Ling 120B: Syntax I

Nico(letta) Loccioni

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Head Movement

Problem In our tree structures, present and past tense morphemes are separated from the V.

> Our tree structures correctly represent the relations between head and phrases but they do not capture the way in which the heads are actually pronounced. hug**ed**, danc**ed**, run**s**, finish**ed**...

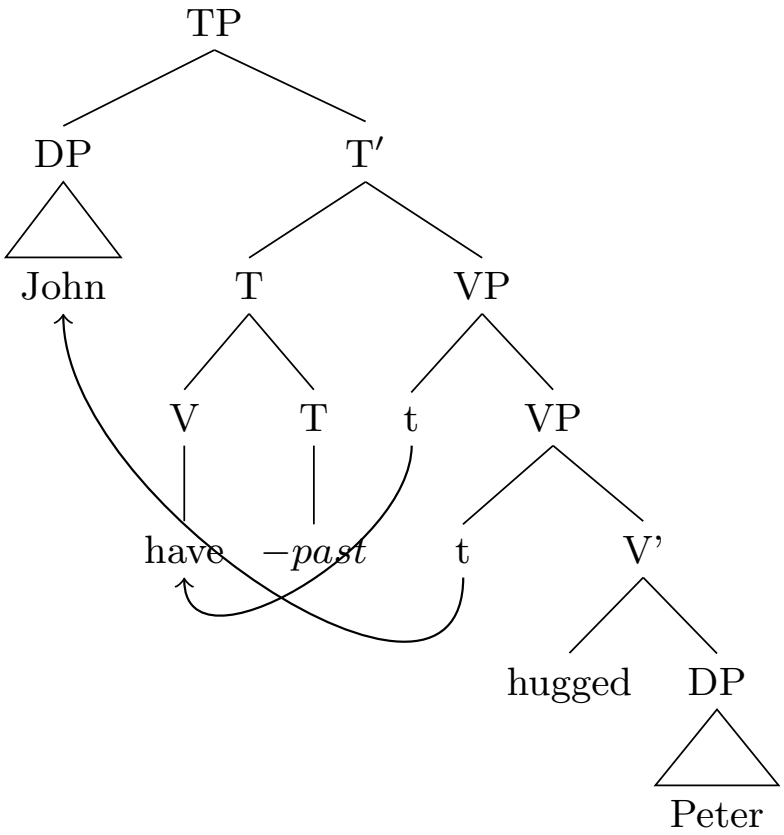
(1) John hugged Peter

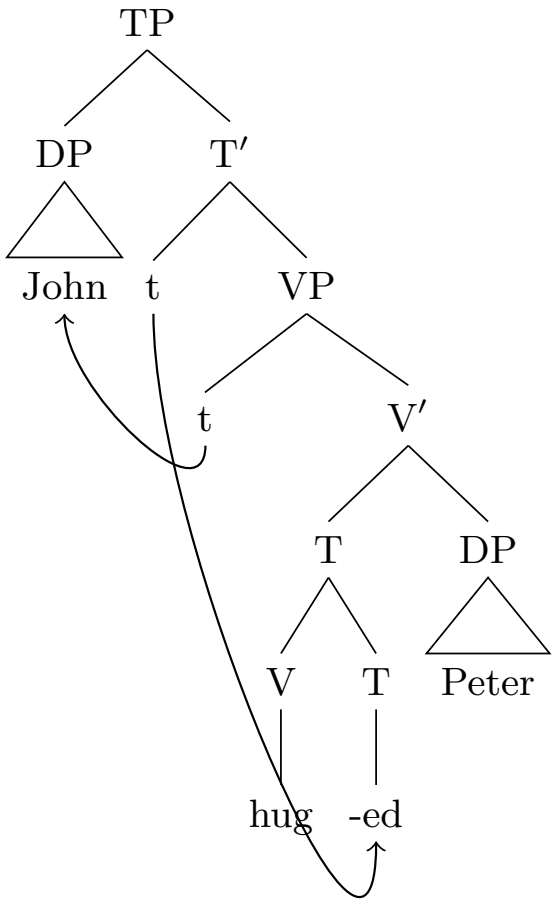
What MOVE operation could put together the verb 'hug' and the bound morpheme '-ed' in (1)?

(i) the V moves up to T;

(ii) T moves down to V.

Both operations turn out to exist, but for different subclasses of verbs, the former for auxiliary verbs (like *have* and *be*), the second for all other English verbs.


TP
DP
T′
John
T
VP
V
T
t
VP
have
−past
t
V’
hugged
DP
Peter


TP
DP
T′
John
t
VP
t
V′
T
DP
V
T
Peter
hug
-ed

The evidence for this account comes from the distribution of (i) adverbs and (ii) negation.

→ Adverbs and negation are adjuncts to VP.

→ We use them as a diagnostic for where the verb is.
Q: Is the verb before or after negation?

(2) Modal verbs

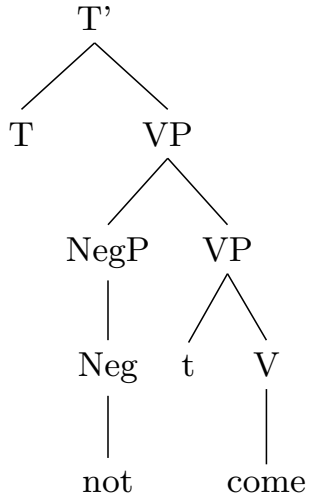
a. John will/can **not** come.
b.*John **not** will/can come.

(3) Aux verbs

a. John has **not** come.
b.*John **not** has come.
c. John will not have come.

(4) Lexical verbs

a. John did **not** come
b.*John came **not**

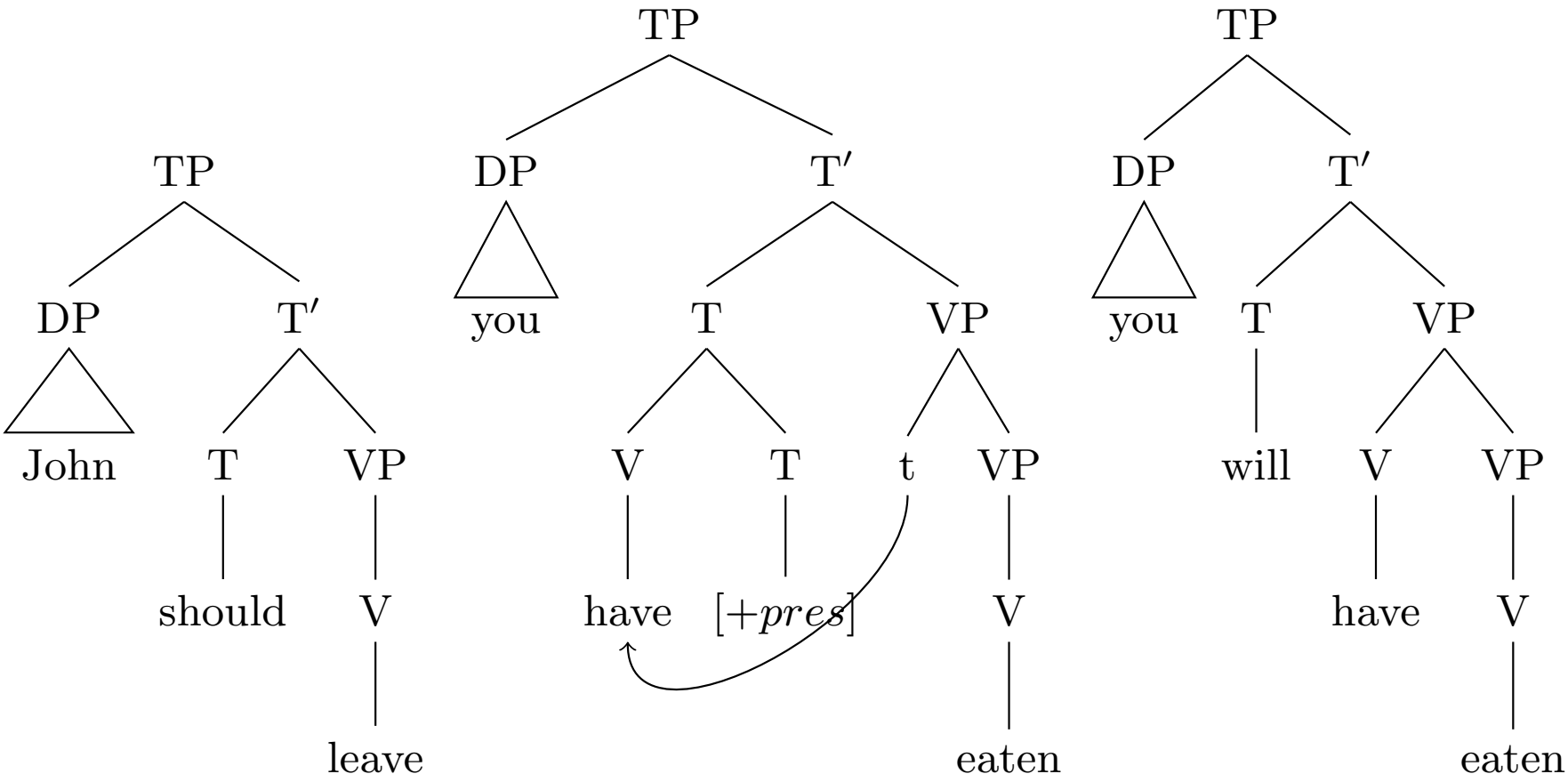


	Modal V	Aux V	Lexical V
Can the verb ever come before negation?	Y	Y	N
Can it ever come after?	N	Y	Y

V-to-T movement I

→ Modals are generated in T;

→ Auxiliaries are verbs (heads of VPs). They can move to T when the position is not otherwise occupied.



V-to-T movement II

→ Lexical verbs do not move to T in English. In other languages lexical verbs do move to T (i.e. French)

English: **Subj >> Adv/Neg >> Lex Verb >> Dir Obj**

French: **Subj >> Lex Verb >> Adv/Neg >> Dir Obj**

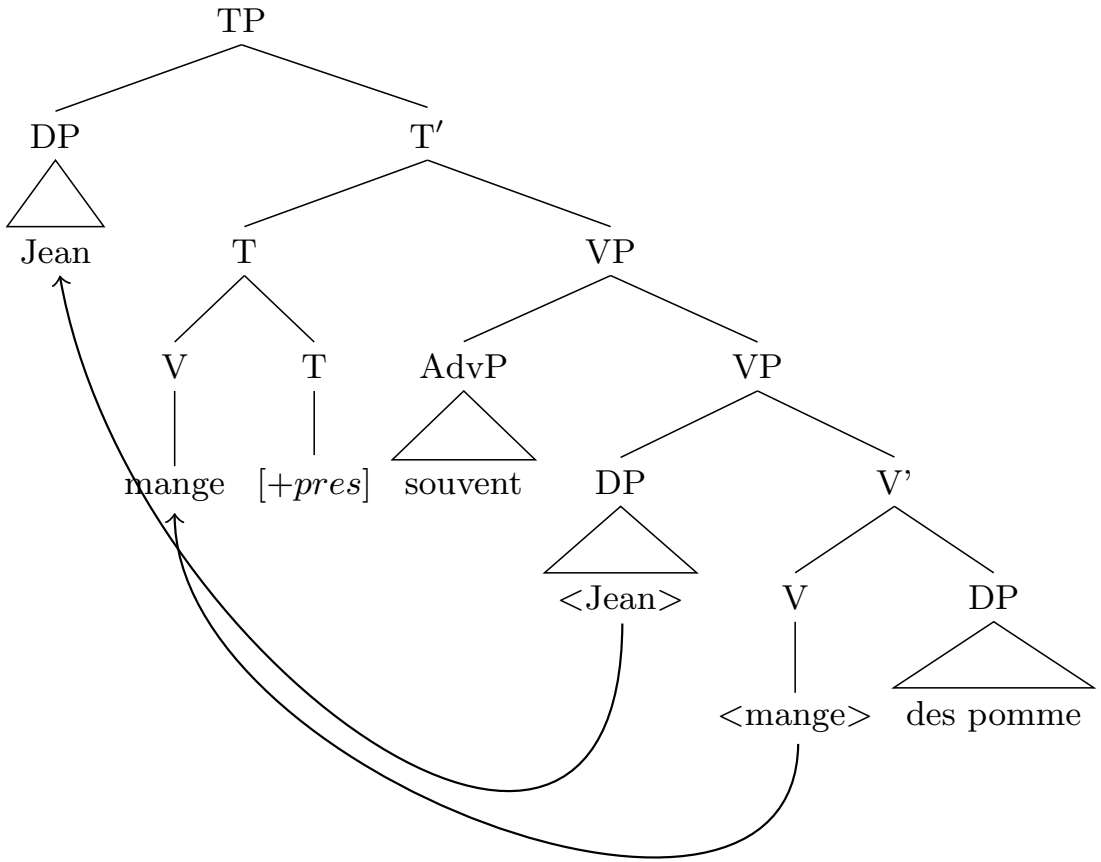
(5) Je mange souvent des pommes
I eat often apples
'I often eat apples'

(6) Je (ne) mange pas de pommes
I eat NEG apples
'I do not eat apples'

(7) Je (n') ai pas mangé de pommes
I AUX NEG eaten apples
'I have not eaten apple'

V-to-T movement III

Tree for (5):



Do you see how the deep-structure trees for (5) and its English counterpart are virtually identical?

V-to-T movement IV

→ Auxiliary verbs can move to T in both English and French!

Aux > ***Neg***

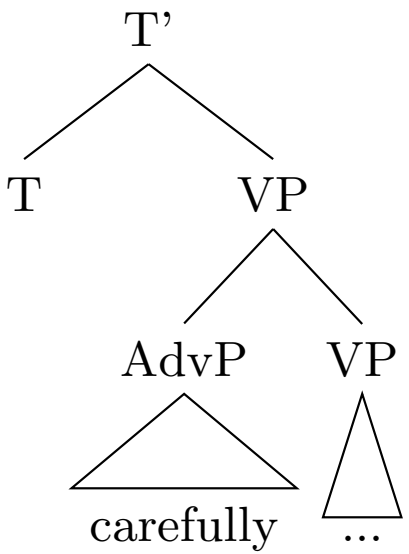
(8) Je (n') ai pas mangé de pommes
I AUX NEG eaten apples
'I have not eaten apple'

This is the reason why we find the same order in (8) and its English counterpart. Try to draw their derivations!

Tense Lowering I

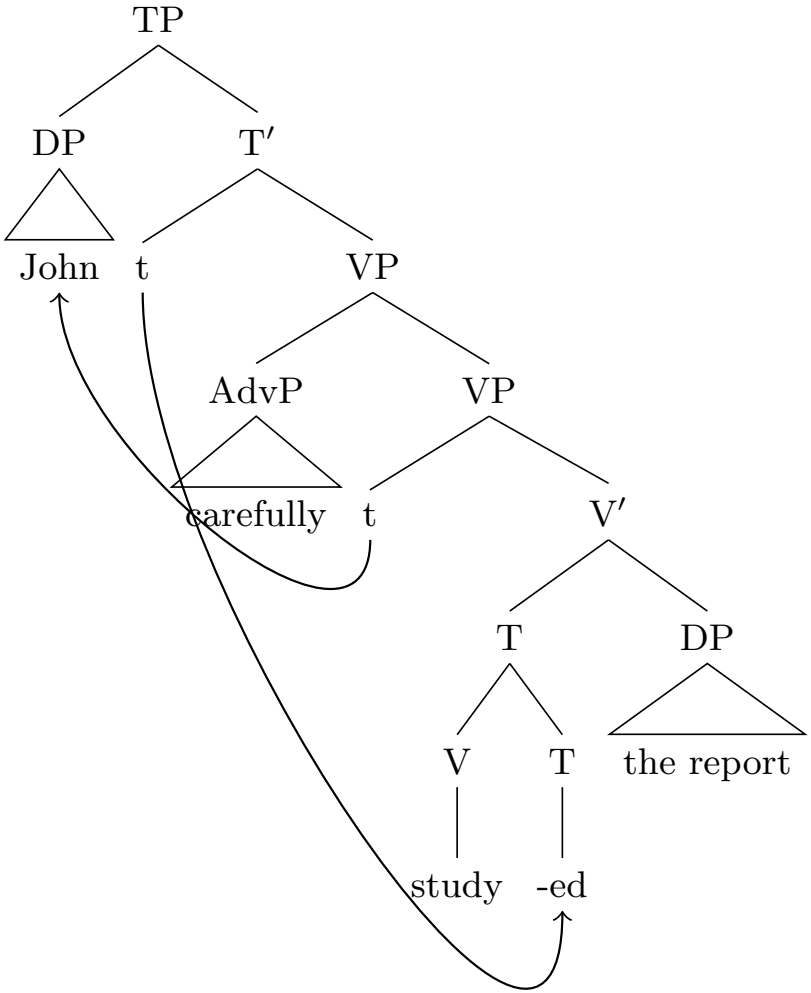
→ Lexical verbs do not move to T in English.

(9) a.*John studied carefully the report
b. John carefully studied the report.



Tense Lowering II

→ T moves onto the verb



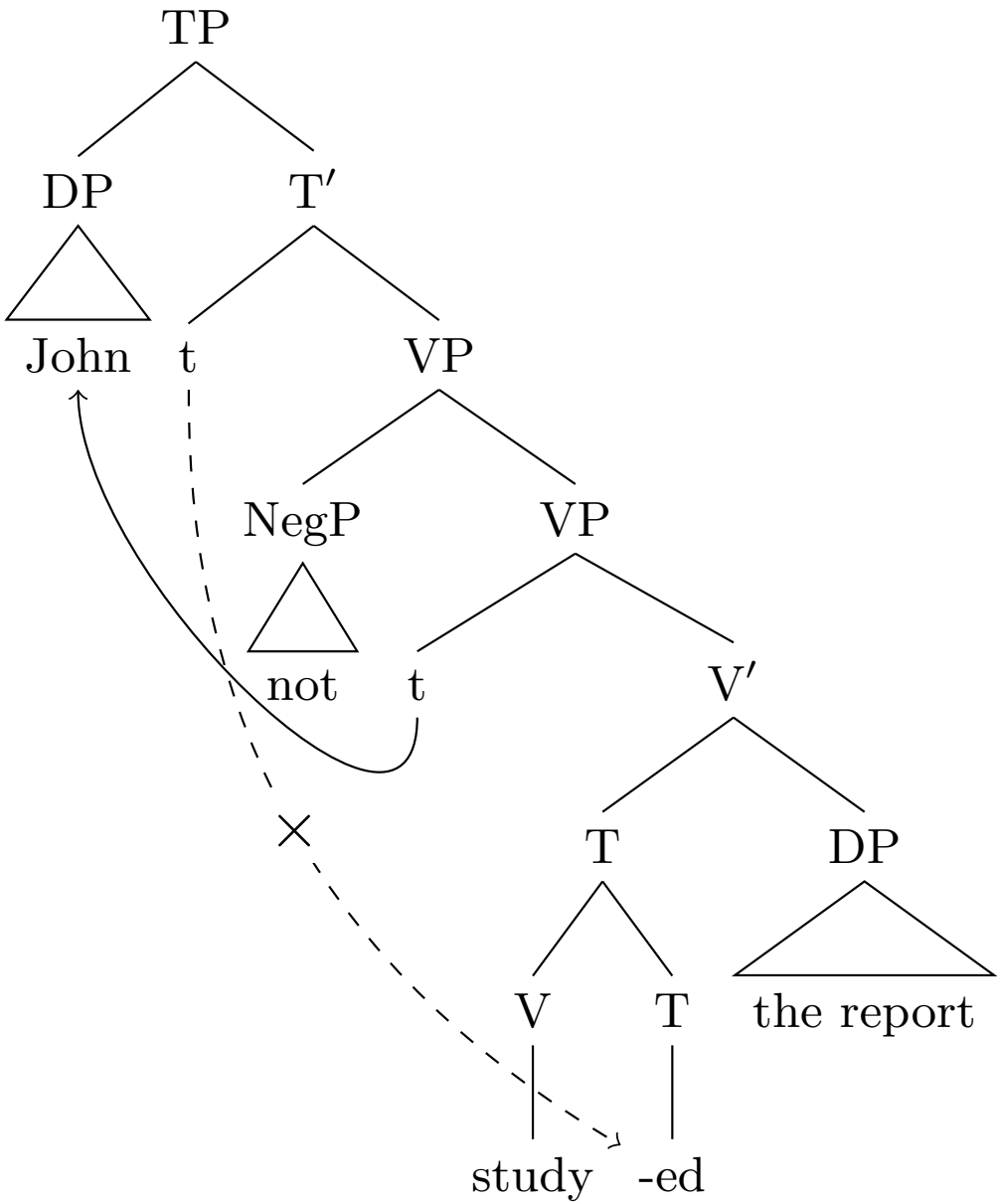
do-support I

→ Tense lowering does not apply in some cases.
A dummy verb *do* can be inserted to support the stranded affix.

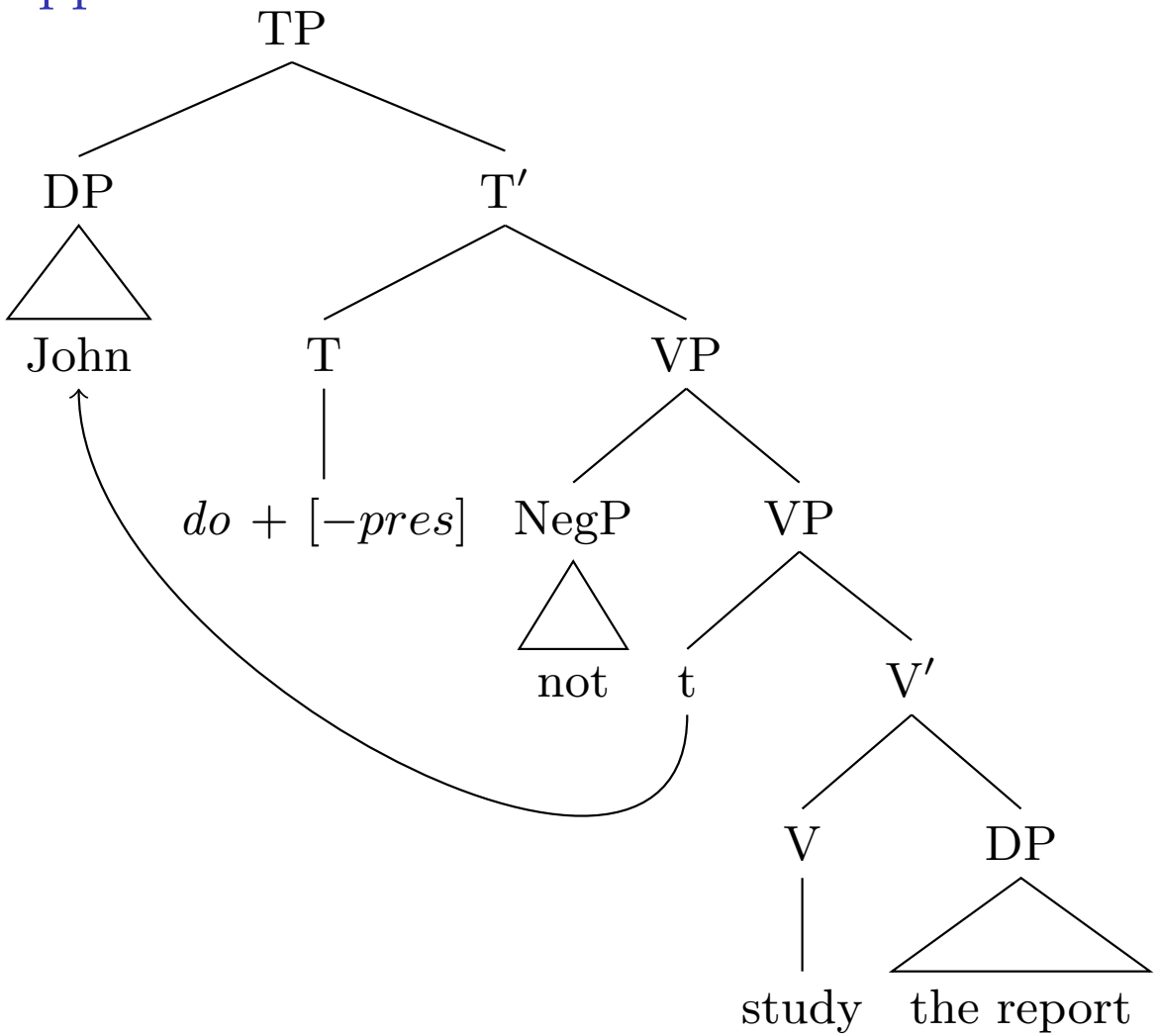
(10) **Negation**

a.*John studied not the report	V to T is not possible
b.*John not studied the report.	T to V is also not possible
c. John <u>did</u> not study the report.	*do*-support
d.*John did/do not studied the report.	

do-support II



do-support III



Do-support: when there is no other option for supporting inflectional affixes, insert the dummy verb *do* into T.

Practice Draw surface trees for the following sentence:

(11) Dylan has been watching movies for hours.

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We saw different ways in which inflectional morphology on T can be supported:

→ The V moves to T

- In English, only aux verbs can undergo this movement
- In some other languages (French), lexical verbs can too

→ T lowers down to V

- e.g. lexical verbs in English

→ *do* is inserted

- e.g. negated sentences in English

Next, we are going to look at another type of head-to-head movement.

T-to-C movement I

→ An operation that moves the material in T to C:

→ Unpronounced complementizers trigger the movement

In English, C [+Q]

→ So we get subject-auxiliary inversion:

(12) a. John should study the report
b. Should John study the report?

→ all auxiliaries do this:

(13) a. Peter is walking → Is Peter walking?
b. Peter has walked → Has Peter walked?
c. Peter will walk → Will Peter walk?

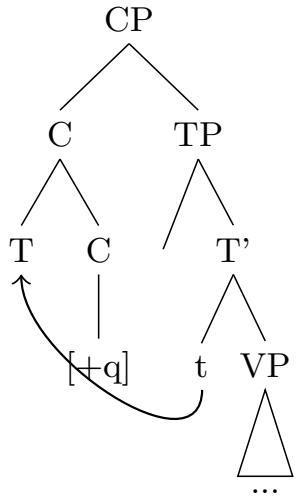
T-to-C movement II

→ More precisely: only the auxiliary in T can precede the subject (head movement targets the closest auxiliary):

(14) Peter should have walked the dog
→ Should Peter have walked the dog?
→ *Have Peter should walked the dog?

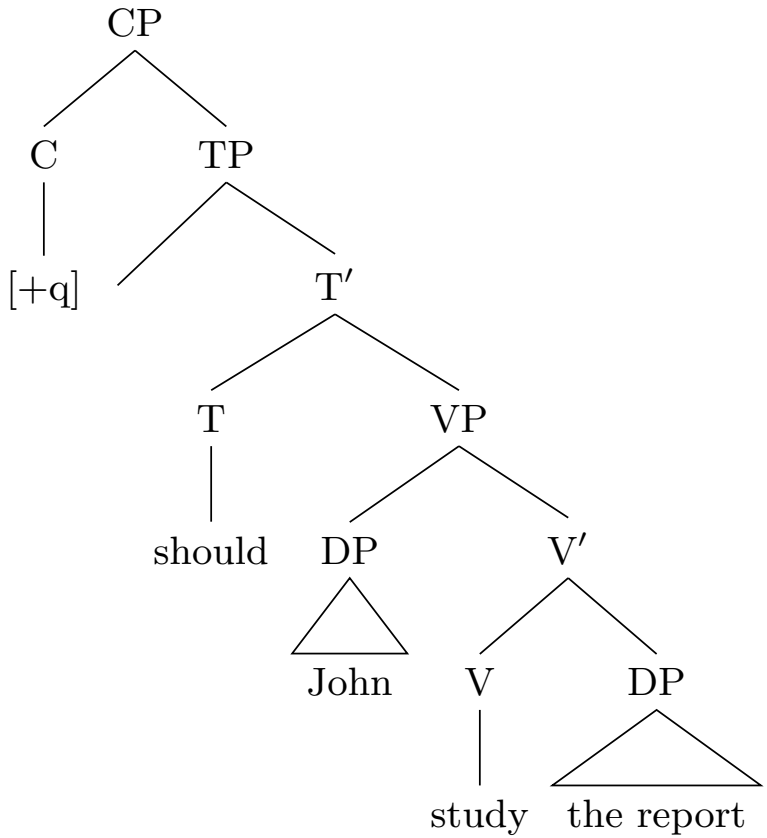
Proposal: The question complementizer C[+*Q*] is an affix which need to be pronounced

→ It triggers movement of T to C.

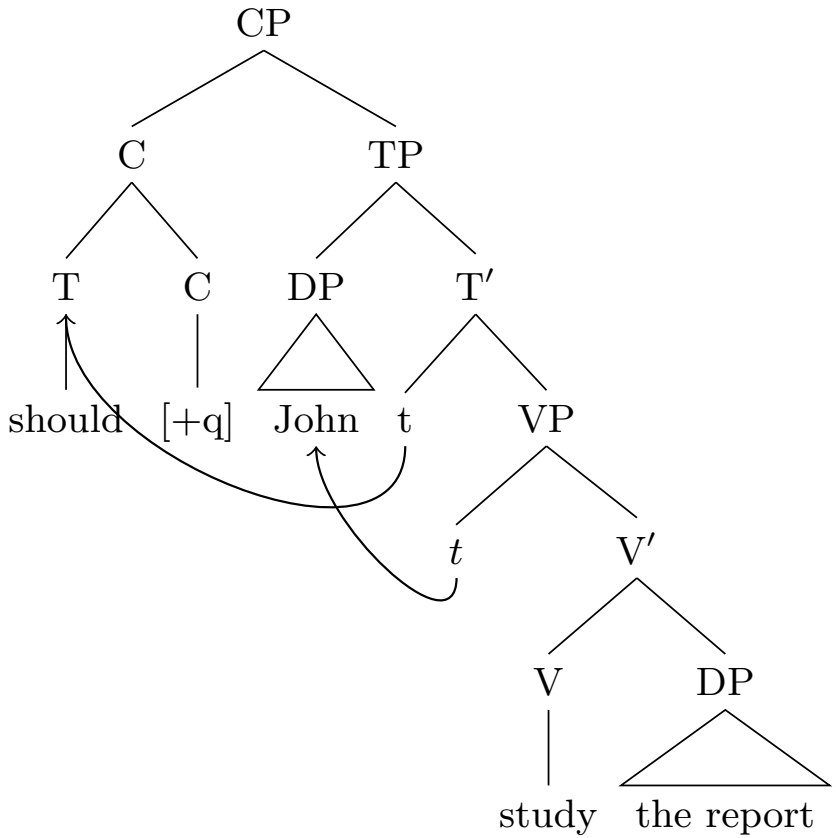


T-to-C movement III

Underlying tree



Surface Tree



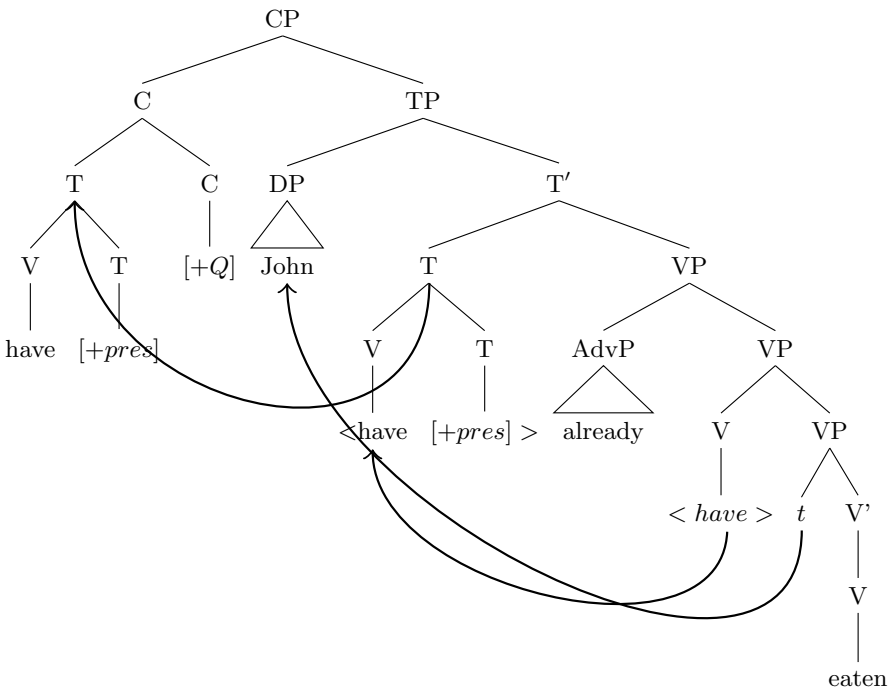
T-to-C movement IV

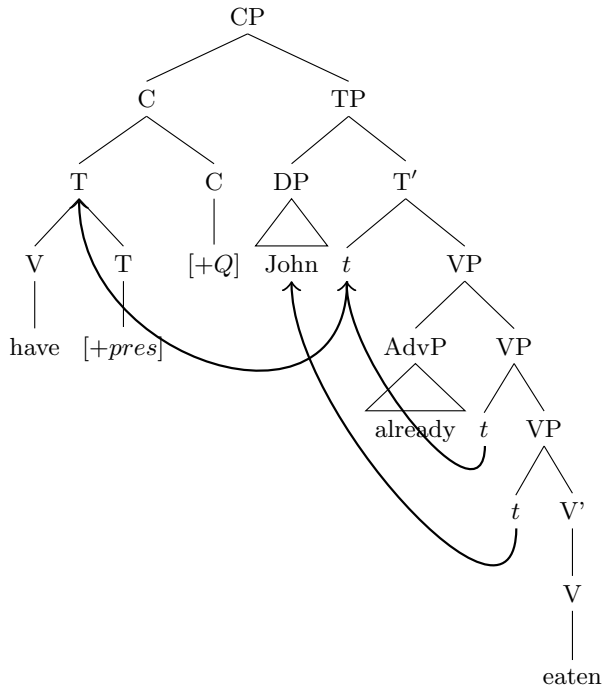
→ Head movement is *local* (intervening heads cannot be skipped)

- V to C does not exist: in order to move what is in V to C, you need a two step movement: (i) V to T and (ii) T to C.

→ Below is an example of a two step movement, given in two different formats

(15) Has John already eaten?





T-to-C movement V

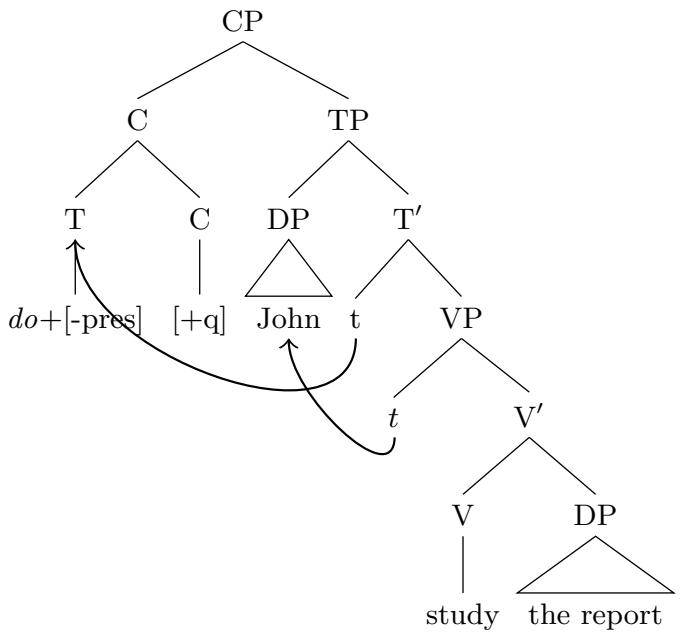
→ What about cases in which what is in T is **not** a free morpheme (a sentence with no auxiliary or modal verb)?

(16) a. John studied the report. — Did John study the report?
b. John knows the anwer. — Does John know the answer?

- In this cases T does not lower to V:

(17) a.*Do John studied the report?
b. Do John knows the answer?

- in these cases we move T to C and then we insert the dummy verb *do*



- The same rule (*do* support) applied in the case of negation. It is a **last resort** rule: it applies only in case that there is nothing else to do.

Summary about Head Movement

→ Head movement is a way of providing bound morphemes with a pronunciation

→ Languages differ on which heads undergo and which heads trigger head movement (French vs. English)

How to proceed (for English)

If you have bound morphemes that need to be pronounced:

1. Is V-to-T possible/justified?
2. If (1) is not an option or the output is still unpronounceable: is T-to-C possible/justified?
3. If (2) is not an option or the output is still unpronounceable: is tense lowering (from T to V) possible?
4. If (3) is not an option or the output is still unpronounceable: *do support*!!
5. If you still have a morpheme that need to be pronounced, go back to step (1).

Practice Draw trees for the following sentences:

(18) a. Will you call your boyfriend?
b. Martha's friend has been studying for hours.
c. Have you always hated cakes?
d. Did Peter tell the truth?
e. Have you not done the homework yet?

Overt question complementizers

Lots of languages have an overt question morpheme (sometimes called 'marker'), which adds plausibility to our assumption that English has a question morpheme in C that is just null. Japanese 'ka' below is an example of an overt question C.

(19) Akira-ga hon-oo kaimasita ka
Akira-TOP book-ACC bought Q
'Did Akira buy the book?'

Draw a tree structure for (19). Assume VPISH and V to T movement.

VSO order: the case of Irish I

9 percent of the world's languages is VSO. Irish is one of them.

(20) Phóg Máire an lucharachán.
Kissed Mary the leprechaun
"Mary kissed the leprechaun"

X-bar theory cannot generate a sentence of this type.

This is how we are going to derive the Irish order.

(i) We are going to assume that VSO languages are underlyingly SVO (at D-structure);

(ii) The verb moves to T;

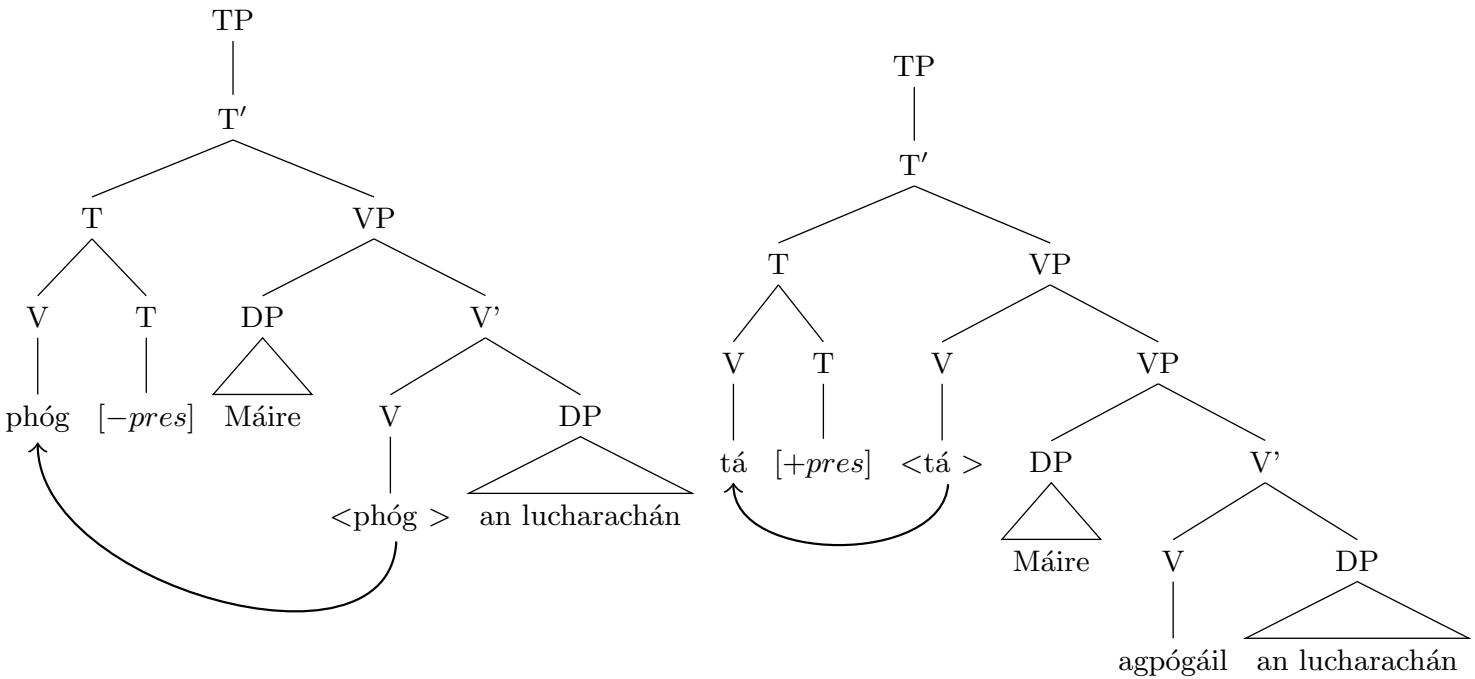
(iii) The subject stays in the VP.

Lexical verbs do not move to T when there is an auxiliary verb. In this case the underlying SVO order is visible.

VSO order: the case of Irish II

(21) Tá Máire ag-pógáil an lucharachán.
Is Mary ing-kiss the leprechaun
Aux [**S** **V** **O**]
"Mary is kissing the leprechaun"

Here are the derivations for (20) and (21):



VSO order: the case of Irish III

Draw a tree for the following Irish sentence:

(22) Chonaic Séamus an cailín ar bharr an chnoic.
saw James the girl on top of hill
'James saw the girl on top of the hill'