

LIN232 Summer 2021 - Week 3

Auxiliaries, Introduction to Movement

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University of Toronto

Welcome Linguists!

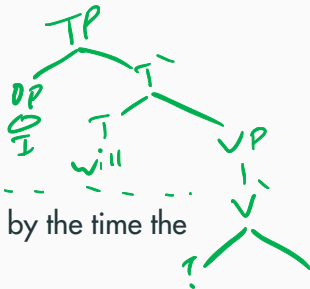
Auxiliaries and Periphrastic tenses

How much room do we have in the clause in our current view of X-bar?

Periphrastic Tenses

Auxiliaries
Aux

Consider the following English sentences:



- (1) a. I will have read my whole library by the time the pandemic is over
- b. They must not be listening carefully if they think we can only draw English trees!

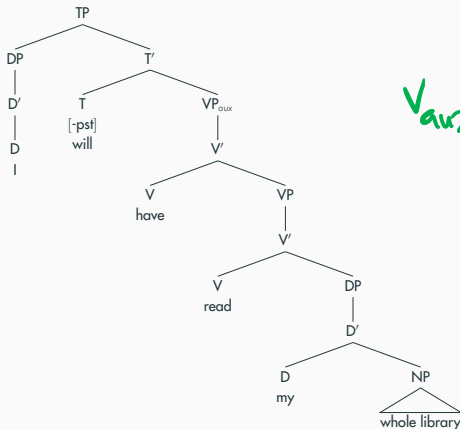
Periphrastic tenses

We will need an extra layer of VP to handle extra *auxiliary* verbs

(2) I will have read my whole library

T = will, must, can, could
may, might etc.

V_{aux} = have, be



(Some) English Periphrastic Tenses

(3) a. We had eaten all the watermelon

past perfect (pluperfect)

b. We have eaten all the watermelon

present perfect

c. We will have eaten all the watermelon

future perfect

d. We are eating all the watermelon

present progressive

e. We were eating all the watermelon

past progressive

f. The watermelon is being eaten

present progressive passive

g. The watermelon had been eaten

past perfect passive

h. The watermelon had been being eaten

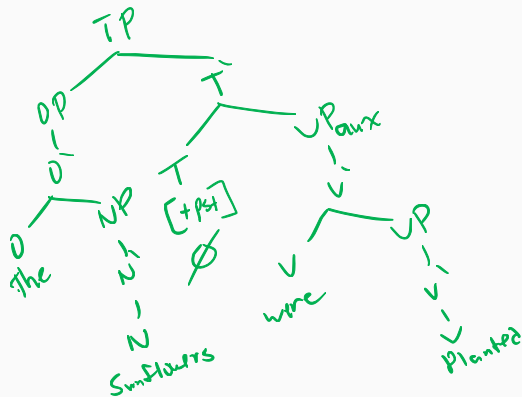
past perfect progressive passive

voice

English Passives

Our layered VP approach works for passive constructions in English too:

(4) \bar{O} N V_{aux} V
The sunflowers were planted



English Auxiliaries vs. Main verbs

V_{aux}

V_P

Here's a handy reference of versions of *be*, *have*, *do* in English

Name	Meaning	Subcategory
<i>be</i> _{cop}	<u>Copula (identity / property)</u>	Main verb
<i>be</i> _{prog} <i>ting</i>	Progressive	Auxiliary
<i>be</i> _{pass}	Passive	Auxiliary
<i>have</i> _{poss}	Possession	Main verb
<i>have</i> _{perf}	Perfect	Auxiliary
<i>do</i> _{main}	Accomplishment / performance	Main verb
<i>do</i> _{aux}	Supports tense before negation	Auxiliary

He does not like Syntax.
"do support"

(Carnie p265)

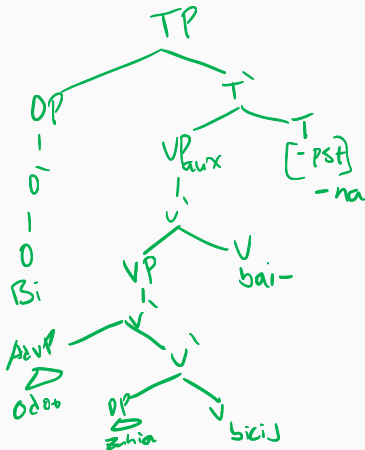
Periphrastic Tenses in other Languages

- (5) Би одоо захиа бичиж байна
 Bi odoo zahia bicij bai-na
 I now letter writing be-NPST

Д Ажл N Vaux

'I'm writing a letter now.'

$[-pst]$? non-past tense
 4 past tense
 $[+pst]$
 (Mongolian)

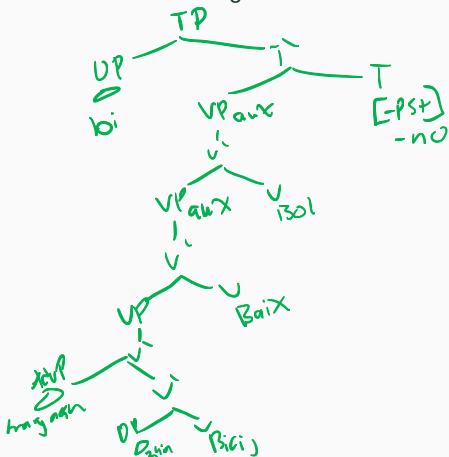


Periphrastic Tenses in other Languages

- (6) Би маргааш захиа бичиж байх болно
 Bi margaash zahia bicij baiх bol-no
 I now letter writing be will-NPST

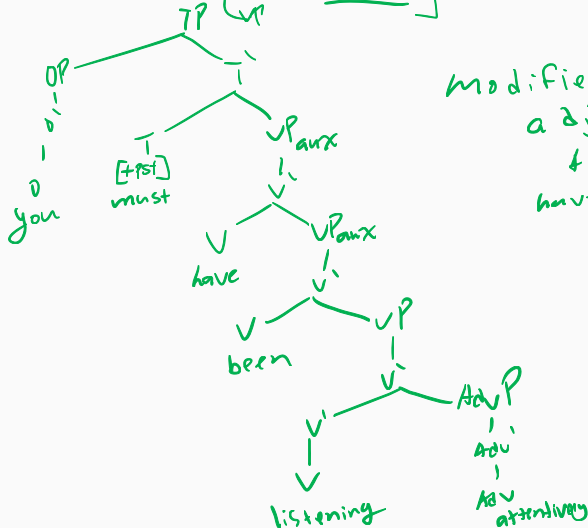
'I will be writing a letter tomorrow'

(Mongolian)



English Tree Practice

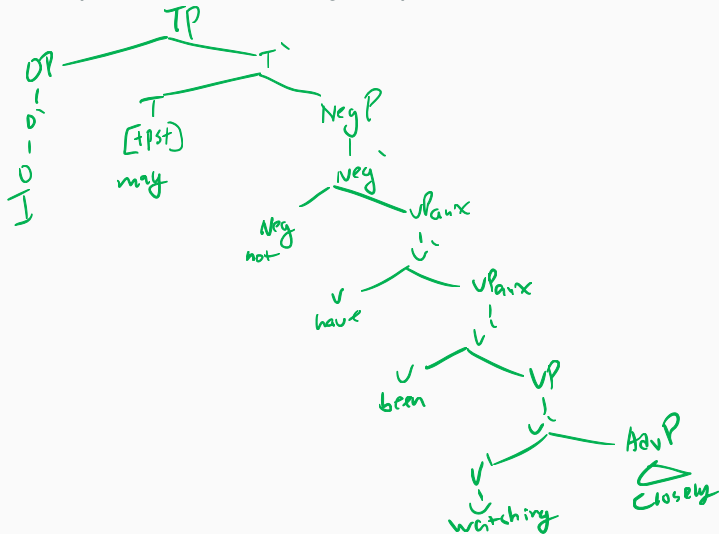
(7) You must have been listening attentively



modifiers are
adjuncts
adjuncts
have to have:
Parent = X'
Sister = X'

English Tree Practice

(8) I may ^{Neg} not have been watching closely



And now for something completely different



Thematic Roles

So far we have not differentiated arguments from one another in a sentence.

But there is an intuitive difference e.g. between these two subjects:

- (9) a. Terry drove my car into a lake.
b. Terry is afraid of syntacticians

(English)

An initiator of an action, or a 'doer' with high volitionality is an *Agent*:

- (10) a. *Raúl* stole 5,500 litres of chocolate ice-cream.
b. *Virgilio* played a beautiful song on the Jarana.

(English)

Arguments that perceive, feel, or hold some attitudes towards events are *experiencers*:

- (11) a. *Jean-françois* enjoys Balkan music
b. *Gavin* saw me fail to park the U-haul
c. Bears scare *Claire*

(English)

An argument that is the recipient of an action that causes it to be moved, affected, experienced, perceived, or undergo a change are called *themes*:

- (12) a. Tuyaa bought *an air conditioner*.
b. Raúl tried and failed to eat *all that ice cream*.
c. That phonetician hates *Semantics*

(English)

A place or entity toward which motion takes place is a *goal*:

- (13) a. Rulema and I went to *Ulaanbaatar* together
b. *Ruth* was given a gold medal

(English)

A sub-type of goal that involved change of possession is a *recipient*:

(14) a. I gave *Radu* a tin of tea

b. *Jessica* received a compliment from Jess

(English)

A *source* is the origin of motion:

- (15) a. The Kiwi came out from *the forest*.
b. The *Naagas* gave Naagaarjuna the Prajñāapaaramitāa
suutras.

(English)

The place where an event or action occurs is the *location*:

- (16) a. The University of Toronto is in *Toronto*
b. I painted my name on *the brick wall*

(English)

An object (often a tool) with which an action is performed is an *instrument*:

(17) a. She wrote the most beautiful calligraphy with *a fine qalam*

b. *This key* will open my shed

(English)

Beneficiaries

A person or entity for whom an action is done, or done for the benefit of, is a *beneficiary*:

- (18) a. I will edit a paper for *Rulema*
b. He knit *my mother* a scarf

(English)

Thematic Roles

Now we can describe what's happening in a Passive sentence:
The theme becomes the subject:

(19) a. ^{Agent}We ate ^{Theme}all the watermelon

b. All the watermelon was eaten

||
(1) removes / deletes
(the agent the agent
part) thematic role
(English)
(2) Promotes the
theme to the
syntactic
subject position

Thematic Roles vs. Theta Roles

A single argument may have more than one *Thematic Role*:

(20)

Ifem gave a letter to Dai Juan

recipient (subject of goal)

theme

Thematic Roles vs. Theta Roles

A single argument may have more than one *Thematic Role*:

(22) *Ifem* gave a letter to Dai Juan

But a verb only assigns one Theta Role per argument:

(23) **Ifem* wrote a letter to *Ifem*

Agent theme goal

I fem wrote a letter to

Andrew

(24) *The Theta Criterion*

- a. Each argument is assigned one and only one theta role
- b. Each θ -role is assigned to one and only one argument

Applying the Theta Criterion

(25) a. ^{Agent}Dai Juan ^{theme}put the letter ^{Goal}into my bag

b. ^{?Agent}*put the letter into my bag

c. *Dai Juan put the letter ^{?Goal}

d. *Dai Juan put th[the letter] th[the book] into my bag

e. *The book put the letter into my bag

f. *Dai Juan put the letter ^{OP}[my bag]

Goals in
English are
PP's

Thinking about Subjects

Expletive Subjects

Some languages allow *null arguments*:

(26) *Xia yu*
fall rain

'It's raining'

(Mandarin)

Expletive Subjects

Some languages allow *null arguments*:

(28) *Xia yu*
fall rain

'It's raining'

(Mandarin)

English does not:

(29) **(It) is raining* = Expletive Pronoun "dummy" pronoun

But what thematic role does 'it' have?

English Expletive Subjects

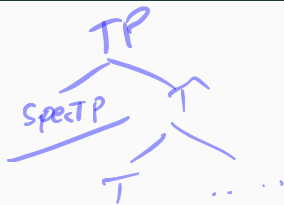
Languages like English provide evidence that even if we don't have a theta role or a thematic role to assign, syntax still imposes requirements on what we must include.

But dummy pronouns like *it* mostly show up in Subject positions, otherwise they usually have a theta role:

(30) a. I love *it* *it* = *theme*

b. Let's put a sticker on *it* *it* = *goal* / *location*

The Extended Projection Principle



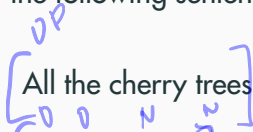


(31) The *Extended Projection Principle*:

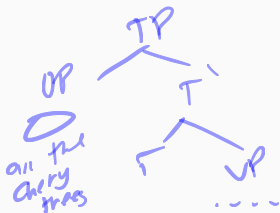
All clauses must have subjects (i.e. the specifier of TP must be filled by a DP or CP) and lexical information is expressed at all levels.

There are certain
phrases that must
fill their specifier position

More about Subjects

Consider the following sentences in English:

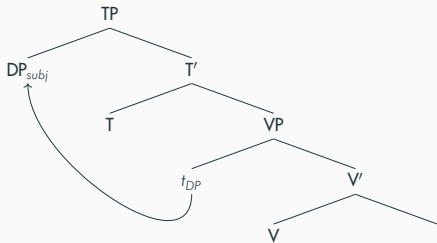
- (32) a.  All the cherry trees might have bloomed early this year
- b.  The cherry trees might have  all bloomed early this year



This is called quantifier float, and while it's a quirk of Germanic languages like English, it shows us something important

VP-internal Subject hypothesis

The VP-internal hypothesis has the subject of a sentence originate in the VP and then move to Spec,TP to satisfy the EPP



Extends
Projection
Principle

(trace)
t_{DP}

Representing Movement

Movement is marked with arrows, leaving a trace behind

Integrating with Auxiliaries

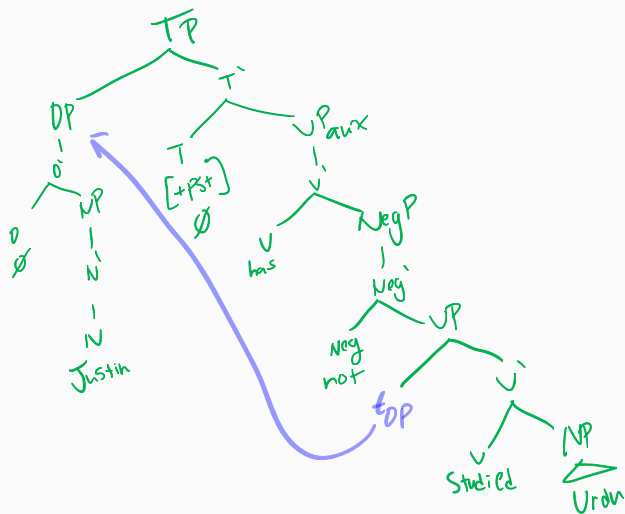
Consider the following English sentences:

- (34) a. The farmers had worked together to improve their conditions
- b. Koorosh has been telling people he is the coolest guy.

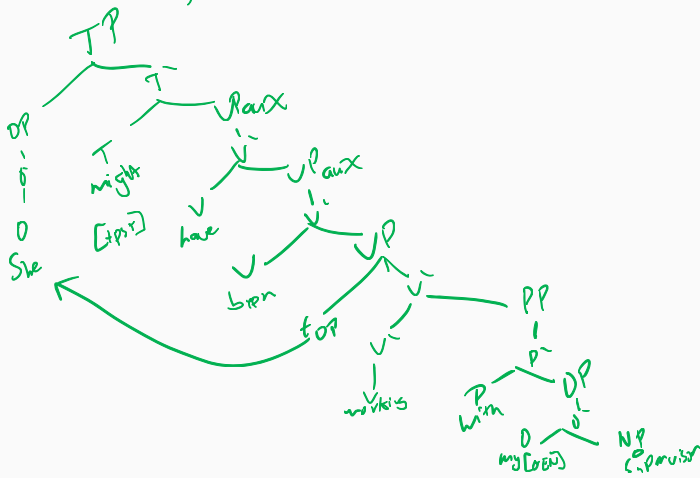
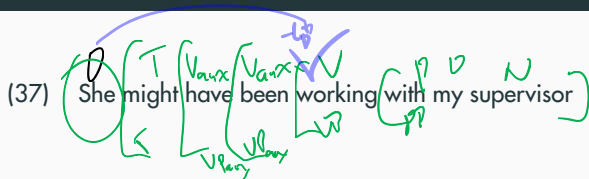
Where does the subject originate? In the specifier of the auxiliary VP, or the main VP?

An English example with a Periphrastic Tense

(36) Justin ^{Jack} has not studied Urdu



More English tree practice



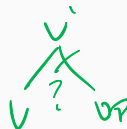
**What other types of movement do we
see?**

V→T Movement

Consider the following sentences in French:

- (38) a. Elle regarde fréquemment la télé
She watches frequently the TV

- b. Elle devrait lire des livres plus souvent
She should read of.the books more often



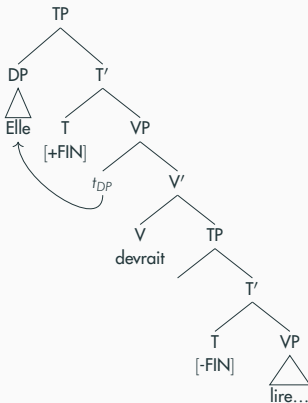
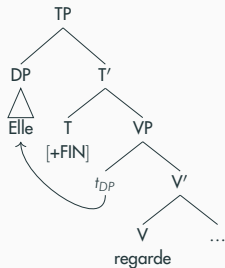
Consider the following sentences in French:

- (39) a. *Elle regarde fréquemment la télé*
She watches frequently the TV
- b. *Elle devrait lire des livres plus souvent*
She should read of.the books more often
- c. **Elle devrait lire plus souvent des livres*
She should read more often of.the books

The projection rule for complements can't be wrong in French, because we can't always separate a verb and its object... So what's going on?

Finiteness

The difference between the two type of sentences is in terms of finiteness:



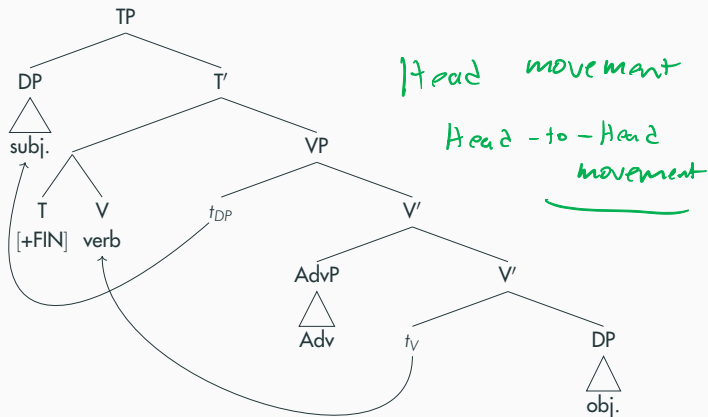
Finiteness: Associated with verbal inflection, tense, the ability to host modal verbs (in Germanic, Sinitic), main clauses

V to T movement

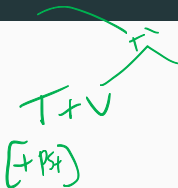
So how do we get the V-Adv-Obj order in Finite clauses in French?

V to T movement

So how do we get the V-Adv-Obj order in Finite clauses in French?
In French finite clauses, the Verb head moves to T:



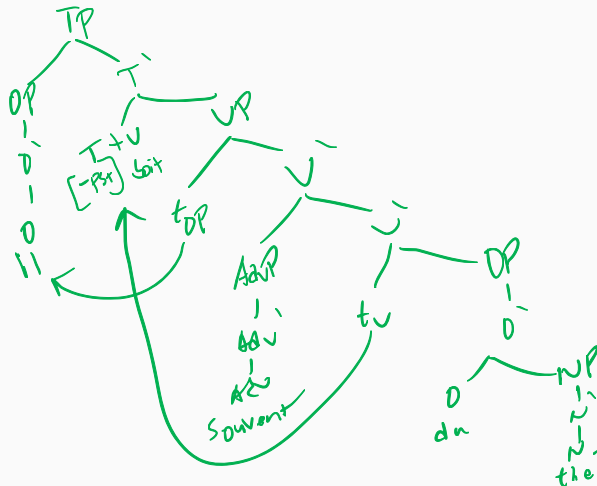
Head Movement



- ▷ $V \rightarrow T$ movement is a type of head movement
- ▷ Essentially, one head moves to another head, and creates a joint head
- ▷ You can draw this with a small branch, or write them next to each other with a +
- ▷ A head that moves takes all of its features and content with it

Another French Tree

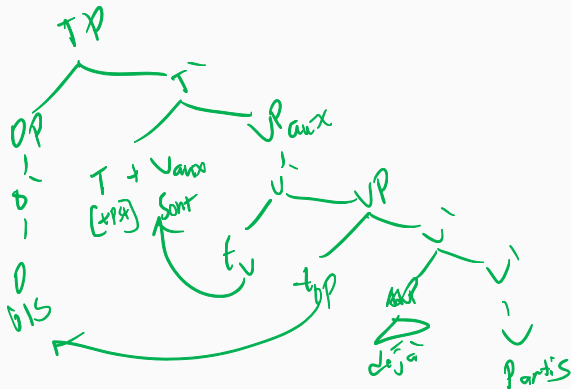
(40) Il boit souvent du thé
 He drinks often of.the tea



More French

We do $V \rightarrow T$ movement for auxiliaries in French too:

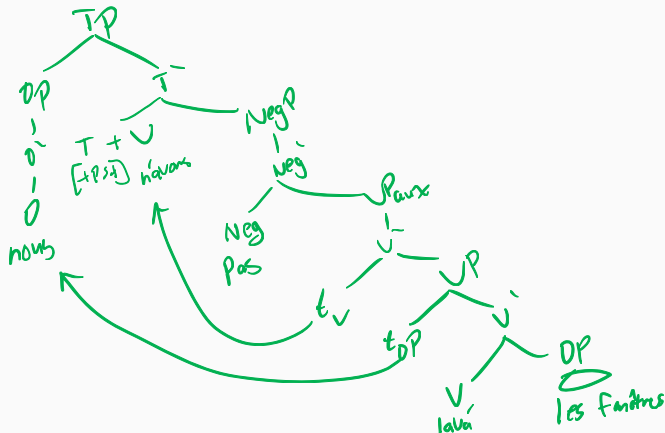
- (41) Ils sont déjà partis
They are already left



Movement and Negation

Another way to show we have movement is around negation:

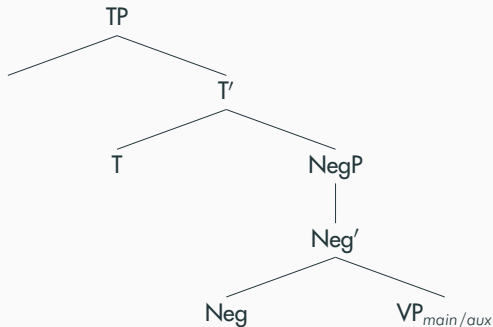
- (42) Nous n'avons pas lavé les fenêtres
We not-have NEG washed the windows



I admit, I hid something from you

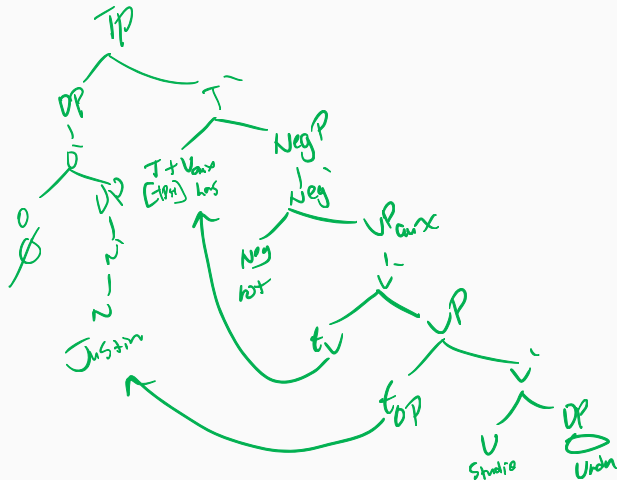
English Negation

I have been putting English negation in the wrong place!
We want to negate the entire verbal domain, not just the main verb
in English



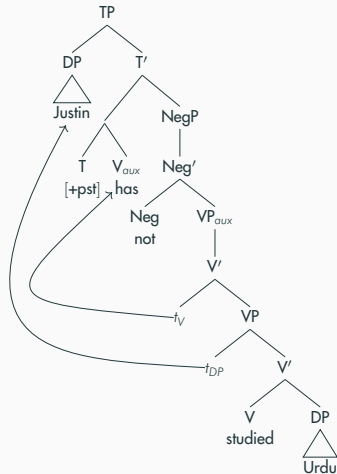
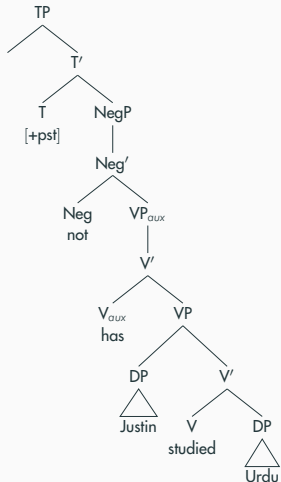
Fixing English Negation & Auxiliaries

(43) Justin ^{Varia} has [✓] not studied Urdu



Fixing English Negation & Auxiliaries

(44) Justin has not studied Urdu



Difference between French and English:

In French, all verbs move to T.

In English, only auxiliaries do (under normal circumstances).

Difference between French and English:

In French, all verbs move to T.

In English, only auxiliaries do (under normal circumstances).

But why?

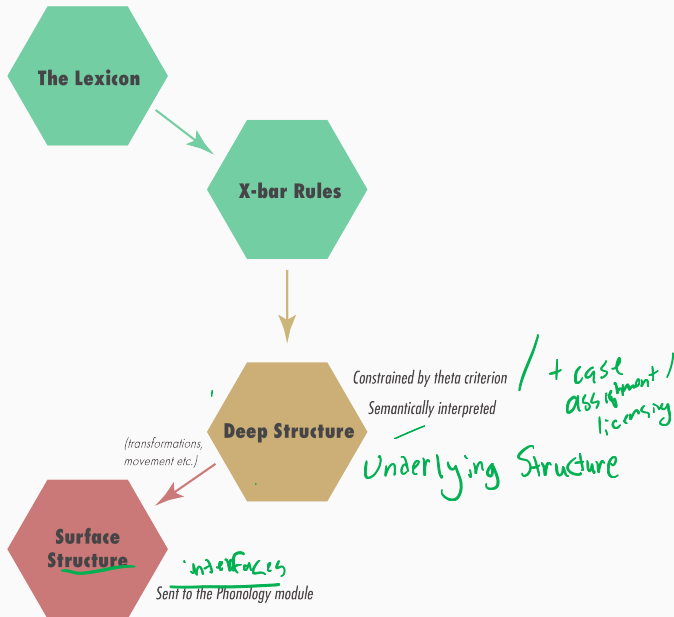
Why move to T?

- ▷ Tense features like [+pst] or [-pst] can be *weak* or *strong*
- ▷ In French, these features are *strong*: they must always be realised by an overt head, and the solution is to move the closest verbal material there.
- ▷ In English, these features are *weak*: If there are close enough to *select* a fully fledged verb phrase, they are happy.
- ▷ In English, if a full verb phrase is not directly in the complement of T (intervened e.g. by negation or an auxiliary), something verbal must move there to host the tense features

**How does movement square with our
theory of Syntax?**

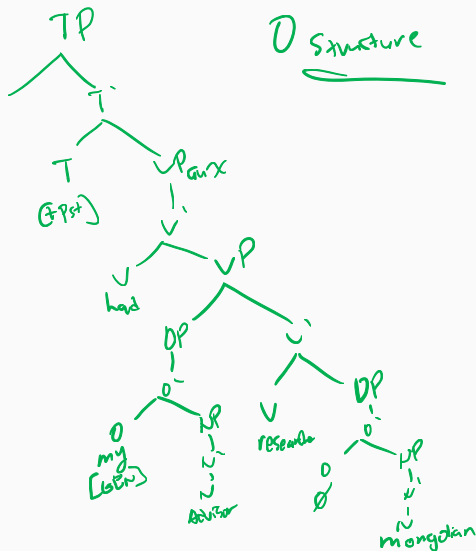
Movement & the Grammar

Situating movement in our theory of Grammar



D-structure vs. S-structure

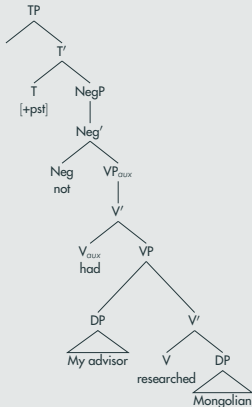
(45) My advisor had not researched Mongolian



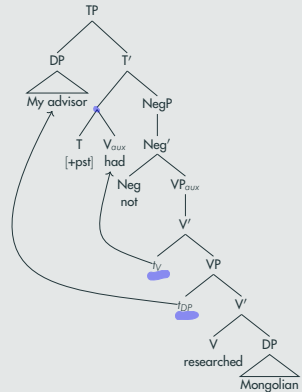
D-structure vs. S-structure

(46) My advisor had not researched Mongolian

(D)ep-structure

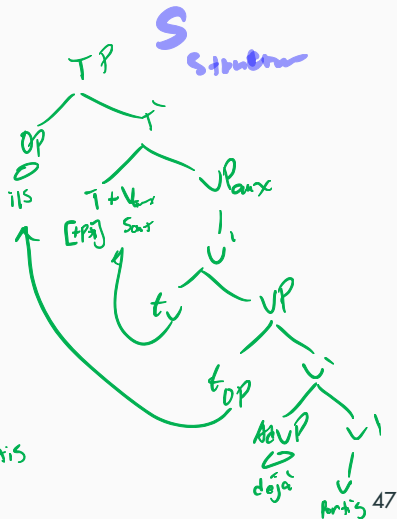
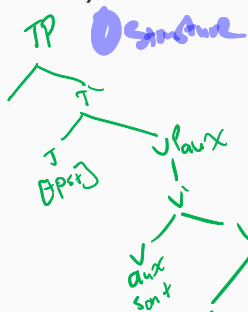


(S)urface-structure



French Movement Practice

(47) Ils sont déjà partis
They are already left



More types of movement


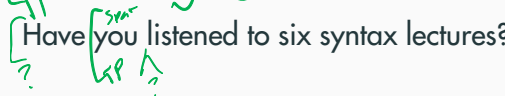
Consider the following pair of sentences in English:

- (48) a. You have listened to six syntax lectures
b. Have you listened to six syntax lectures?

In English we have subject-auxiliary inversion in polarity (yes/no) questions.

More types of movement

Consider the following pair of sentences in English:

- (49) a.  You have listened to six syntax lectures
- b.  Have you listened to six syntax lectures?

In English we have subject-auxiliary inversion in polarity (yes/no) questions.

How do we derive the second sentence from the first?

English Polarity Questions

What's higher than TP?

English Polarity Questions

What's higher than TP?
The CP!

Connects
to discourse

Situate
clauses
in time

encode
the event

Can_T you_{TP} see my screen?

CP

C'

C

[+Q]

T

TP

T'

T + V

VP_{aux}

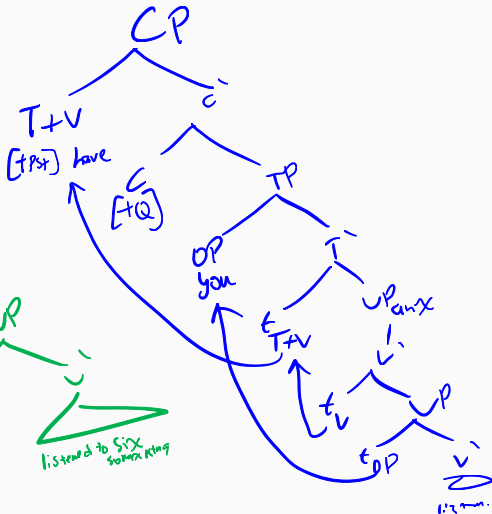
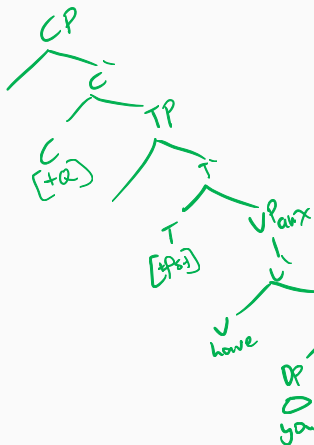
V'

t_V

VP

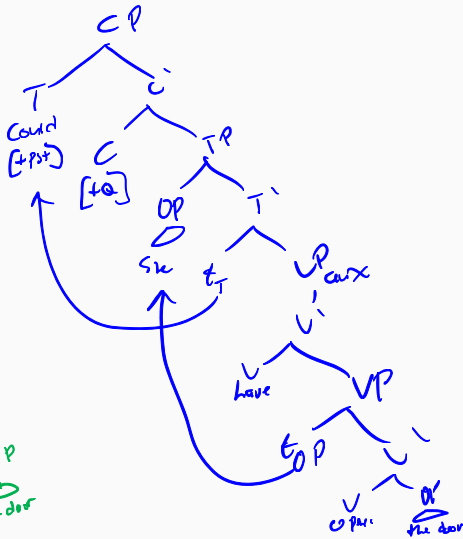
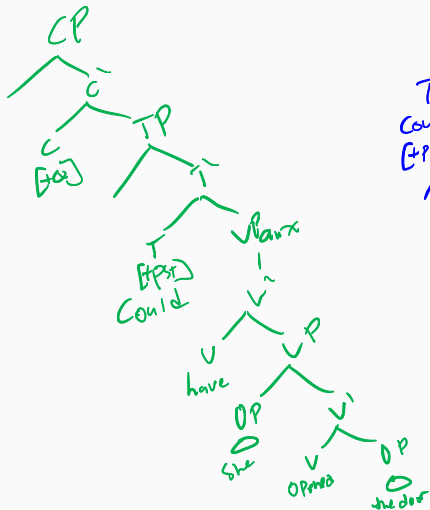
English Polarity Questions

(50) Have you listened to six syntax lectures?



English Polarity Questions

(51) Could she have opened the door?



English Polarity Questions

What about questions without auxiliaries or modals?

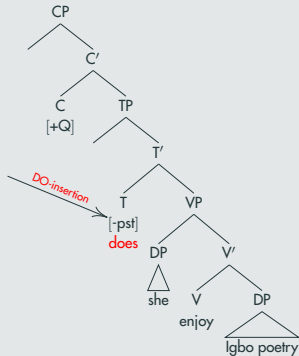
- (52) a. She enjoys Igbo poetry.
b. Does she enjoy Igbo poetry?

- ▷ In English, when you need to move T to spec,CP, but there is nothing in T, you insert a dummy “do”
- ▷ This is a verb with no content
- ▷ This is a “last-resort” option, and happens just before movement / S-structure

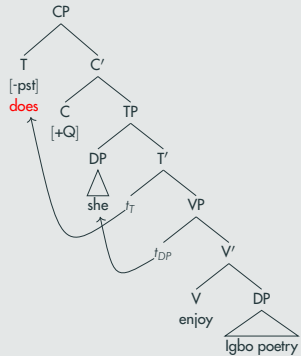
Do insertion

(53) Does she enjoy Igbo poetry?

D-structure



S-structure



There's one more place where we need "do" in English.
Previously, I've only showed you English negation examples with an auxiliary; what happens without one?

There's one more place where we need "do" in English.
Previously, I've only showed you English negation examples with an auxiliary; what happens without one?

- (55) a. We finished our gardening before the rainstorm
b. We *did not* finish our gardening before the rainstorm

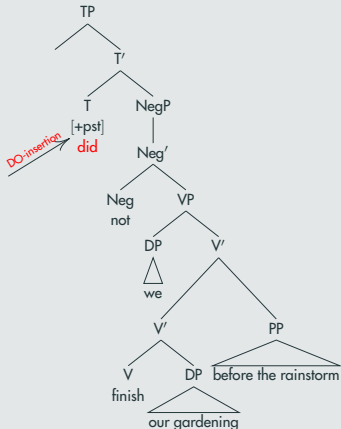


- ▷ T needs phonological material to host the tense features
- ▷ But negation intervenes and the main verb isn't close enough to satisfy this requirement through selection
- ▷ But there is no auxiliary available to move up to T, and the main verb won't budge
- ▷ Last resort: insert a meaningless "do" form to support the tense features

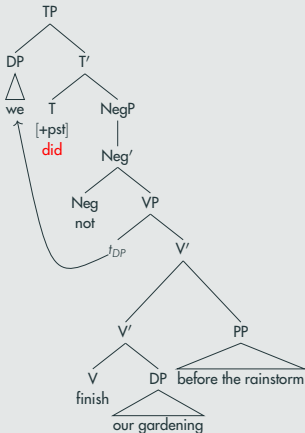
English Do Support

(56) We did not finish our gardening before the rainstorm

D-structure



S-structure



Returning to the CP

Types of C heads

Recall that we introduced the [+Q] feature earlier, and I also talked about finiteness (in French)

Let's take a look at what types of C heads we have in English:

- (57)
- a. I know **that** you are a brilliant student
 - b. I know \emptyset you are a brilliant student
 - c. He requested **for** us to review the slides
 - d. He requested \emptyset us to review the slides
 - e. I wondered **if** they would come to my party
 - f. I wondered **whether** they would come to my party
- Handwritten notes and features:
- For (a) and (b), a bracket groups the C head and the clause, with features $+FIN -Q$ and $+FIN -Q$ written next to it.
 - For (c) and (d), a bracket groups the C head and the clause, with features $-FIN -Q$ and $-FIN -Q$ written next to it.
 - For (e) and (f), a bracket groups the C head and the clause, with features $+FIN -Q$ and $+FIN +Q$ written next to it.
 - A diagonal line is drawn through the right side of the list, separating the first three items from the last three.
 - The word "Embedded" is written in green next to item (b).
 - The word "Clauses" is written in green next to item (c).
 - Handwritten "asked" is written above item (c) and (d).

Types of C heads

Different main verbs select different types of CP complements, whose features are represented on the head:

that [-Q, +FINITE]

∅ [-Q, +FINITE]

for [-Q, -FINITE]

∅ [-Q, -FINITE]

if/whether [+Q, +FINITE]

Putting it all together

(58) Did she ask if we could draw complicated trees?

