

Last Friday

L2 Syntax Lecture 3: The structure of verb phrases

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Elementary trees

- Devolve the basic combinatorial properties of words to the **lexicon**
- Each lexical item is an **elementary tree**
- Sentences are built by **combining elementary trees**
- **Thematic roles** are assigned to nodes in elementary trees

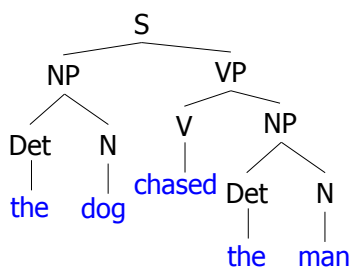
Today and Friday

- Tree terminology
- The structure of VPs
- The structure of NPs
- X' structure

Today's reading

- Cook and Newson, first half of Chapter 4 (p.133-147)
- Copies in the DSB ground floor resource room, on WebCT, and in the library

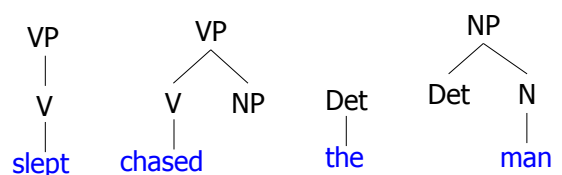
Describing positions in trees



- S is the **root**
- NP and VP are **daughters** of S
- S is the **mother** of VP
- NP and VP are **sisters**
- S **dominates** VP (and everything else)
- NP and Det are **nonterminal nodes**
- **chased** and **the** are **terminal nodes**

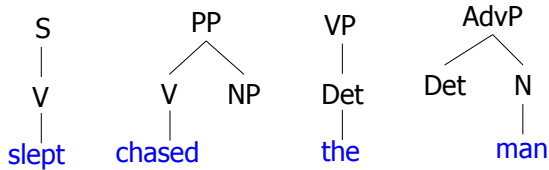
Elementary trees: reminder

Syntactic structure in the lexicon

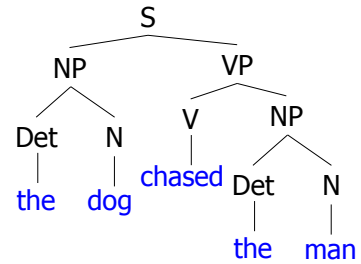


A restriction on trees

- **Endocentricity**: phrases must be headed by lexical items of the appropriate category.
- A verb's elementary tree should be VP (and no bigger), etc.



Is this endocentric?

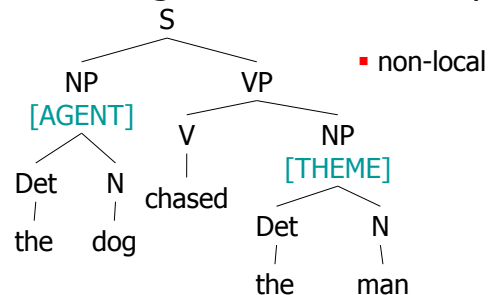


Reminder: theta-role assignment and locality

Thematic roles depend on the verb.
This information must be in the lexicon:

- **chased**: assigns **AGENT** to subject and **THEME** to complement
- **danced**: assigns **AGENT** to subject
- **melted**: assigns **THEME** to subject
- **sold**: assigns **AGENT** to subject, **BENEFICIARY** to 1st complement (if present), and **THEME** to 2nd complement

Reminder: theta-role assignment and locality

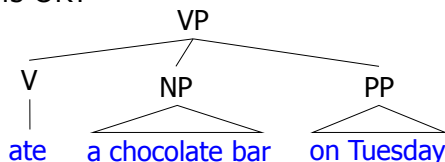


A closer look at VPs

I ate a chocolate bar on Tuesday

What is the structure of the VP *ate a chocolate bar on Tuesday*?

Is this OK?



A closer look at VPs: *do so* substitution

do so substitution: a constituency test

- I ate a chocolate bar on Tuesday, and he *ate a chocolate bar on Tuesday* too

A closer look at VPs: *do so* substitution

do so substitution: a constituency test

- I ate a chocolate bar on Tuesday, and he **did so** too

A closer look at VPs: *do so* substitution

do so substitution: a constituency test

- I **ate a chocolate bar on Tuesday**, and he **did so** too

did so substitutes for *ate a chocolate bar on Tuesday*

What does that substitution tell you?

A closer look at VPs: *do so* substitution

- I **ate a chocolate bar on Tuesday** and he **did so** too
- I **ate a chocolate bar** on Tuesday and he **did so** on Wednesday

A closer look at VPs: *do so* substitution

- I **ate a chocolate bar on Tuesday** and he **did so** too
- I **ate a chocolate bar** on Tuesday and he **did so** on Wednesday

Nested constituents:

[[ate a chocolate bar] on Tuesday]

A closer look at VPs: *do so* substitution

- * I **ate** a chocolate bar on Tuesday and he **did so** an ice cream on Wednesday
 - *Ate* is a constituent (of course)
 - The substitution test cannot separate off *a chocolate bar* from *ate*
 - But we can separate *on Tuesday* from *ate a chocolate bar*
 - *A chocolate bar* is a **complement** of *ate*

A closer look at VPs: *do so* substitution

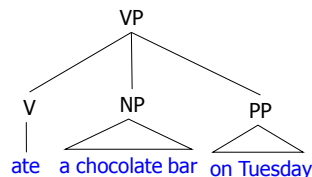
- * I **ate** a chocolate bar on Tuesday and he **did so** an ice cream on Wednesday
 - Call things like *a chocolate bar*, which can't be separated from *ate*, **complements**
 - Call things like *on Tuesday*, which can be separated from *ate* (and can be left out altogether) **adjuncts**

Summary of facts

- *ate a chocolate bar on Tuesday* is a constituent
- *ate a chocolate bar* is a constituent
- *a chocolate bar* is a complement of *ate*
- *on Tuesday* is an adjunct

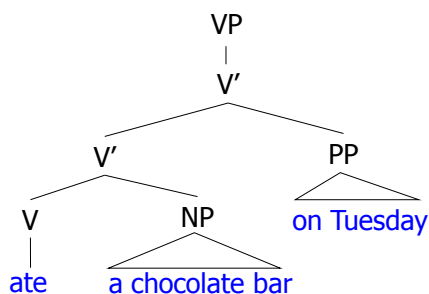
We need a tree to cover these facts

Does this structure work?

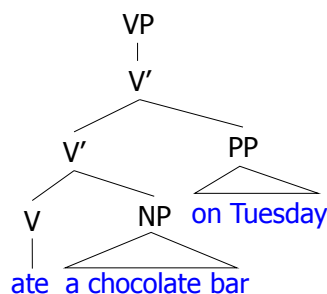


- *ate a chocolate bar on Tuesday* is a constituent
- *ate a chocolate bar* is **NOT** a constituent
- **NO** structural difference between *a chocolate bar* and *on Tuesday*

Our new structure



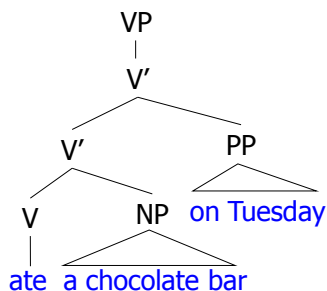
Our new structure explained



Three levels

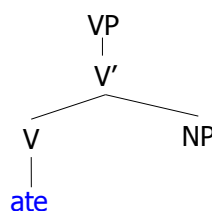
- V
- V'
- VP (= V'')

Our new structure explained



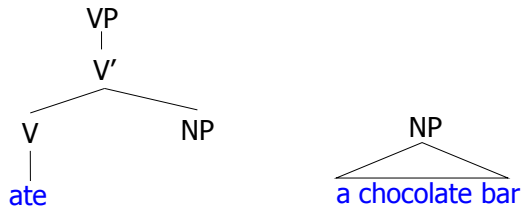
- *ate a chocolate bar on Tuesday* is a constituent
- *ate a chocolate bar* is a constituent
- can identify a complement by its position (sister of V, daughter of V')

Building our new structure

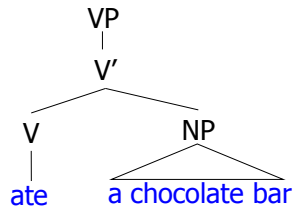


Elementary tree

Building our new structure

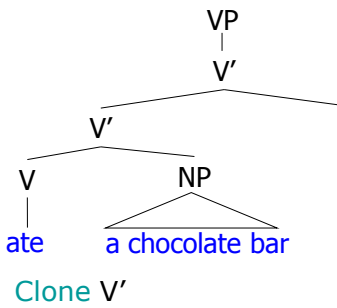


Building our new structure

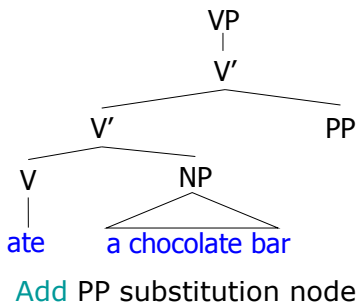


Substitute in complement

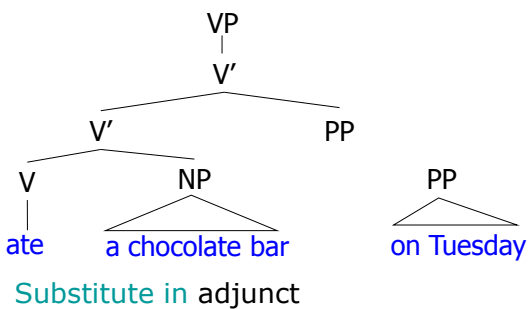
Building our new structure



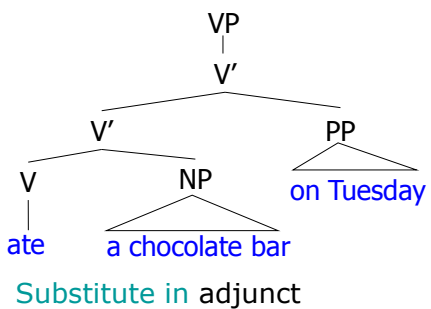
Building our new structure



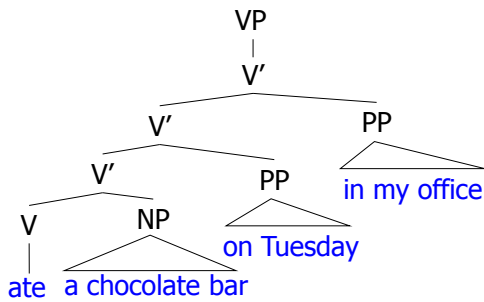
Building our new structure



Building our new structure



... and repeat

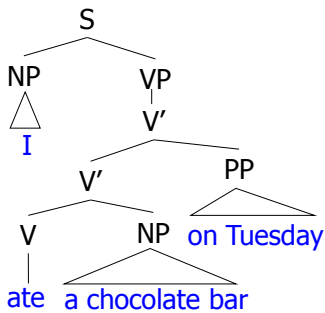


Do so substitution again

- I ate a chocolate bar on Tuesday and he did so too
- I ate a chocolate bar on Tuesday and he did so on Wednesday
- *I ate a chocolate bar on Tuesday and he did so an ice cream on Wednesday

Generalization: *do so* can substitute for any V' (not V or VP)

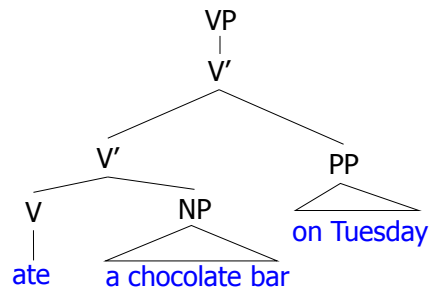
The structure of sentences



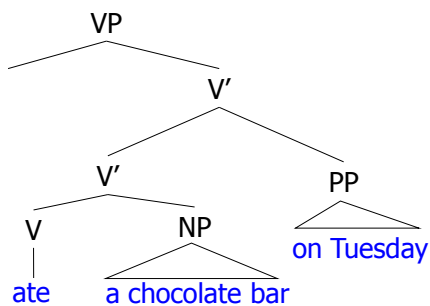
What's wrong with this?

- violates *endocentricity*
- subject not *local* to verb

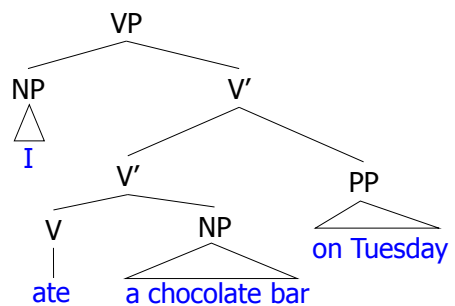
The structure of sentences



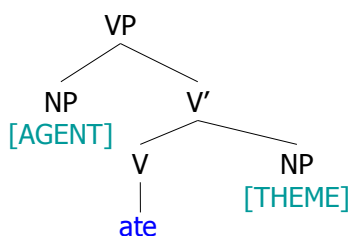
The structure of sentences



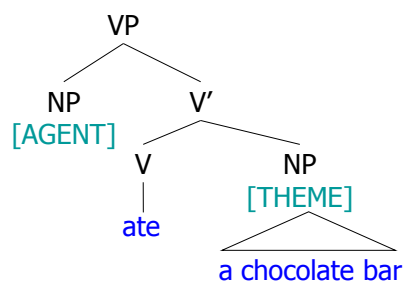
The structure of sentences



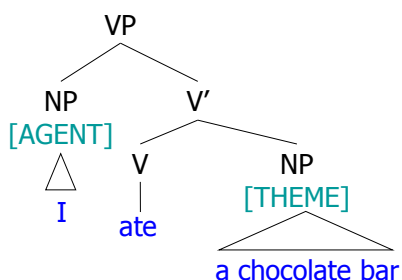
Building up a sentence again



Building up a sentence again

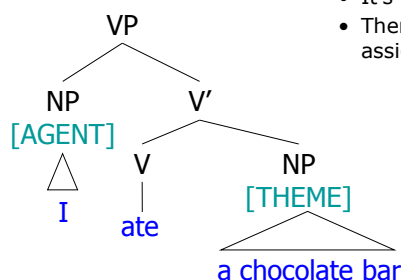


Building up a sentence again



Problems solved

- It's *endocentric*
- Thematic roles assigned *locally*



Subject-verb agreement in English: number

- (1) The man speaks
- (2) *The men speaks
- (3) *The man speak
- (4) The men speak

Subject-verb agreement in Italian: person + number

- 1sg (io) parlo
- 2sg (tu) parli
- 3sg (lei) parla
- 1pl (noi) parliamo
- 2pl (voi) parlate
- 3pl (loro) parlano

Subject-verb agreement in Swahili: person + number + class

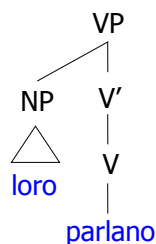
1sg ninasema		
2sg unasema		
3sg anasema	3sg unasema	3sg kinasema
1pl tunasema		
2pl mnasema		
3pl wanasema	3pl inasema	3pl vinasema
Class A	Class B	Class C

Locality of subject-verb agreement

- (1) The man thinks the cats speak
- (2) *The man thinks the cats speaks
- (3) *The man think the cats speak
- (4) *The man think the cats speaks

Hypothesis: phenomena determined by the verb are limited to nodes in the verb's elementary tree

The new structure again



- It's **endocentric**
- Thematic roles assigned **locally**
- subject-verb agreement is **local**

Summary

Today:

- Terminology for talking about trees
- *Do so* substitution
- The structure of verb phrases
- V, V', VP
- Sentences as VPs
- Subject-verb agreement

What comes next

- The structure of noun phrases
- First parallels between sentences and noun phrases
- X'-theory