

Our Phrase Structure Grammar

CP \rightarrow (C) TP

TP \rightarrow NP (T) VP

NP \rightarrow (D) (AdjP+) N (PP+) (CP)

VP \rightarrow (AdvP+) V (NP) ({NP/CP}) (AdvP+) (PP+) (AdvP+)

AdjP \rightarrow (AdvP) Adj

AdvP \rightarrow (AdvP) Adv

PP \rightarrow P NP

XP \rightarrow XP conj XP

X \rightarrow X conj X

Some important points

Language isn't just a series of words, but words that have certain *hierarchical relationships* with each other. . .

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Our PS Rules are finite, but because they are *recursive*, we can produce an infinite set of sentences, since we can continuously embed phrase within phrase.

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Languages can vary *greatly* in word order and other "unimportant" ways that have to do with how we linearize/externalize language. But we should be able to abstract away from that and see commonalities.

Languages differ linearly. . .

English

NP → D AdjP N

Spanish

NP → D N AdjP

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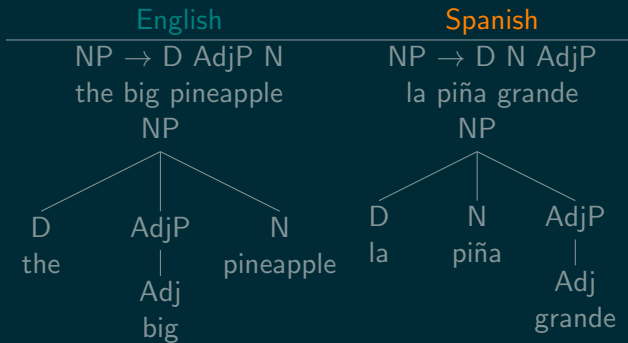
English

NP → D AdjP N
the big pineapple

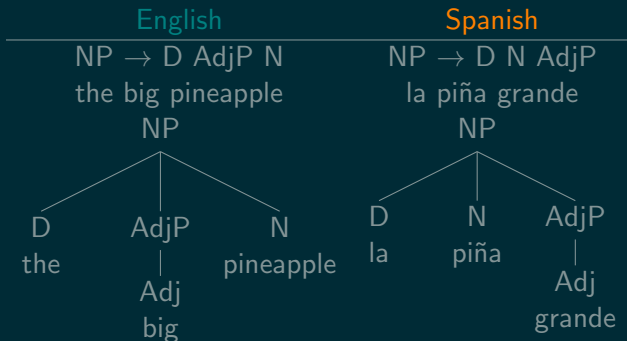
Spanish

NP → D N AdjP
la piña grande

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But the *structural relationships* between phrases, like the N and the AP that modifies it, remain constant across all languages.

...but the core is the same

We can make different PS Rules for different languages, but they'll just be the *same relations* in different linear order.

Watch making advice: It doesn't matter what order you put the subcomponents of a watch together. You're going to end up with the same watch.

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The Acquisition Problem: When children learn a language, they already know where everything goes in the hierarchy, they just have to decide what linear order words come in their language.

Word order irrelevant to the core of language



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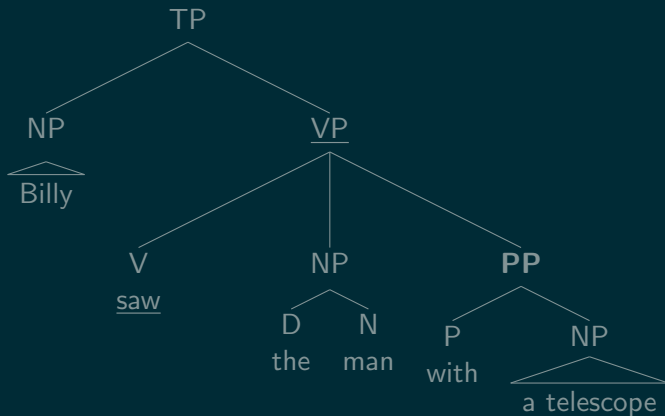
But once we linearize it, there can be *ambiguity*.

An Over-repeated Example

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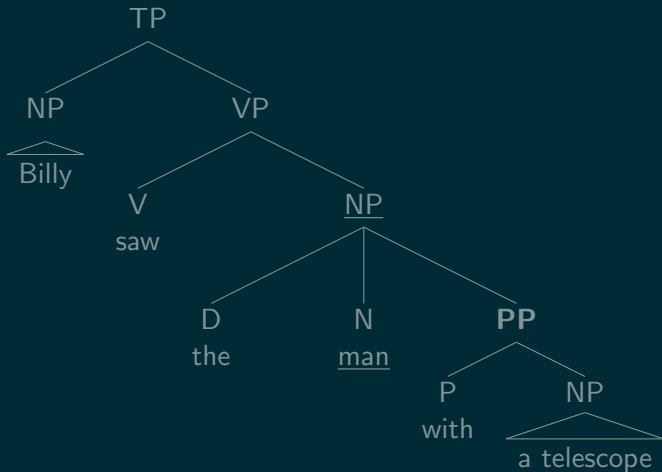


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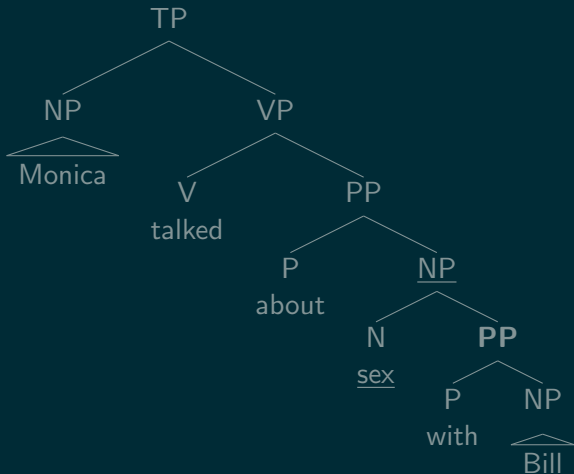
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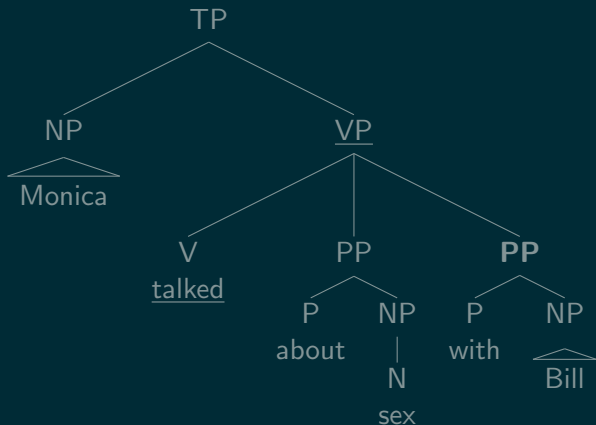
A more salient example

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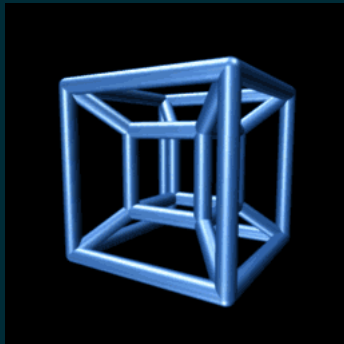
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Excercise

Chapter 3, Problem 8 a-d (feel free to try e and f if you have time)

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This is a part of your next homework.

Problem 8

GPS8. AMBIGUITY II

[Application of Knowledge and Skills; Basic to Intermediate]

The following English sentences are all ambiguous. Provide a paraphrase (a sentence with roughly the same meaning) for each of the possible meanings, and then draw (two) trees of the original sentence that distinguish the two meanings. Be careful not to draw the tree of the paraphrase. Your two trees should be different from one another, where the difference reflects which elements modify what. (For sentence (b) ignore the issue of capitalization.) You may need to assume that *old* and *seven* can function as adverbs. Sentences (c), (d), (e), and (f) are ambiguous newspaper headlines taken from http://www.fun-with-words.com/ambiguous_headlines.html.

- a) John said Mary went to the store quickly.
- b) I discovered an old English poem.
- c) Two sisters reunited after 18 years in checkout counter
- d) Enraged cow injures farmer with ax
- e) Hospitals are sued by seven foot doctors
- f) Dealers will hear car talk after noon