Intro to Syntax, PART FOUR

Omer Preminger, *MIT*

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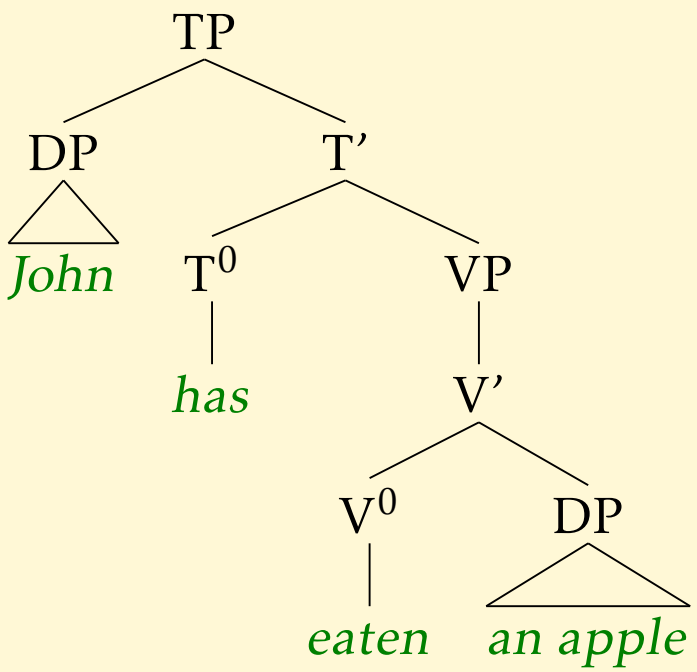
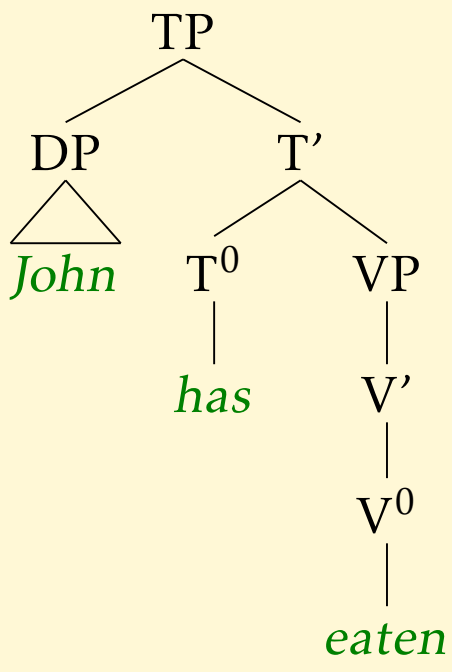
Selection, Arguments & Adjuncts

- As we have seen, verbs can take a ***complement*** (as in (1))
- But they don't have to (as in (2))

(1)



(2)



Introducing selection

- However, not every verb can freely take or not take a ***complement***
  - Compare (3a–b) — essentially, what we saw diagrammed on the previous slide — to (4a–b):

(3) a. John has eaten.
    b. John has eaten his dinner.

(4) a. * John has devoured.
    b. John has devoured his dinner.

  - Perhaps more strikingly (for reasons we will discuss shortly), compare (5a–b) with (6a–b):

(5) a. * John has enjoyed.
    b. John has enjoyed his victory.

(6) a. John has rejoiced.
    b. * John has rejoiced his victory.

- It seems difficult to reduce all of these facts to meaning
  - I don't know what difference in meaning would cause *enjoy* to demand a DP complement, but *rejoice* to refuse it

NOTICE

I'm not saying there is no difference in meaning between *enjoy* and *rejoice*; there probably is.

- BUT: suppose I were to claim that it is this difference in meaning that is responsible for the difference in their behavior w.r.t. complementation
  - Unless I could demonstrate that the exact same meaning difference triggers the exact same behaviors in other pairs of verbs, my claim would be an empty one
    - it would just be a fancy way of restating the facts that we have already observed regarding *enjoy* and *rejoice*

Introducing selection

- There exist verbs that demand a complement, but will not accept DPs in that role:

(7) a. * John depends.
b. * John depends [$_{DP}$ his sister].
c. John depends [$_{PP}$ on his sister].

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(8) a. John requested [$_{CP}$ that Bill pass him the salt].
b. John insisted [$_{CP}$ that Bill pass him the salt].

(9) a. John requested [$_{DP}$ the salt].
b. * John insisted [$_{DP}$ the salt].

Introducing selection

- There are verbs that demand both a DP **and** a PP:

(10) a. John put [$_{DP}$ the jar] [$_{PP}$ on the table].
b. * John put.
c. * John put [$_{DP}$ the jar].
d. * John put [$_{PP}$ on the table].

- **NOTE:** We don't even have room in our current X'-schema for both the DP and the PP!
  - since there's only room for one complement to X^0
- We'll address this in a couple of classes, if we have time

➢ In the meantime, however — since it is not clear how both selected phrases can be *complements* of the V^0 *put* — we will sometimes use the more neutral term ***argument***:
  - both the DP and the PP are ***arguments*** of *put*

- Even though we've used **verbs** to demonstrate selectional properties, it's a phenomenon that extends to all syntactic categories
  - Let's look at some examples with **adjectives**:

(11) a. John is proud.
b. John is proud [$_{PP}$ of Mary].
c. John is proud [$_{CP}$ that Mary won].

(12) a. John is happy.
b. * John is happy [$_{PP}$ of Mary].
c. John is happy [$_{CP}$ that Mary won].

(13) a. * John is fond.
b. John is fond [$_{PP}$ of Mary].
c. * John is fond [$_{CP}$ that Mary won].

Interim summary:

- We've seen that a head can impose restrictions on whether it will have an argument, and what kind of argument that will be
- These kinds of requirements are generally known as ***selection***
  - sometimes referred to as *c-selection*, where 'c' is short for *categorical*
    - which is meant to contrast with *s-selection*, where 's' is short for *semantic*
      - which refers to those selectional facts that **can** be reduced to meaning

➢ the selectional requirements of a particular item/word are *idiosyncratic*(≡specific to that particular item/word)

⇒ there seems to be no way for a speaker to have this linguistic knowledge except **listing**, for every item/word, what its selectional requirements are

- **NOTICE:** we already need a list, somewhere in the speaker's mental representation, to tell us which words belongs to which syntactic categories

  ⇒ we might as well list, alongside the syntactic category of each word, what its selectional requirements are

  - So we'll have something like this:

(14) *proud*: A, ___ (PP | CP)

  – this representation means the word *proud* is an *Adjective*, and can optionally take either a PP or a CP as its argument

- The complete list of all such information, for every word in the language, is called the ***lexicon***
  - and one entry like (14) is called a ***lexical entry***

Selection: beyond *category*

- We've been speaking of selectional properties in terms of syntactic categories (DP, PP, CP)

➢ Is that enough?

  - For many cases, it appears that the combination of syntactic category + semantic requirements will do the job
  - For example, the PP that *put* requires can be any PP, provided it is semantically compatible with the notion of *location*

(15) a. John put [$_{DP}$ the book] [$_{PP}$ { on the table / under the chair / in the fire / near the sofa / *after the meeting / *despite his misgivings / *because of the strike }].

➢ It would be redundant to stipulate this last bit syntactically

· since that's something that semantics needs to know, anyway

Selection: beyond *category*

- But some heads impose syntactic restrictions on their argument that are more specific than just its *category*
  - We've previously seen the verb *depend*, for example
    - *depend* not only requires a PP argument, but also imposes severe restrictions on what that P^0 will be:

(16) The peasants depend on/*from/*by/*near the king.

  - This is not reducible to semantics
    - one can imagine a metaphor for *dependence*, where *on* (the P^0 corresponding to the spatial relation *X is above Y*) is relevant
    - ➢ the point is, one can imagine a dozen other such metaphors
      - and, as any 2nd language learner will attest, different languages choose different P^0's for the same thing (and thus, perhaps, different metaphors?)

- Another example, this time with adjectives:

(17) a. John is fond of/*at/*with/*by/*from Mary.
b. John is angry at/*of/*with/*by/*from Mary.
c. John is happy with/*of/*at/*by/*from Mary.

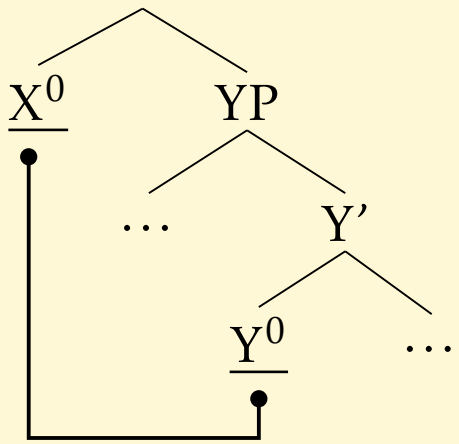
⇒ heads can select not only the *category* of their complement, but the actual identity of its head

➢ **NOTICE:** the category of a phrase, YP, is uniquely and completely determined by its head, Y^0

Selection: *sisterhood* and the Projection Principle

⇒ the instances of *selection* we've seen so far can be understood as some head X^0 imposing restrictions on the head (Y^0) of its complement (YP)

(18)



➢ Are there instances of *selection* that go beyond (18)?

- are there instances, for example, of X^0 imposing restrictions on the *complement/specifier* of Y^0 (when YP is the sister of X^0)?

Selection: *sisterhood* and the Projection Principle

- There is, for example, no verb that is like *depend*, but imposes restrictions on the D^0 inside P^0's complement, rather than on P^0 itself:

(19) John *schmepends* [$_{PP}$ near/on/at/to/by/despite [$_{DP}$ a/*the stipend]].

- This is, of course, anecdotal evidence; but it's also impossible to *prove* a negative (i.e., the non-existence of something)

⇒ so unless and until we encounter compelling evidence to the contrary, we will assume that *selection* is indeed restricted to *sisterhood*

  - i.e., heads can impose restrictions (categorical or otherwise) on the heads of their sister(≡complement)

(20) <u>*Projection Principle:*</u>
If a head X^0 selects for an element α, then α must be the head of the αP sister of X

Selection: *sisterhood* and the Projection Principle

- Consider the following example:

(21) a. It is surprising <u>for</u> a youngster <u>to</u> win the race.
b. It is surprising <u>that</u> a youngster <u>will</u> win the race.

(22) a. * It is surprising <u>for</u> a youngster <u>will</u> win the race.
b. * It is surprising <u>that</u> a youngster <u>to</u> win the race.

- ◦ Let's take for granted, for now, that this *for* is a C^0, just like *that*
- ➢ What we see here is that C^0 imposes selectional restrictions on the tense head, T^0
- ⇒ which, at the very least, fits in with what we've been doing:
  - we've been assuming that TP **is** the complement(≡sister) of C^0

(23) a. The dragon devoured [the villagers] (yesterday) (in Omaha).
b. The dragon rejoiced (yesterday) (in Omaha).
c. The dragon put [the peasant] [upon the plate] (yesterday) (in Omaha).

➢ It seems that elements like *yesterday* or *in Omaha* can be added to (almost?) any VP

- One option is to state this information as part of the ***lexical entry*** for each verb
  - but that seems redundant:
    - remember, the whole purpose of the ***lexicon*** was to list those facts about each word that had to be memorized
    - but if *yesterday*/*in Omaha* can be added to **every VP**, that is not information that needs to be memorized separately for each verb

⇒ in other words, elements like *yesterday*/*in Omaha* are not *selected* by any verb in particular

(24) *DEFINITION:*
phrases that aren't *selected* by particular X^0s are called ***adjuncts***

- This could have been the end of the story — in which case, it wouldn't be a particularly interesting story

➢ However, it turns out that there are interesting syntactic consequences to the *argument*-vs.-*adjunct* distinction:

(25) John wrote [a letter] [to Mary] [in the garden] [on Tuesday], ...

a. ... and Bill did so too.

b. ... and Bill did so [on Thursday].

c. ... and Bill did so [at his desk] [on Thursday].

d. * ... and Bill did so [to Susan] [at his desk] [on Thursday].

e. * ... and Bill did so [a note] [to Susan] [at his desk] [on Thursday].

⇒ *do so* must replace, at the very least, the verb + all of its *arguments*

- *adjuncts*, on the other hand, may or may not be included

Adjuncts

Another consequence of the *argument*-vs.-*adjunct* distinction:

(26) a student [of physics] [from Brazil]

- It's reasonable to think *[from Brazil]* is an adjunct:
  - it can be added to almost any noun:

(27) the box [from Brazil]

  - it doesn't seem to be a specific property of *student* (as opposed to any other noun) that allows *[from Brazil]* to appear after it

⇒ in other words, *[from Brazil]* is **not** selected by *student*

- compare this with *[of physics]*:

(28) * the box [of physics]

⇒ *[of physics]* **is** selected by *student*

- Now consider (26), compared to (29):

(29) * a student [from Brazil] [of physics]

⇒ *adjuncts* cannot be ordered before *arguments*

(Unlike many of the other properties we've been talking about, there are many languages for which this is not true; if we'll have time, we'll talk a little bit about what the relevant difference is between these languages and English.)

- Compare this with (30a–b):

(30) a. the student [from Brazil] [with the short hair]

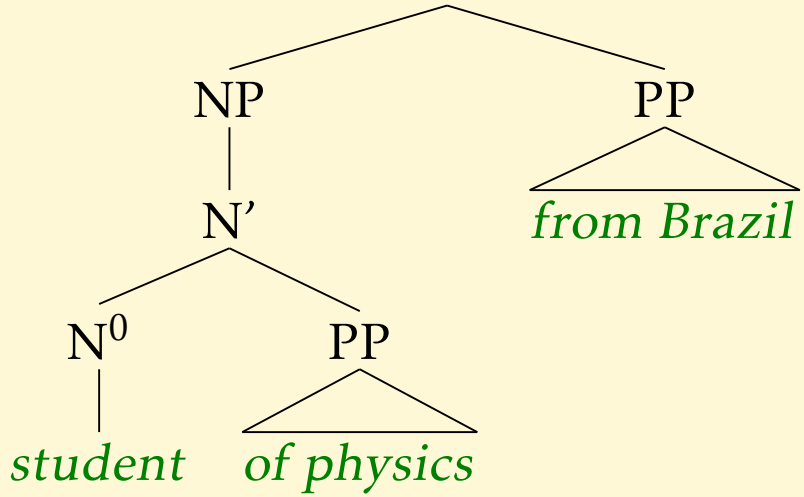
b. the student [with the short hair] [from Brazil]

⇒ two *adjuncts* **can** be reordered w.r.t. each other

- How might we relate these two facts?
  - **(i)** *do so* must replace, at the very least, the verb + all of its *arguments*
    - *adjuncts*, on the other hand, may or may not be included
  - **(ii)** *adjuncts* cannot be ordered before *arguments*
    - while *adjuncts* can be reordered amongst themselves

- Suppose adjuncts are *Merged* as sisters to the maximal projection (XP):

(31)



  - RECALL: complements are *Merged* as sisters to the head

⇒ by the time the adjunct is *Merged*, the complement is already there

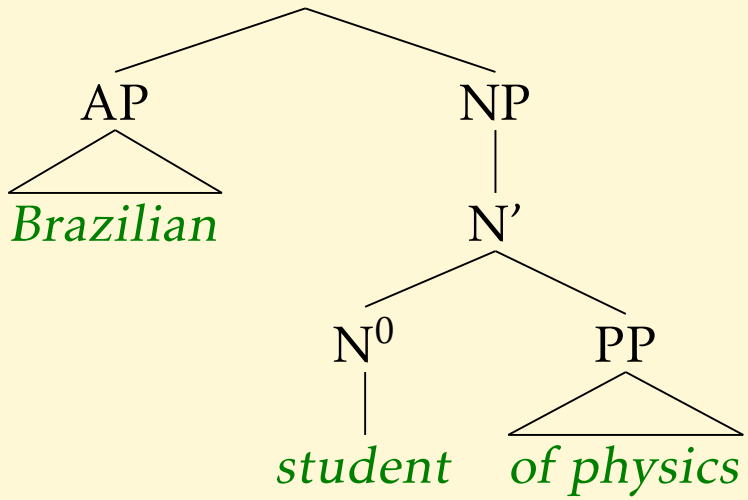
⇒ as a result, the adjunct will be **farther out** from the head (compared to the complement)

⇒ if both the complement and the adjunct are **to the right** of the head, then the adjunct **must follow** the complement

- **PREDICTION:** an adjunct **can** precede the complement, so long as it also precedes the head
  - if we introduce the adjunct via *Merge*(<adjunct>, XP), rather than *Merge*(XP, <adjunct>)

⇒ this prediction is borne out:

(32)



- In fact, **both** the adjunct and the complement can appear *pre-nominally* (i.e., before the noun)
  - ➢ in that case, however, the adjunct must **precede** the complement:

(33) a. a Brazilian physics student

b. * a physics Brazilian student

- **NOTICE:**
  - our *structurally*-based characterization of adjunct positions ("farther away from the head than complements") gets (33a–b) right
  - whereas a *linearly*-based characterization of adjunct positions ("following/to the right of complements") does not

- How about the label of the resulting constituent (when an XP and an adjunct *Merge*)?
  - REMINDER: our original motivation for the existence of *syntactic categories* was **distributional** (i.e., where a set of constituents can and can't appear)
  - it's pretty clear that (34b) or (34c) can appear in whatever syntactic environments (34a) can appear in:

(34) a. [$_{NP}$ student of physics]
b. [$_{?}$ [$_{NP}$ student of physics] [$_{PP}$ from Brazil]]
c. [$_{?}$ [$_{AP}$ Brazilian] [$_{NP}$ student of physics]]

⇒ it stands to reason that the category of (34b–c) is the same as the category of (34a) — namely, NP:

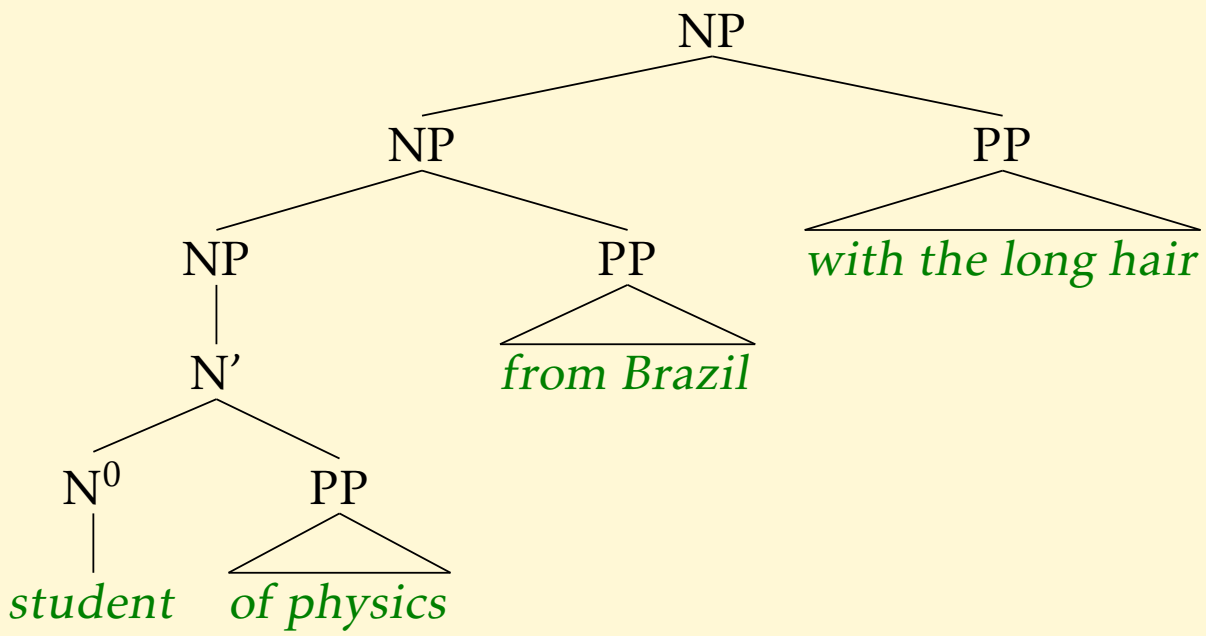
(35) a. [$_{\mathbf{NP}}$ [$_{NP}$ student of physics] [$_{PP}$ from Brazil]]
b. [$_{\mathbf{NP}}$ [$_{AP}$ Brazilian] [$_{NP}$ student of physics]]

- If so, then the addition of an adjunct — unlike the addition of a complement — does not change the category of a constituent
  - e.g., the result of *Merging* an adjunct to an NP is another NP

⇒ **PREDICTION:** the output of one *adjunction*(≡*Merge* of an adjunct) should be able to serve as input for another *adjunction*

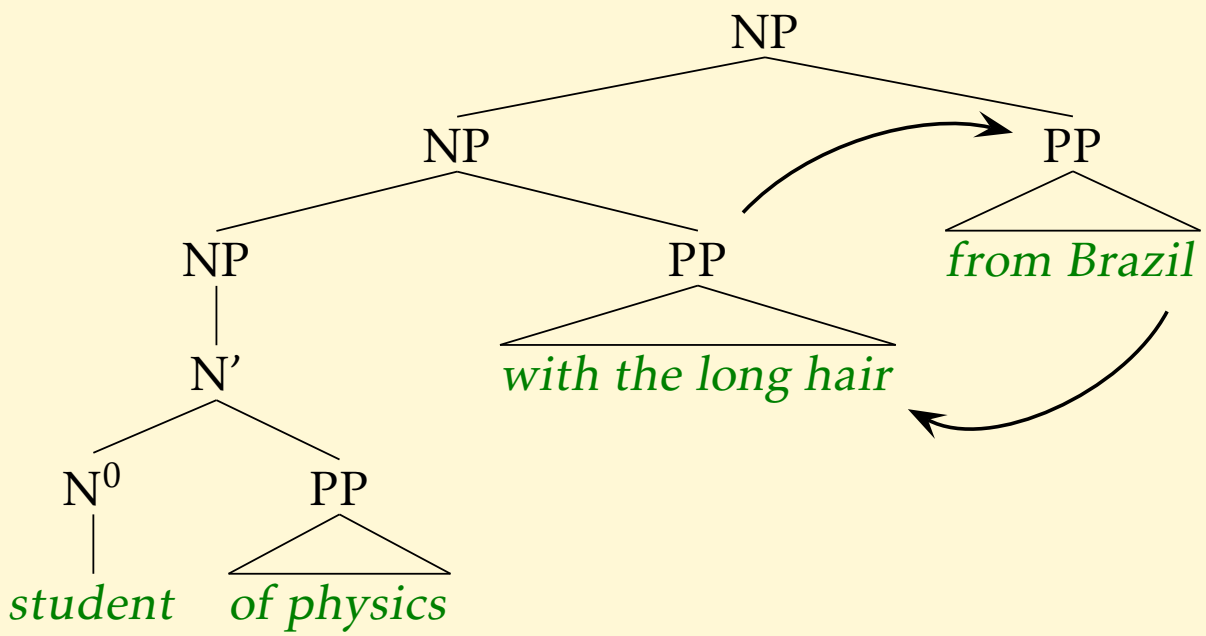
- We have already seen, in fact, that this prediction is borne out:

(36)



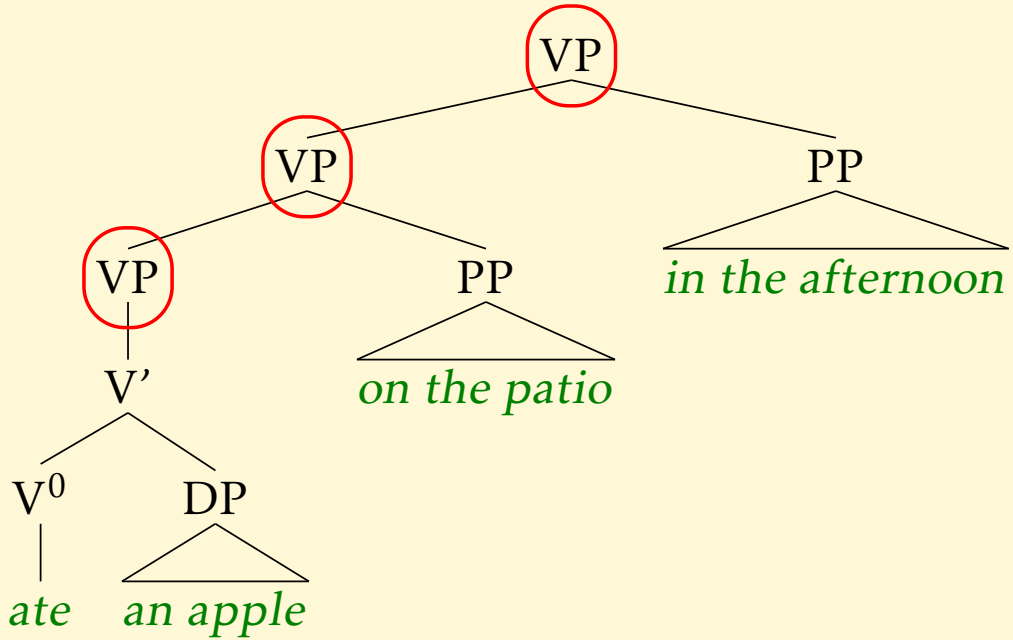
- This also captures the fact that, modulo semantic/pragmatic constraints, adjuncts can *Merge* in any order
  - because the adjunct always *Merges* to an XP (e.g., an NP, as in (36))
    - regardless of whether it is the first adjunct, the second adjunct, etc.

(37)



- Finally, consider the *do so* facts:
  - we saw that *do so* must replace at least the verb + all of its *arguments*
    - *adjuncts*, on the other hand, may or may not be included

(38)



➢ ***do so* can replace VP nodes, and only them!**

⇒ our hypothesis about how adjuncts are *Merged* into the structure gives rise to a very elegant characterization of *do so*'s behavior

References

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