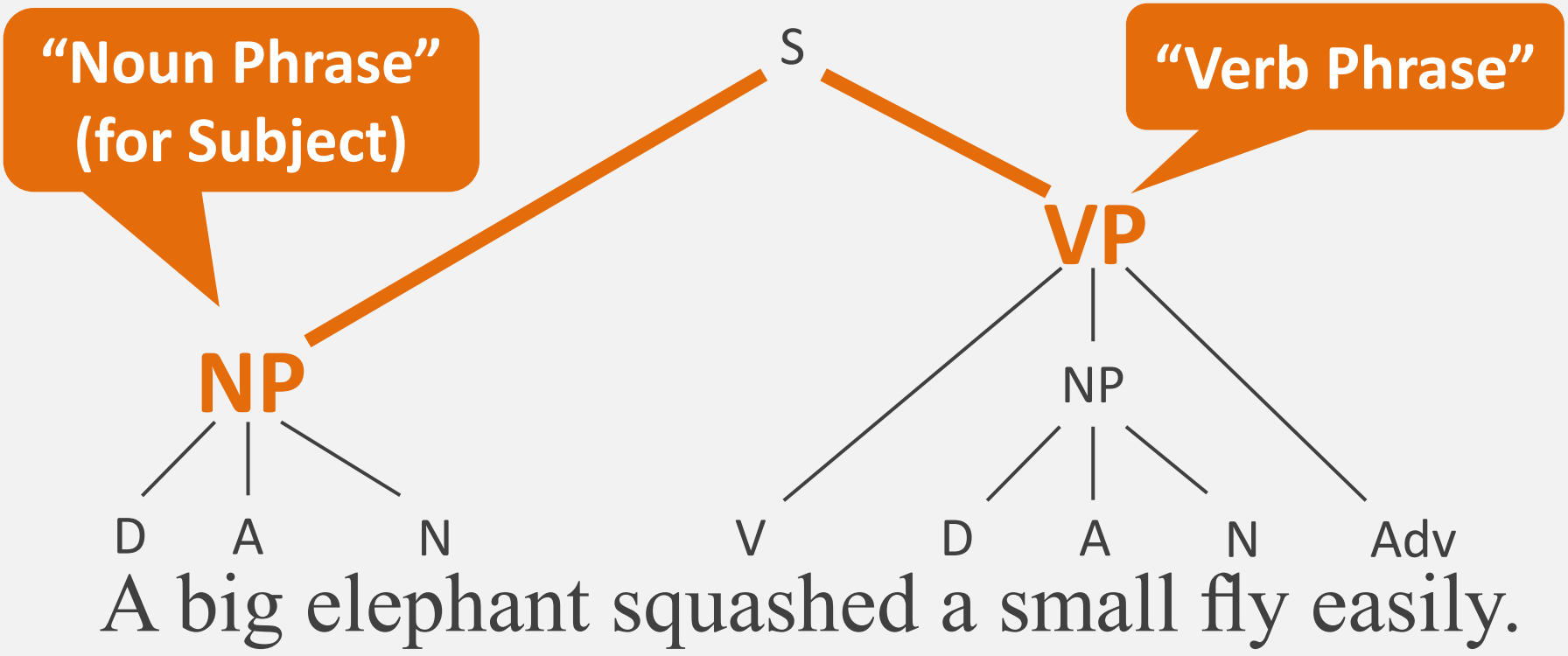

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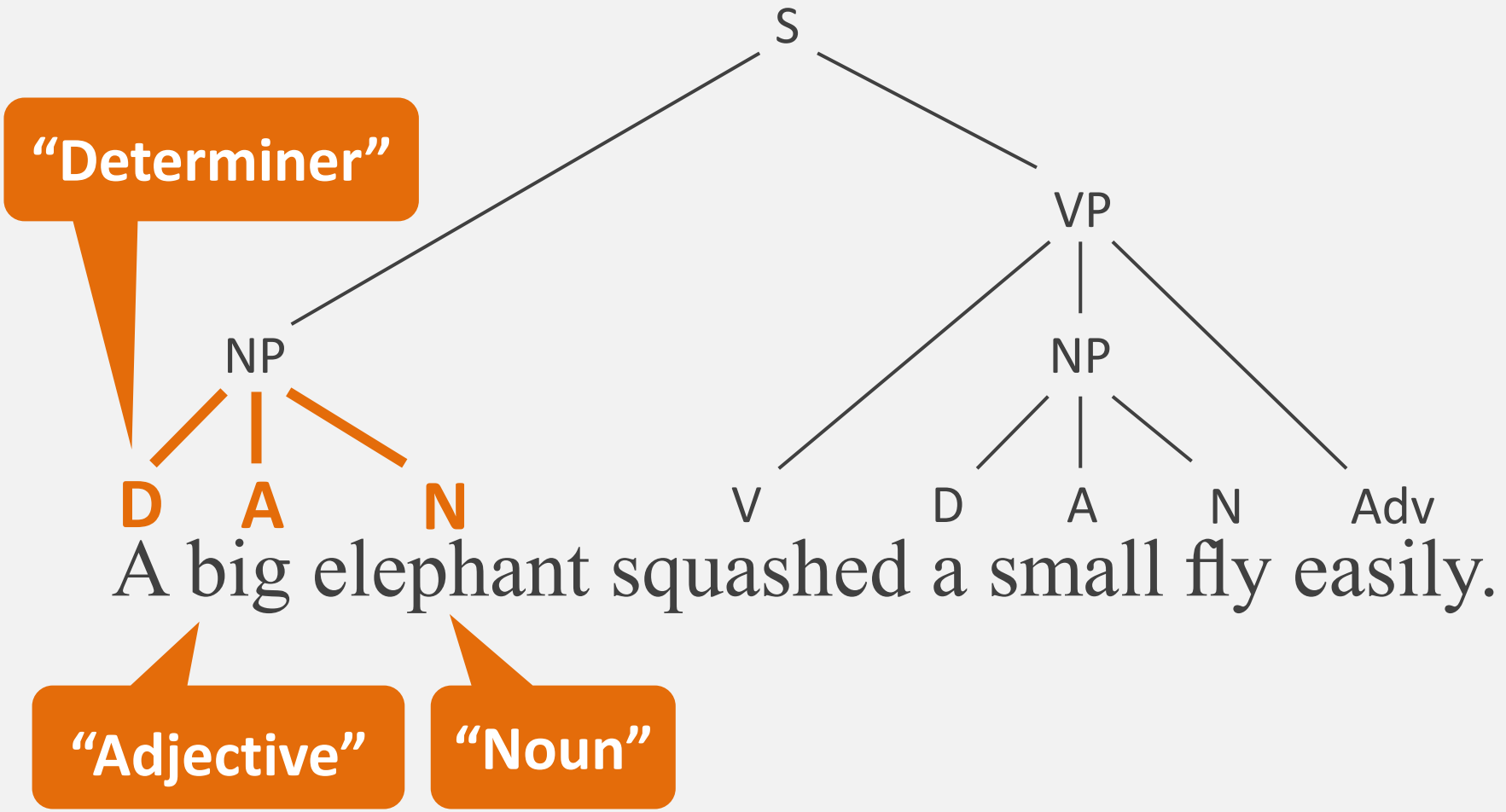

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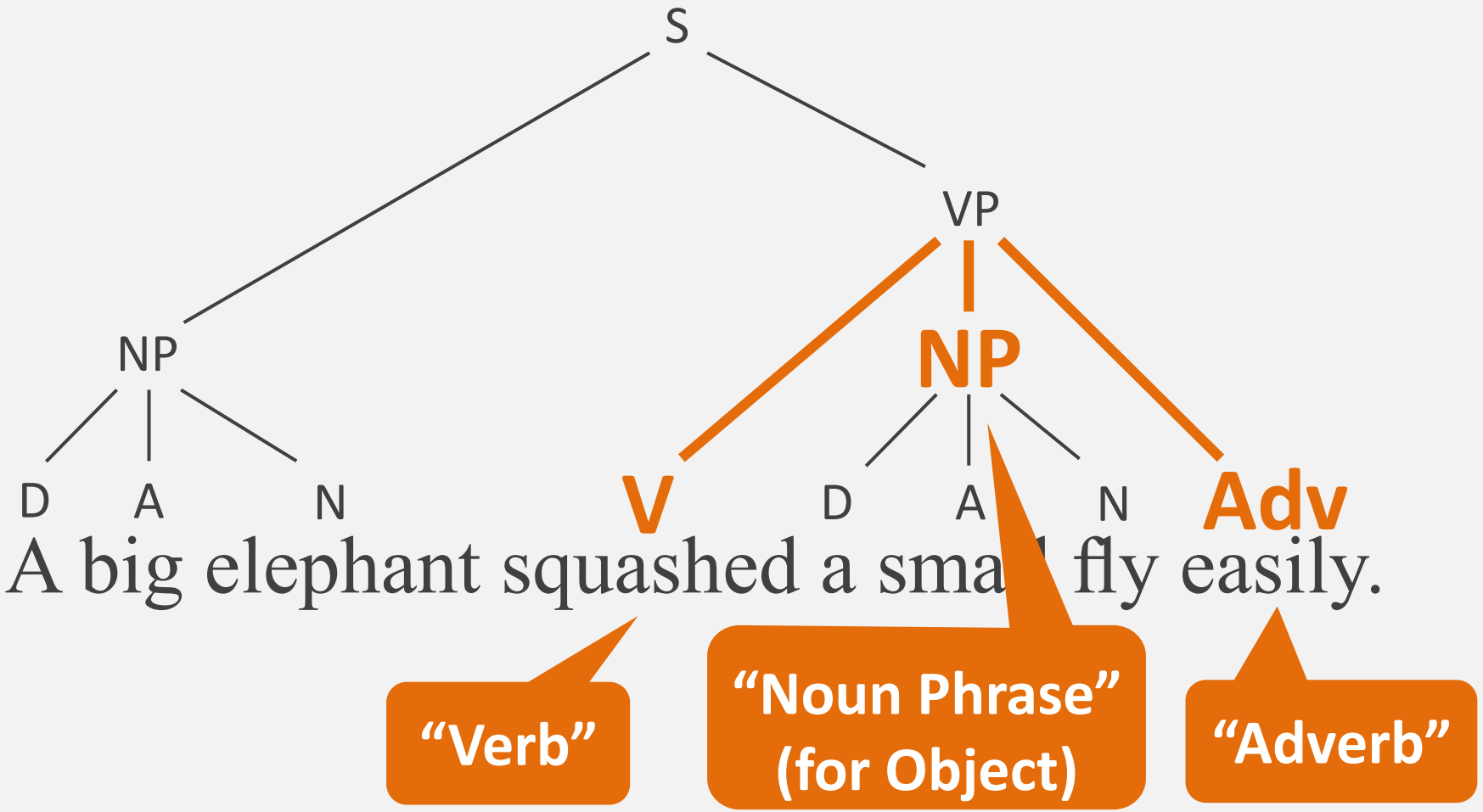
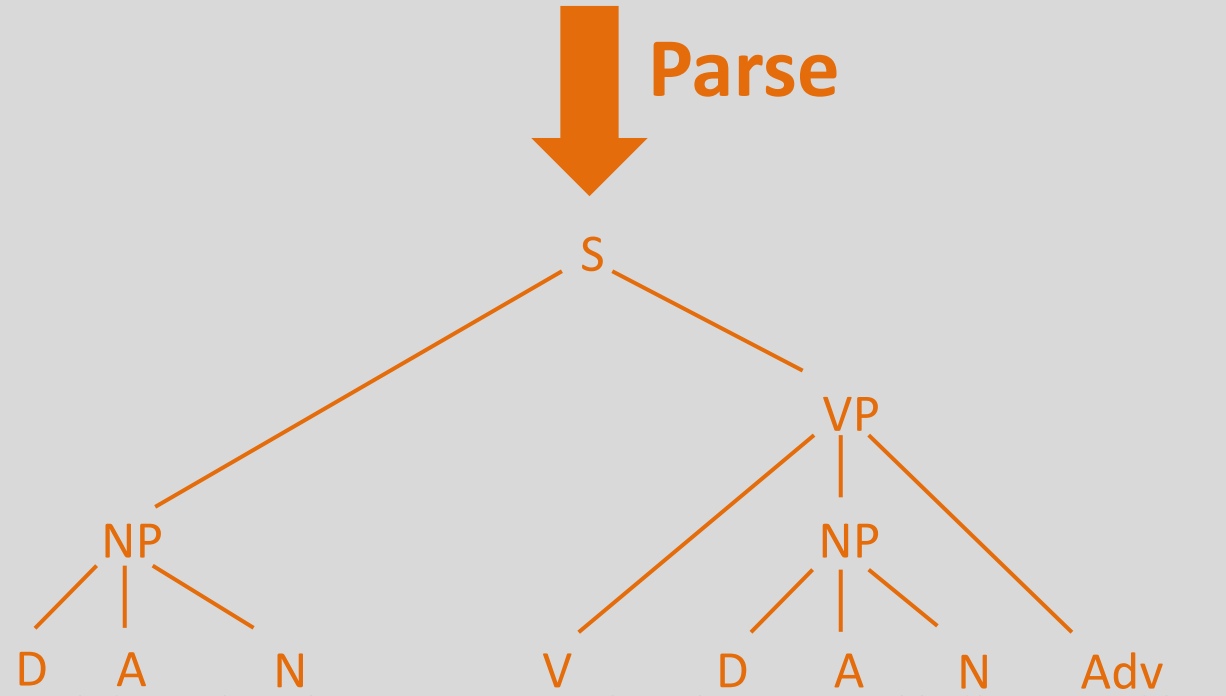


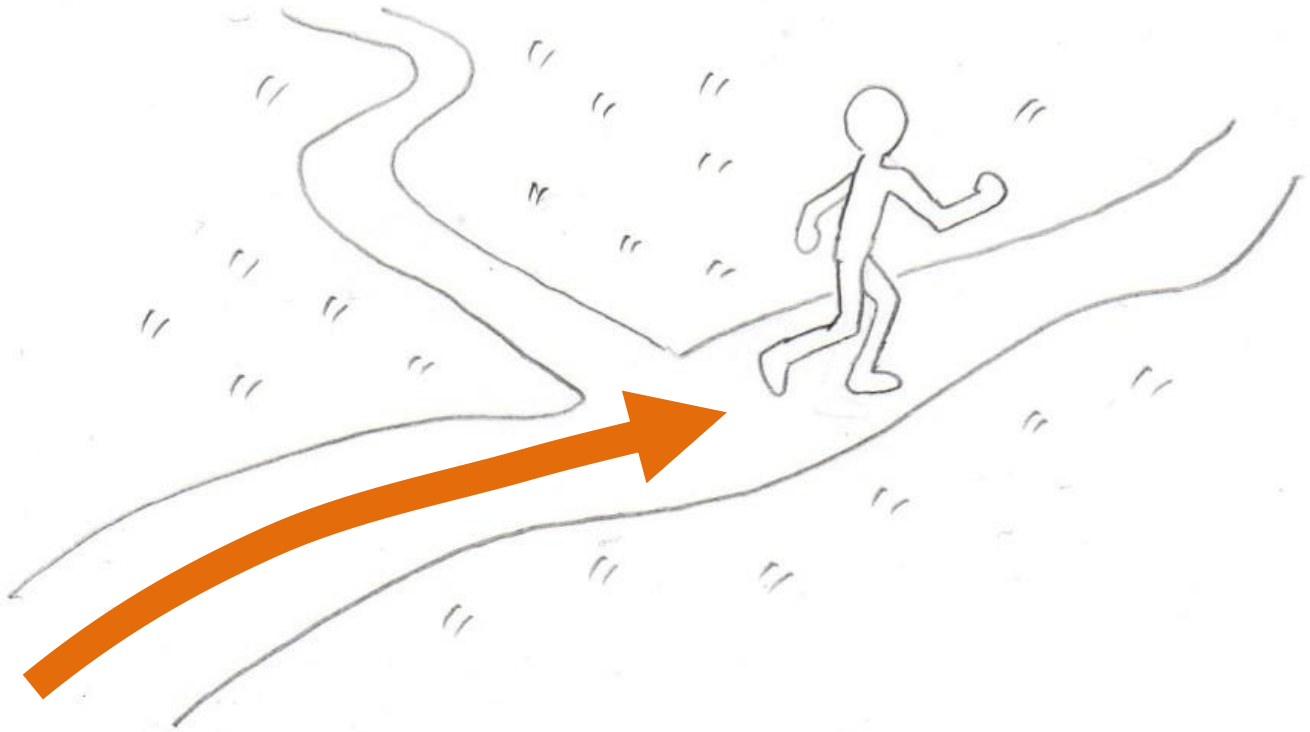
Basic Concepts – Syntax and Parsing

Parsing = making syntax tree from sentence

A big elephant squashed a small fly easily.



What is a garden-path sentence?



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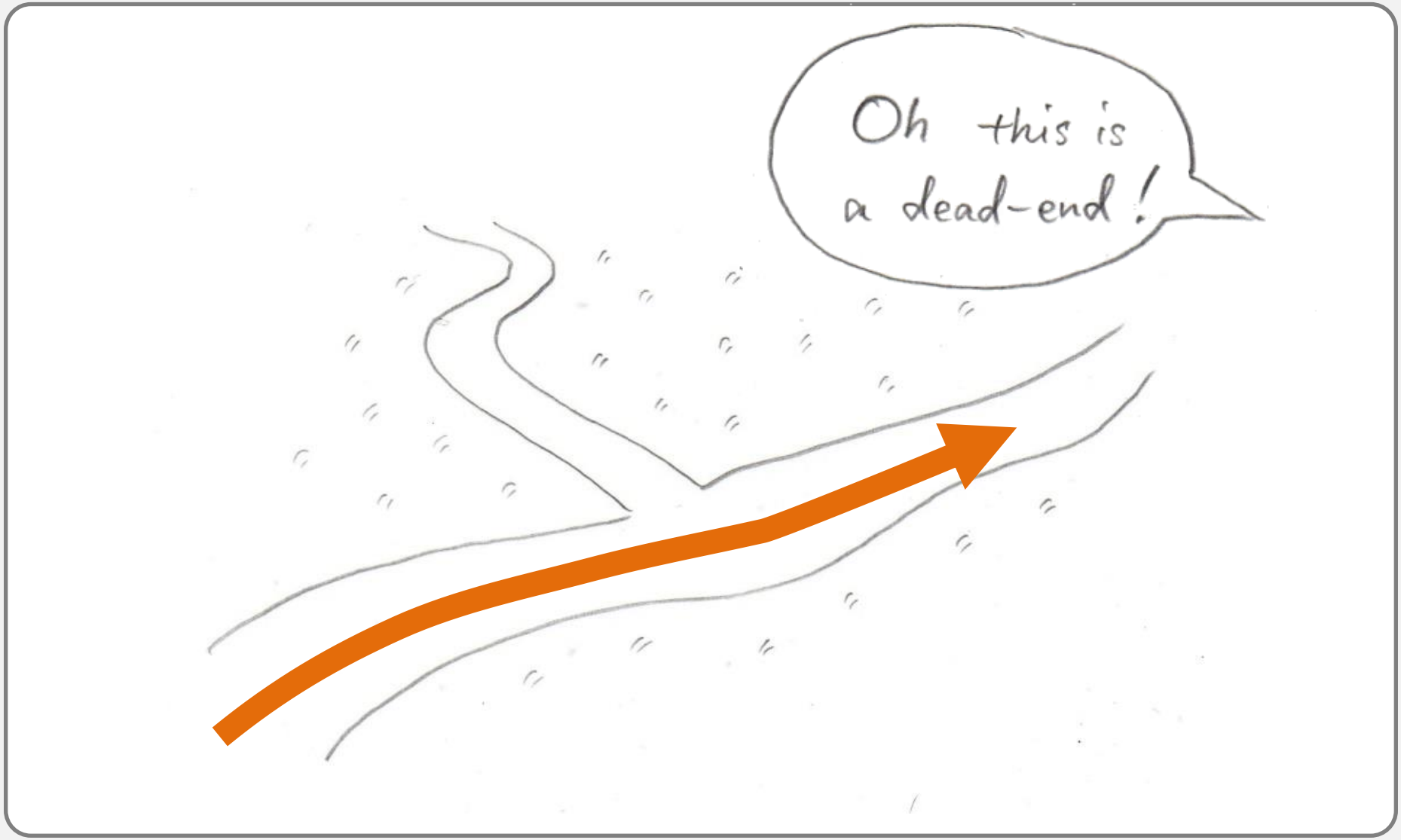

What is a garden-path sentence?

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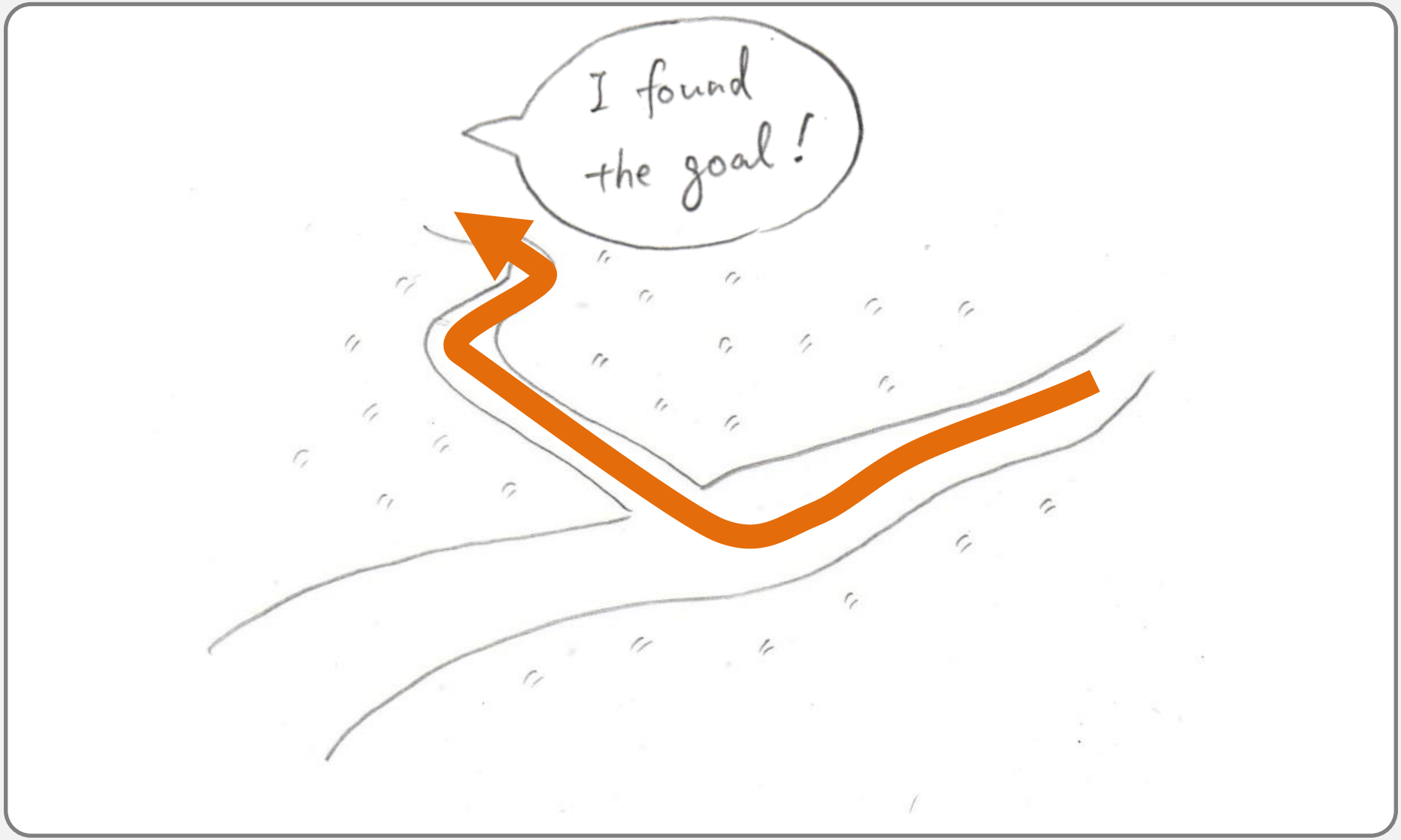

Example

The girl told the story cried.

Example

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Example

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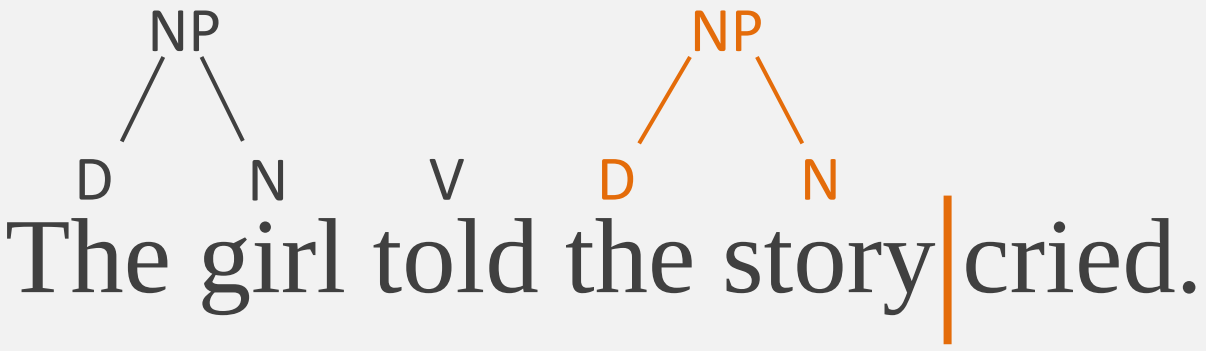

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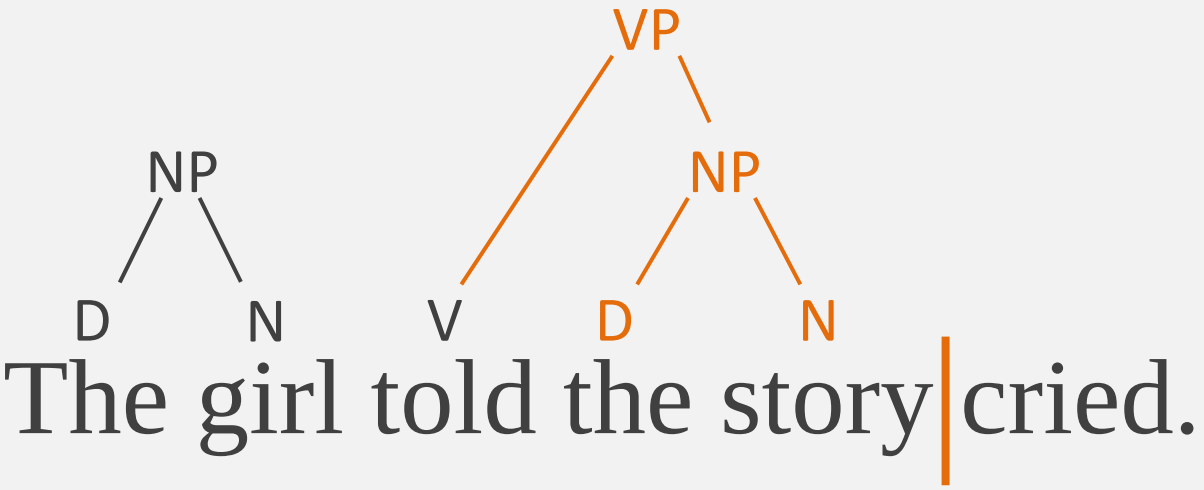

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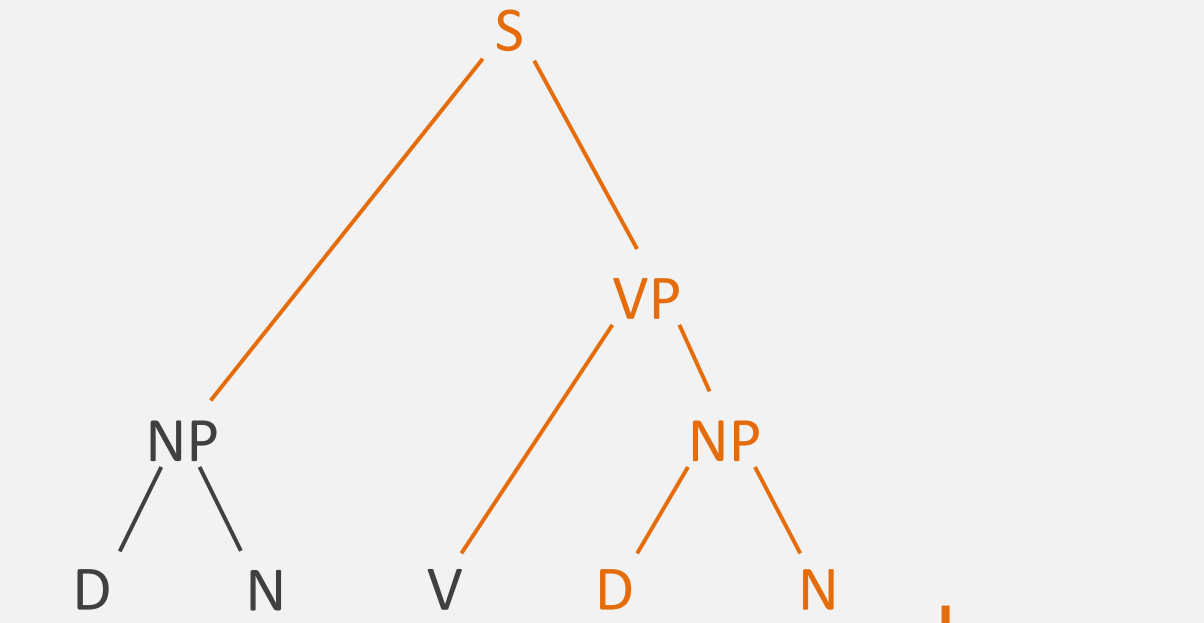

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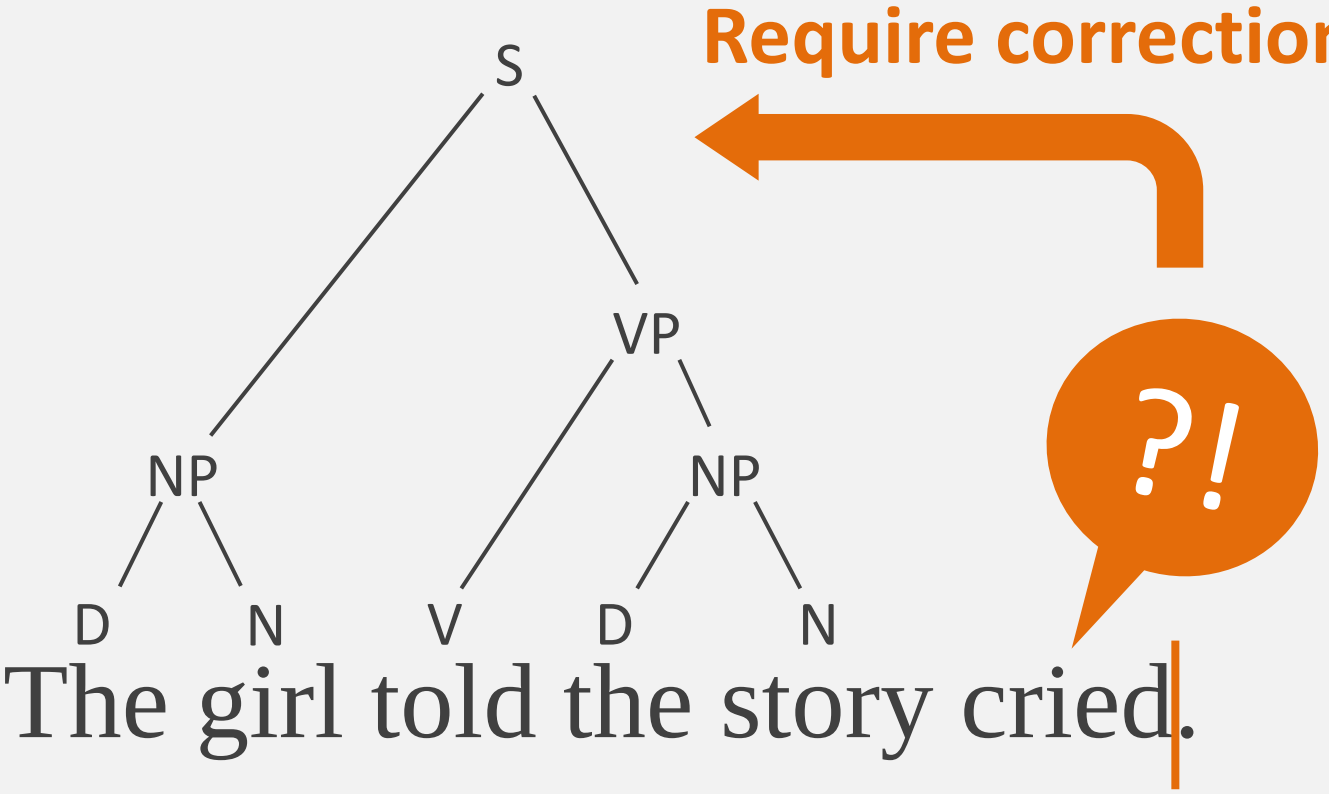
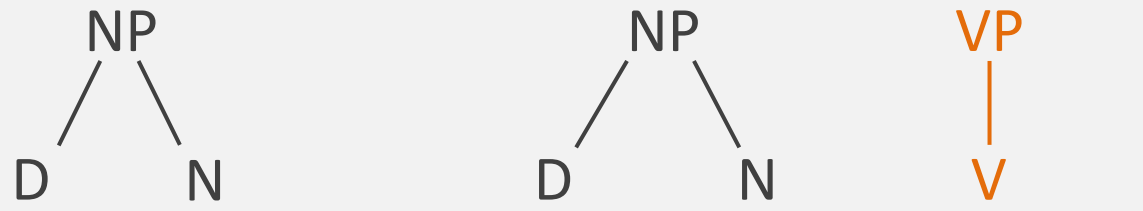

Require correction
S
VP
NP
NP
D
N
V
D
N
?!
The girl told the story cried.

Example



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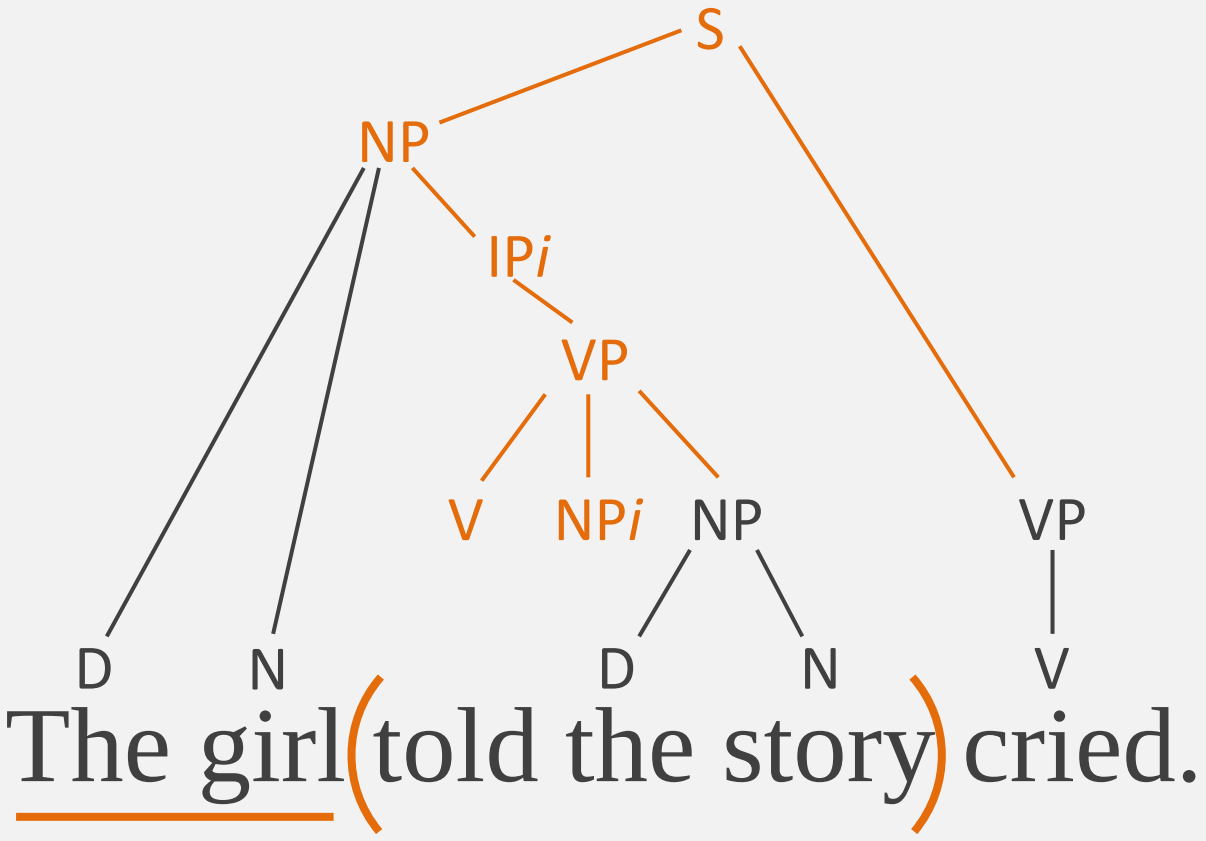
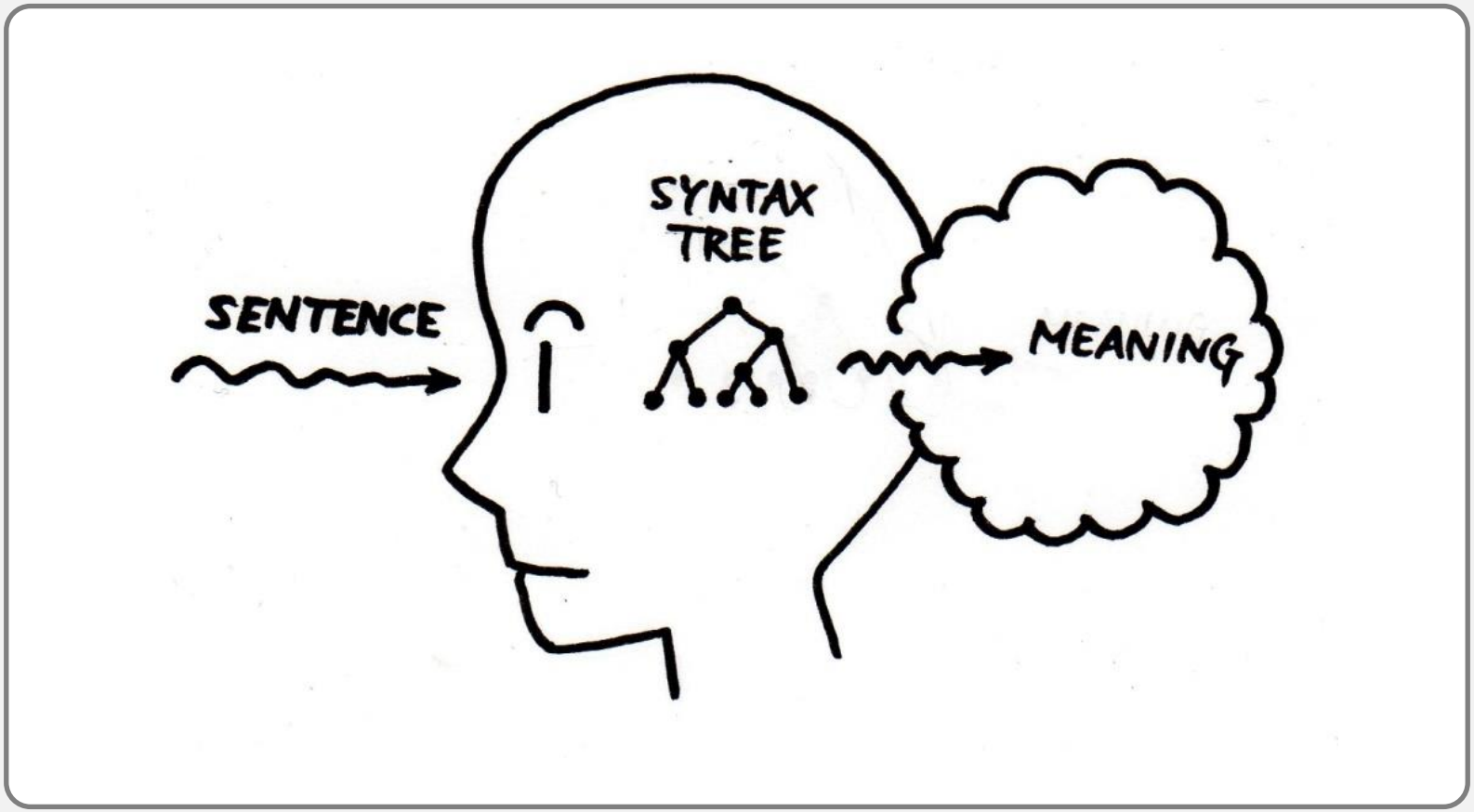
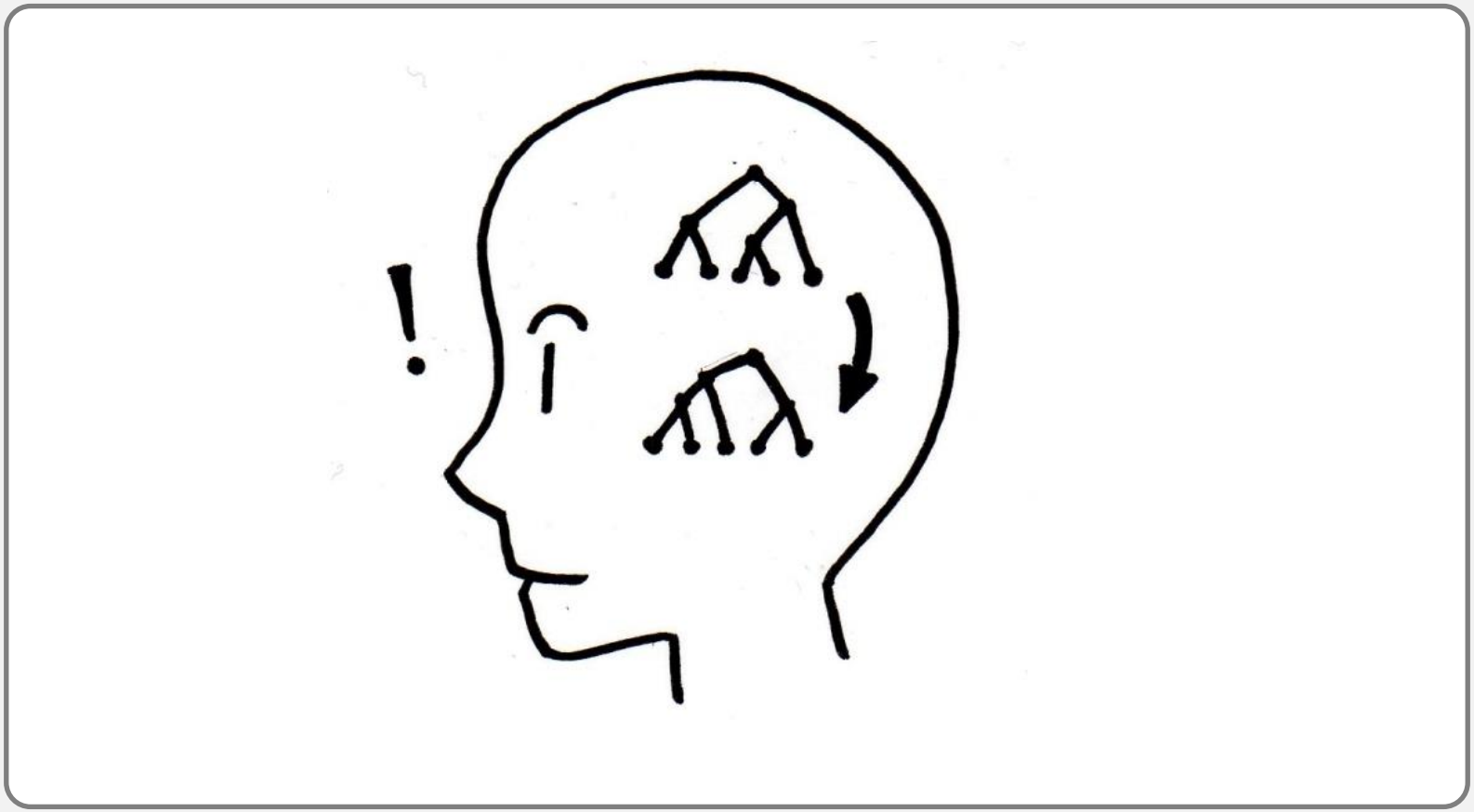


Fundamental Issue



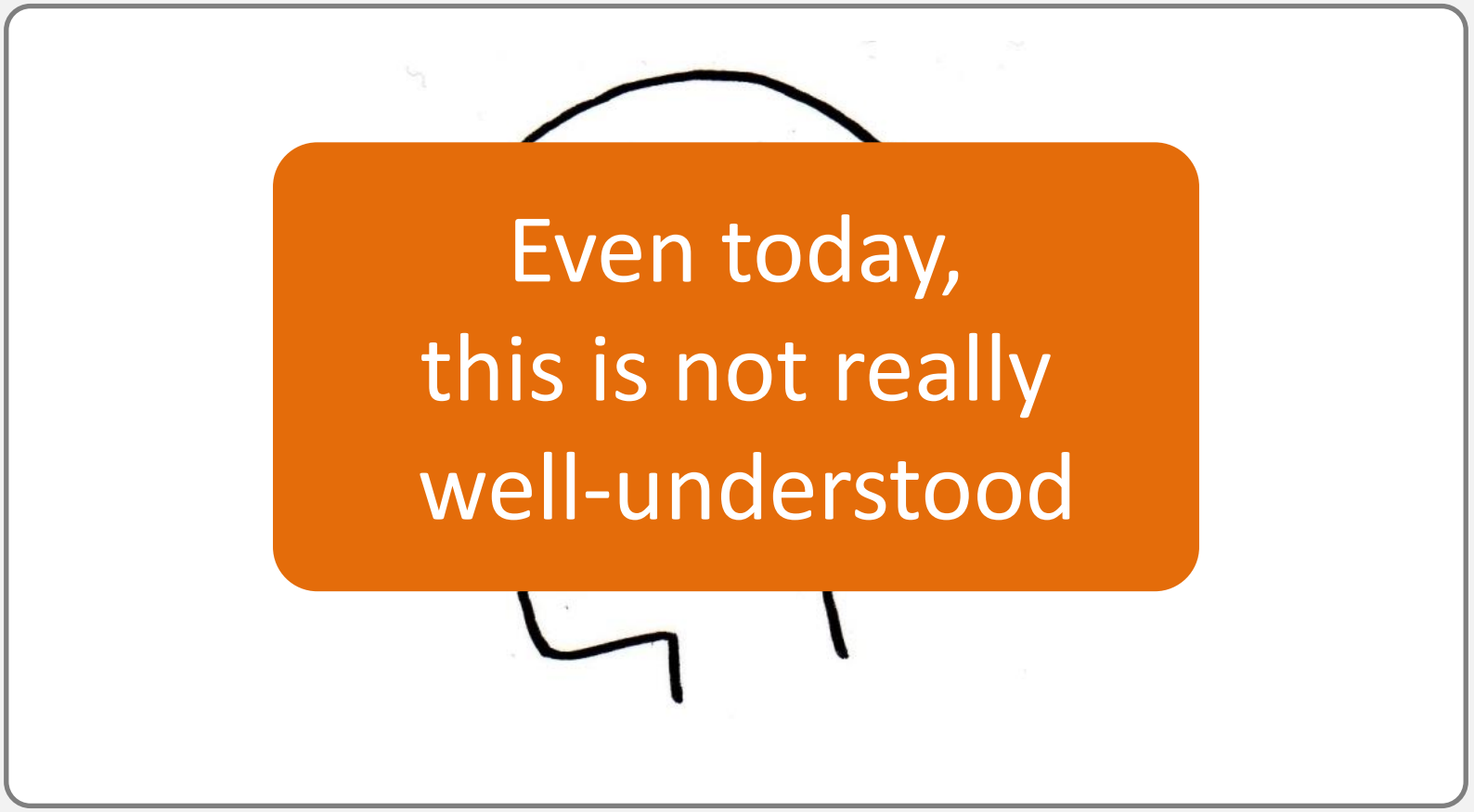
Fundamental Issue

When encountering a garden-path,
how do we fix temporary syntax tree?



Fundamental Issue

When encountering a garden-path,
how humans correct temporary syntax tree?



Syntactic Ambiguity

Syntactic Ambiguity

= Situation that there is more than one syntax tree for the same sentence

Usage for Linguistic Experiments

You can obtain strength of collocation:

Tom painted the wall with cracks. ?!

Tom painted the wall with a brush.

Tom saw the man with a telescope.

Tom saw the man with a telescope.

Conclusion

Garden-path sentences are

- Interesting phenomena in itself
- Suggestive of how humans recognize sentences
- Still not well-understood
- Useful for measuring collocations between certain verb and phrase