Ling 120B: Syntax I

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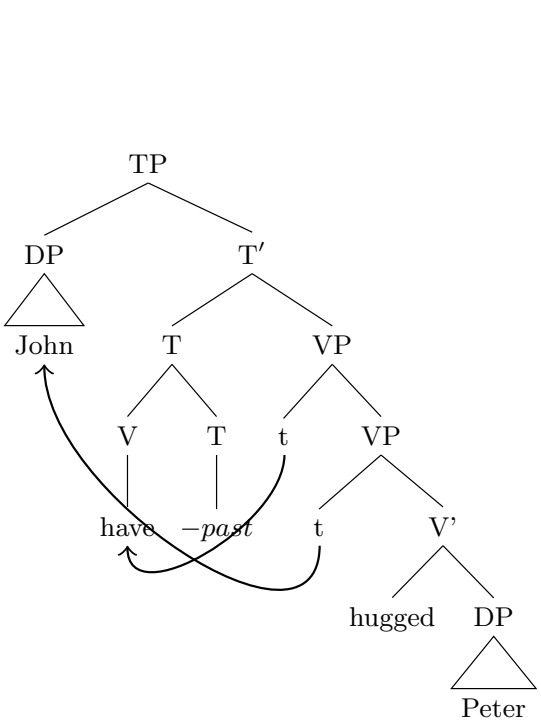
Head Movement

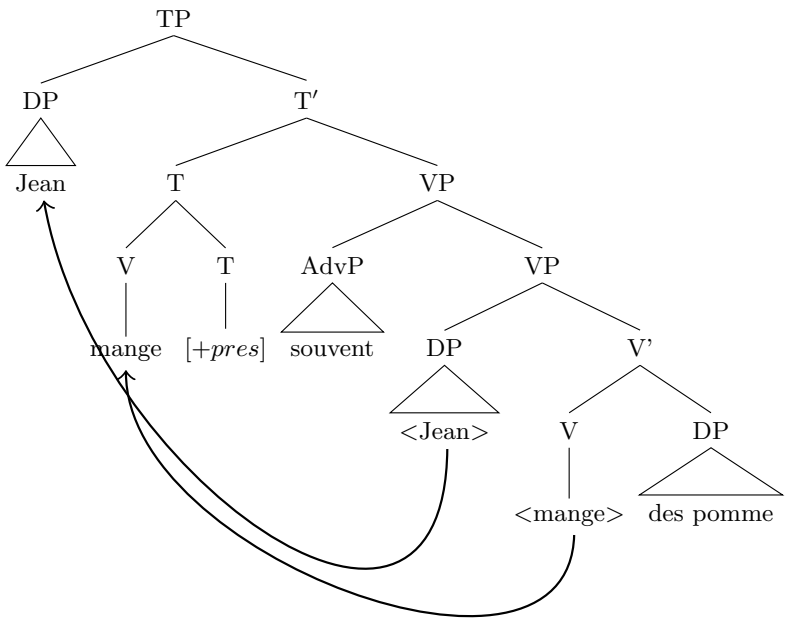
Fixing bound T heads I

Last week, we saw different ways in which inflectional morphology on T can be supported:

(1) The V moves to T

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

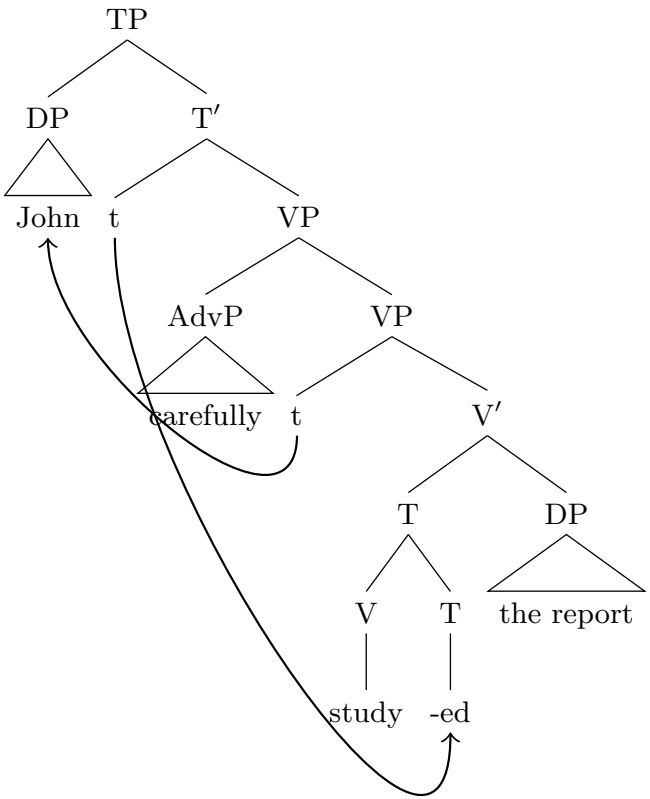




Fixing bound T heads II

(2) T lowers down to V

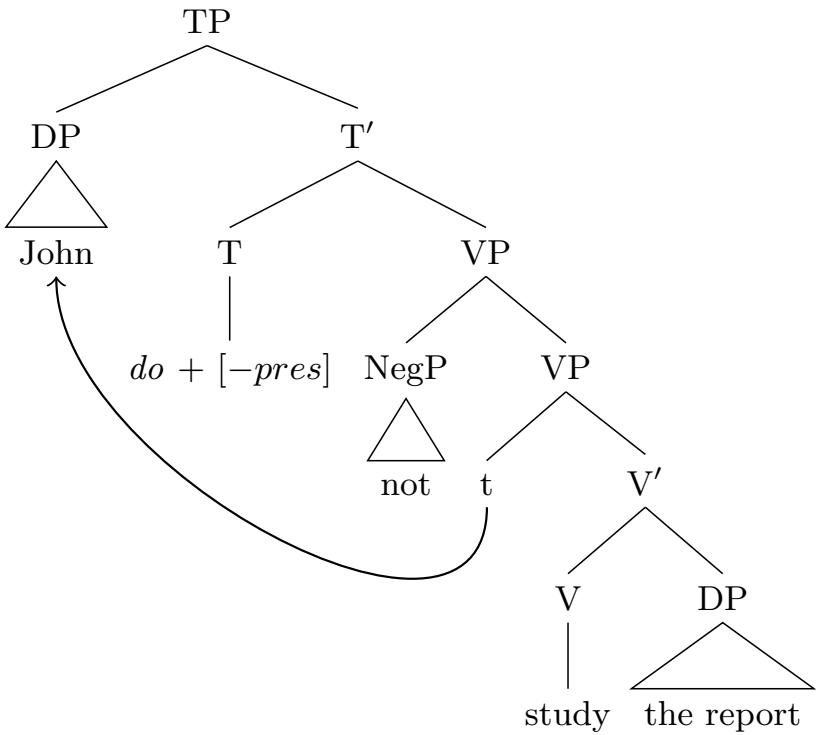
- e.g. lexical verbs in English



Fixing bound T heads III

(3) *do* is inserted

- e.g. negated sentences in English



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:

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

→ all auxiliaries do this:

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

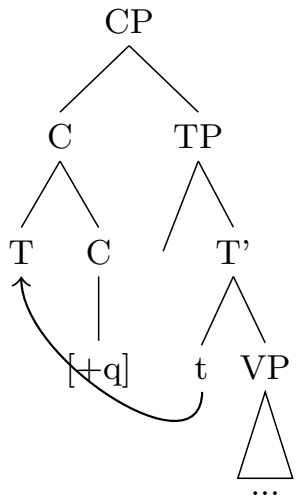
T-to-C movement II

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

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

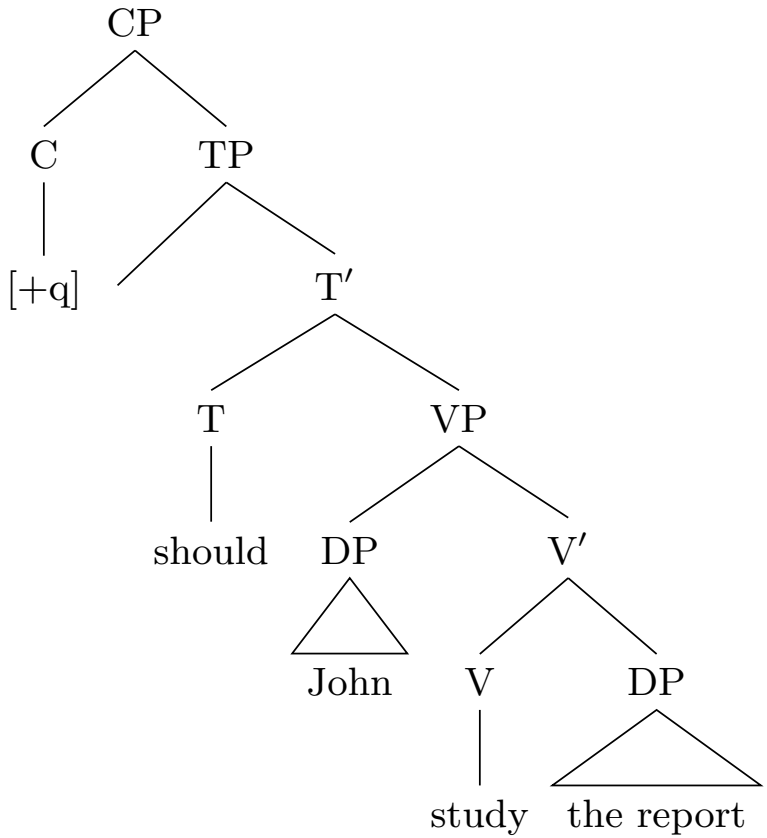
Proposal: The question complementizer C[+*Q*] is an affix which need to be pronounced

→ It triggers movement of T to C.

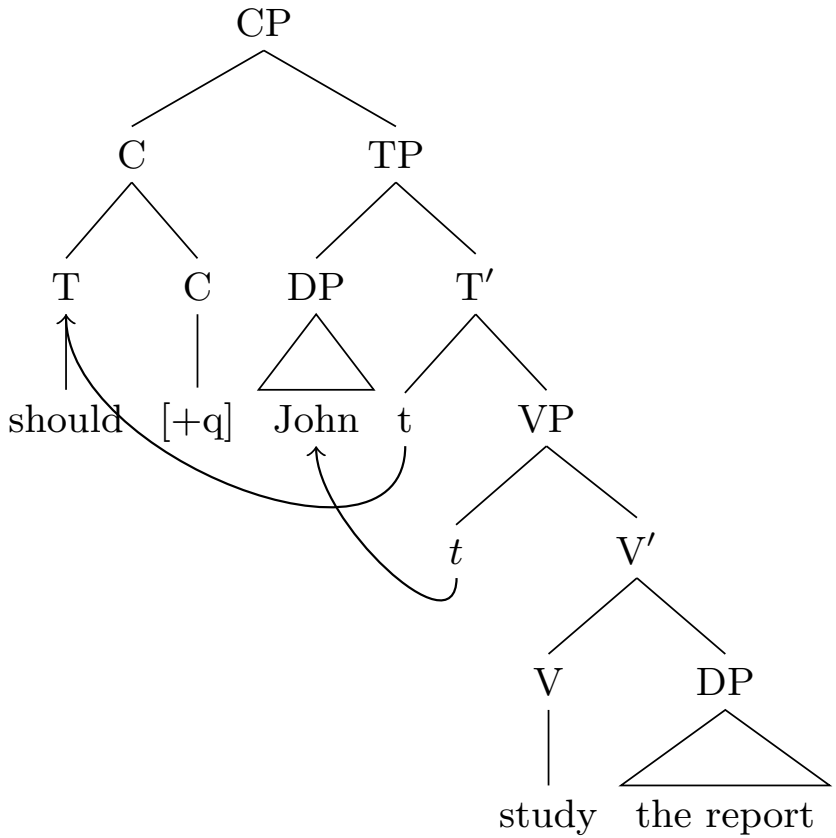


T-to-C movement III

Underlying tree



Surface Tree



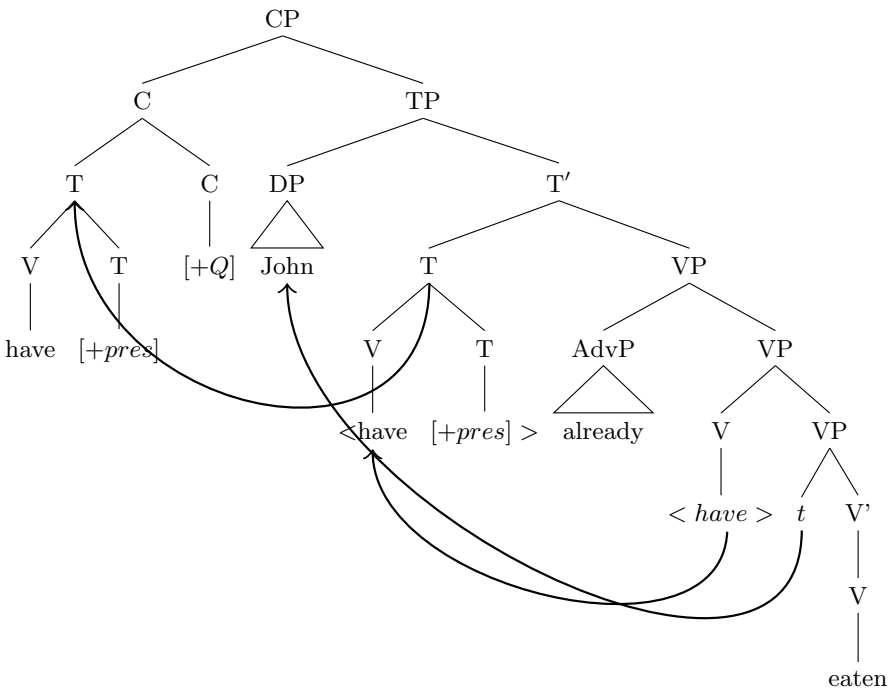
T-to-C movement IV

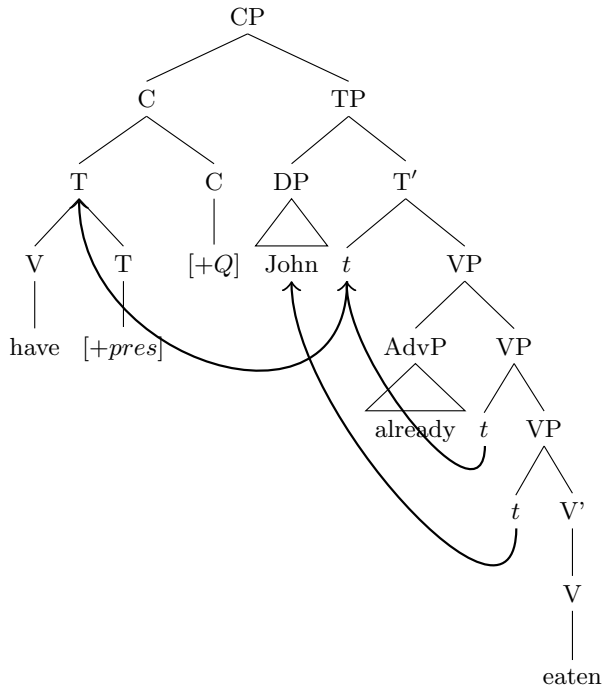
→ Head movement is *local* (intervening heads cannot be skipped)

- 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

(4) Has John already eaten?





T-to-C movement V

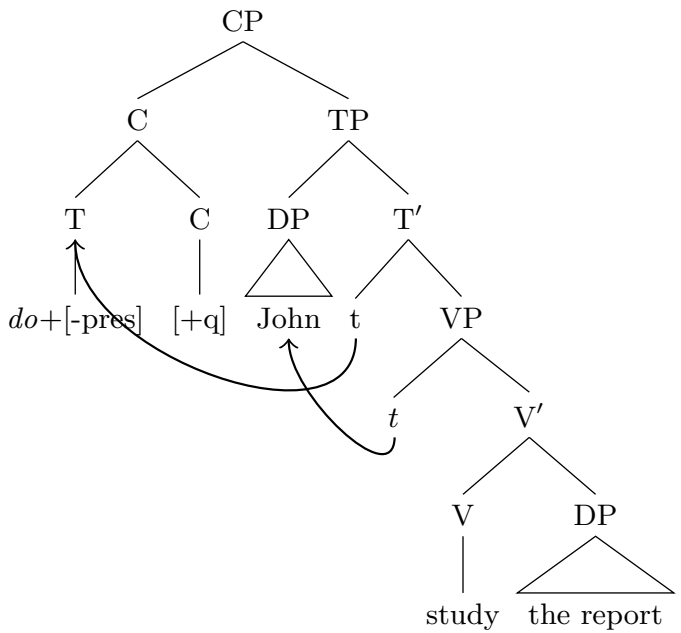
→ What about cases in which what is in T is **not** a free morpheme (a sentence with no auxiliary or modal verb)?

(5) 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:

(6) 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 I

Draw trees for the following sentence:

(7) Has Dan been reading Peter's personal notes for months?

Scandinavian I

Pay attention to the difference between Icelandic and Swedish below:

(8) Icelandic

a. adh strákurinn keypti ekki hjól
that the boy bought not a bike
'that the boy didn't buy a bike'

b.*adh strákurinn ekki keypti hjól

(9) Swedish

a. att pojken inte köpte en cykel
that the boy not bought a bike
'that the boy didn't buy a bike'

b.*att pojken köpte inte en cykel

Scandinavian II

Compare the paradigms of the verb ‘buy’ in the past indicative in Icelandic and Swedish:

Icelandic	1	2	3
SG	keyp-t-i	keyp-t-ir	keyp-t-i
PL	keyp-t-um	keyp-t-udh	keyp-t-u

Swedish	1	2	3
SG	köp-te	köp-te	köp-te
PL	köp-te	köp-te	köp-te

VSO order: the case of Irish I

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

(10) 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;

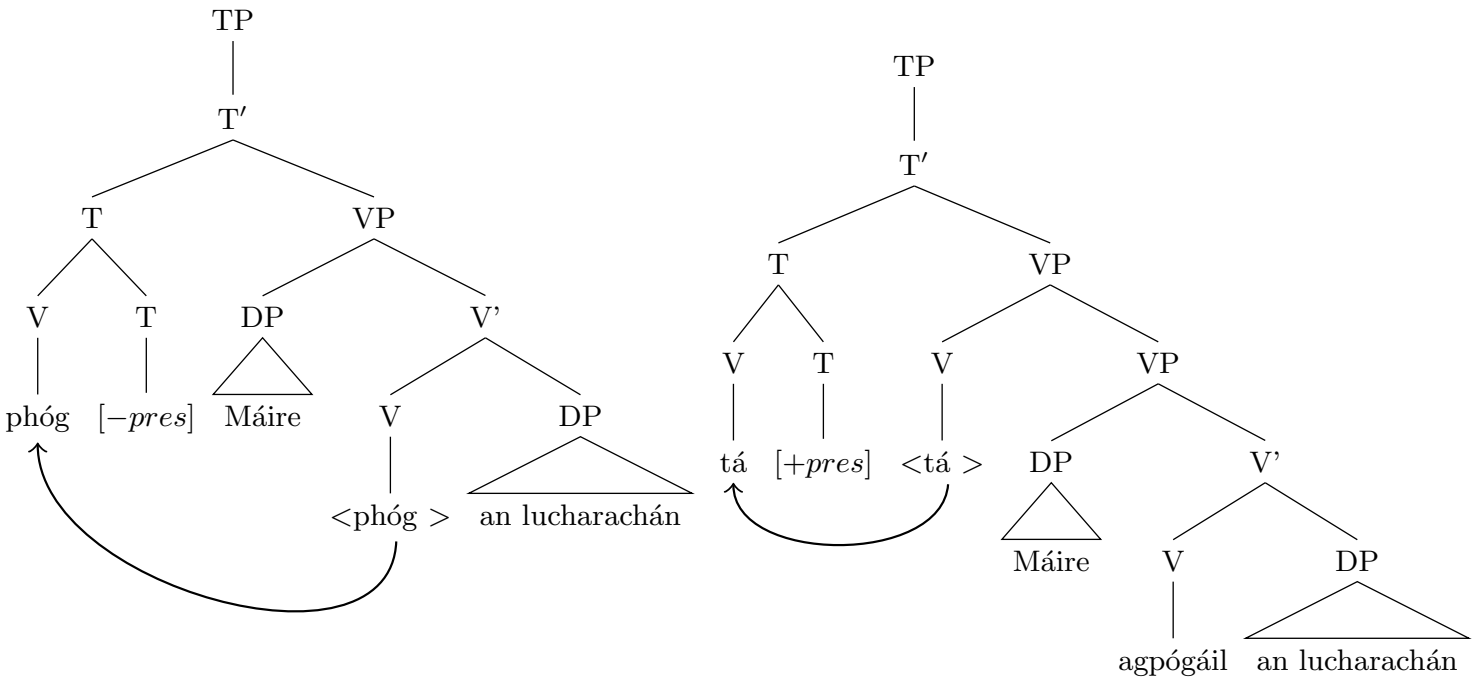
(iii) The subject stays in the VP.

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

(11) 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 (10) and (11):



VSO order: the case of Irish III

Draw a tree for the following Irish sentence:

(12) 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'

Let's fill up the following table:

Language	H-final or H-initial?	Spec-final or Spec-initial?	Do lexical verbs move to T?	Does the subject move to spec, TP?
English				
French				
Irish				
Middle English				

Middle English data - from 1150 to 1500

(13) a. for þe Britons destroide alwai þe cristen peple þat seynt Austyne hade baptisede
'for the Britons always killed the Christians that St. Austin had baptized'

b. he weneth alwey that he may do thyng that he may nat do
'he always thinks that he can do things that he can't do'

c. for þey synneden neuere
'for they never sinned'

d. but he wythdrowe not hir temptacyon
'but he did not withdraw her temptation'

e. but Balyn dyed not tyl the mydnyghte after
'but Balyn did not die till the midnight after'

Present indicative of *hêre(n)*, 'hear' (Mossé 1968):

Middle English	1	2	3
SG	hêr-e	hêr-(e)st	hêr-eth
PL	hêr-eth	hêr-eth	hêr-eth

Wh-movement

Phrasal Movement

Phrasal Movement: move a phrase to a empty specifier position.

It's a feature driven movement.

→ Subject raising: finite T has a EPP feature which is satisfied when the syntax provides a subject for T.

will T[+tense] epp: DP_{nom}/CP c-selects VP

→ Wh-movement is another type of phrasal movement.

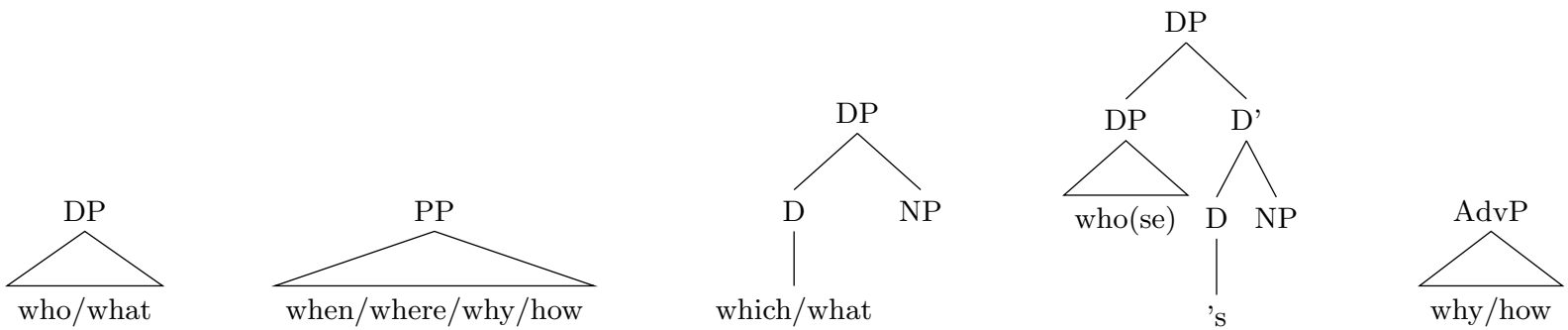
C also has a sort of EPP feature. It requires a [+wh] phrase in its specifier. We will call this feature [+wh].

Wh-movement I

(14) a. John ate a cookie
b. what did John eat ?

→ What kind of phrases does wh-movement move in English? Phrases that contain *wh*-words. They can be arguments or adjuncts.

who, what, which, whose, where, when. why, how...



→ How do we know that there is movement?

- Empirical facts: relation between base position and wh-word

Wh-movement II

- Wh-words sometimes stays in their base position

(15) a. Peter bought the car in Chicago.
b. Where did Peter buy the car _?
c. What did Peter buy _ in Chicago?
d. Where did Peter buy what _?

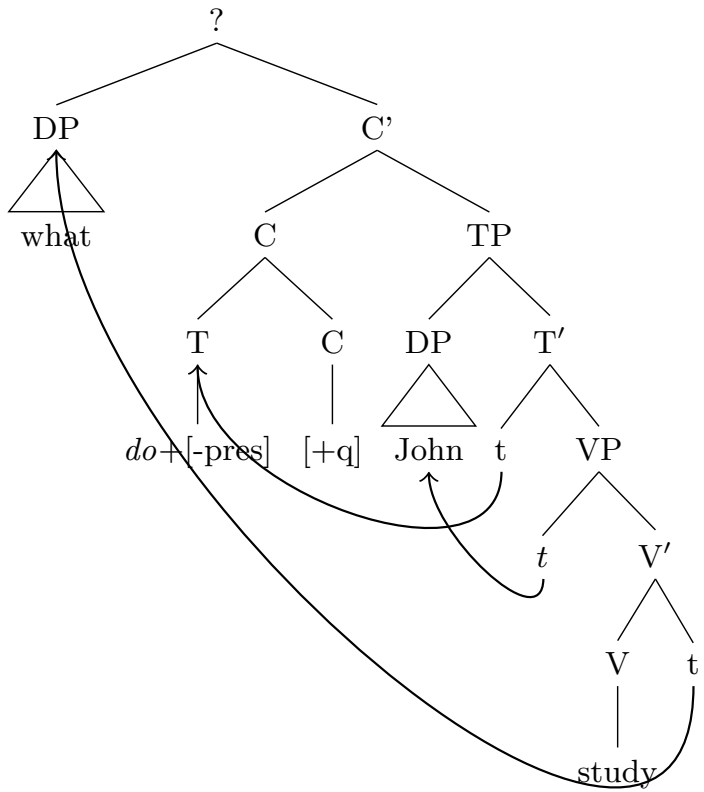
- Wh-movement is not a universal property: in many languages wh-words do not have to move to the beginning of the sentence and appear in their base position.

(16) Pita-ga nani-o tabeta-ka.
Peter-NOM what-ACC ate-C[+q]
'What did Peter eat?' Japanese

Wh-movement III

→ Where do wh-phrases move to in wh-questions?

- We know that they raise past C since they are found to the left of a T that has raised to C:



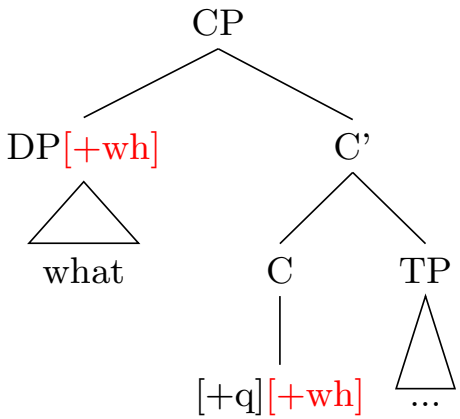
Wh-movement IV

- A natural conclusion is to assume that they raise to the specifier of CP. Why can't they be CP adjuncts?

  (i) It seems that only one wh-phrase can move to that position (at least in English):

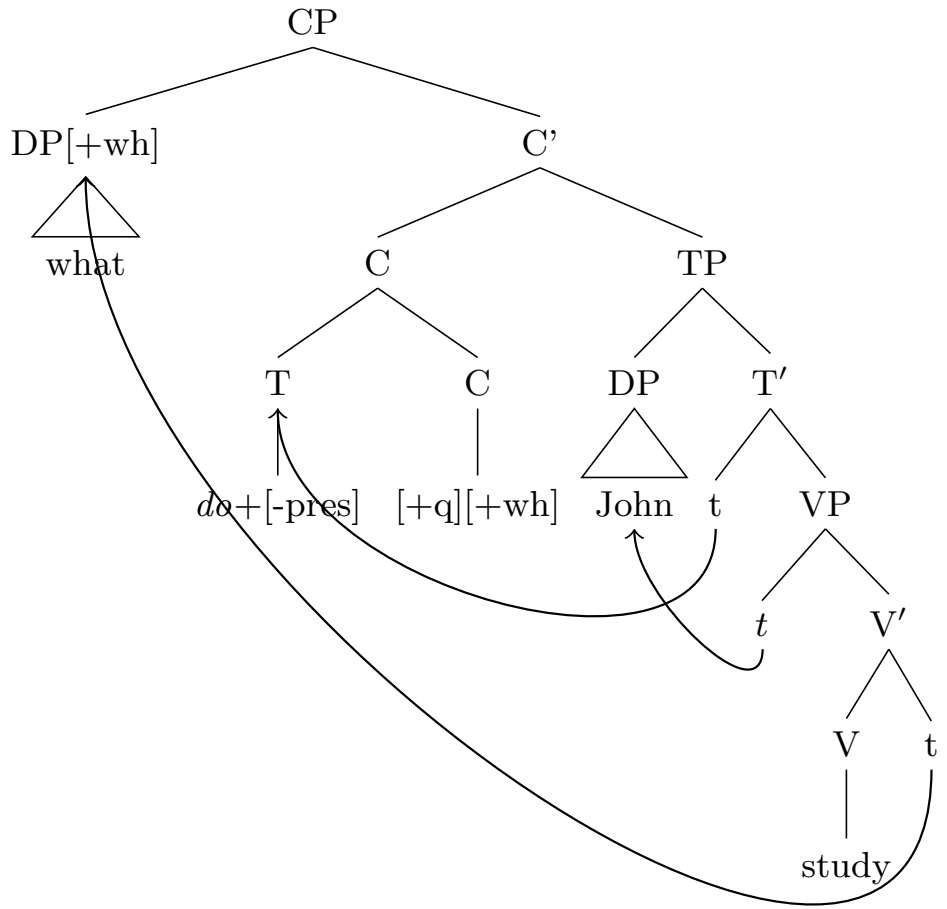
  (17) a. Who bought what?
  b.*Who what bought?

  (ii) Analogy with other feature driven movements: agreement (or feature checking) between the head and its subject (or specifier). **The feature that triggers wh-movement is [+wh].** [**NB**: This is different from what ISAT does: it only uses [+q]]



Wh-movement V

This would be the final tree for *What did John study?*:



Wh-movement VI

Two features, four possibilities:

[-Q -wh]	ex. John thinks that the moon is made of cheese
[+Q -wh]	ex. Did+∅ John read the report?
[+Q +wh]	ex. What Did+∅ John read?
[-Q +wh]	ex. I wonder what ∅ John read.

Wh-movement VII

Crosslinguistic Evidence

In some languages, there are special forms of complementizers that represents these features. Irish is such a language, in Irish you get

→ the *go* complementizer in declarative sentences;
→ the *an* complementizer in yes/no questions;
→ the a^L complementizer in wh-questions

(18) Measann sibh **go** bhfuil an oechair insa doras
think you.PL that is the key in.the door
"You think that the key is in the door' (McCloskey 1979)

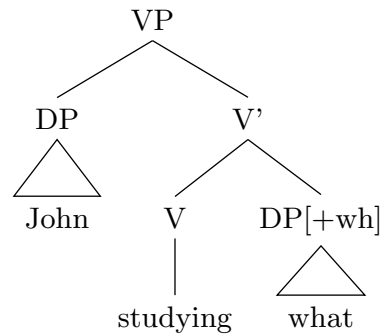
(19) **An** bhfaca tú an madra?
Q See.PAST you the dog
"Did you see the dog?" (Carnie 2006)

(20) Cad **a**^{L} tá sa seomra?
What C-*wh* is in the room
"What is the room?" (Carnie 2006)

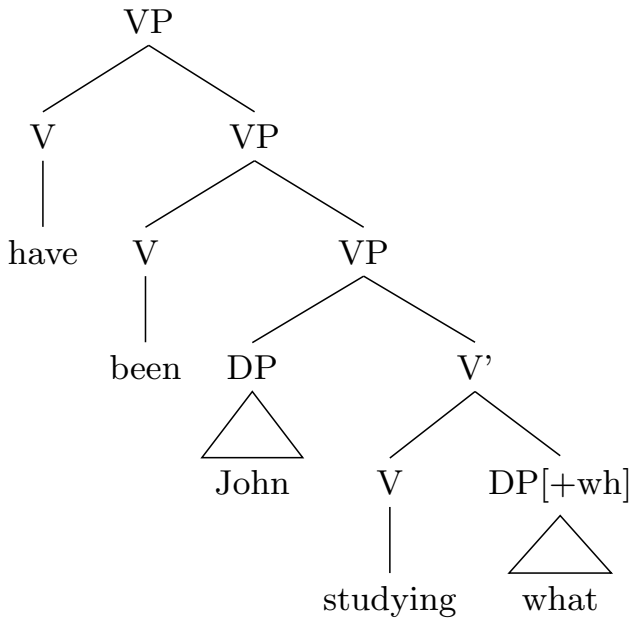
Wh-movement VIII

Here is a bottom-up step-by-step derivation of the sentence *What has John been studying?*

Step 1 The VP headed by the lexical verb:

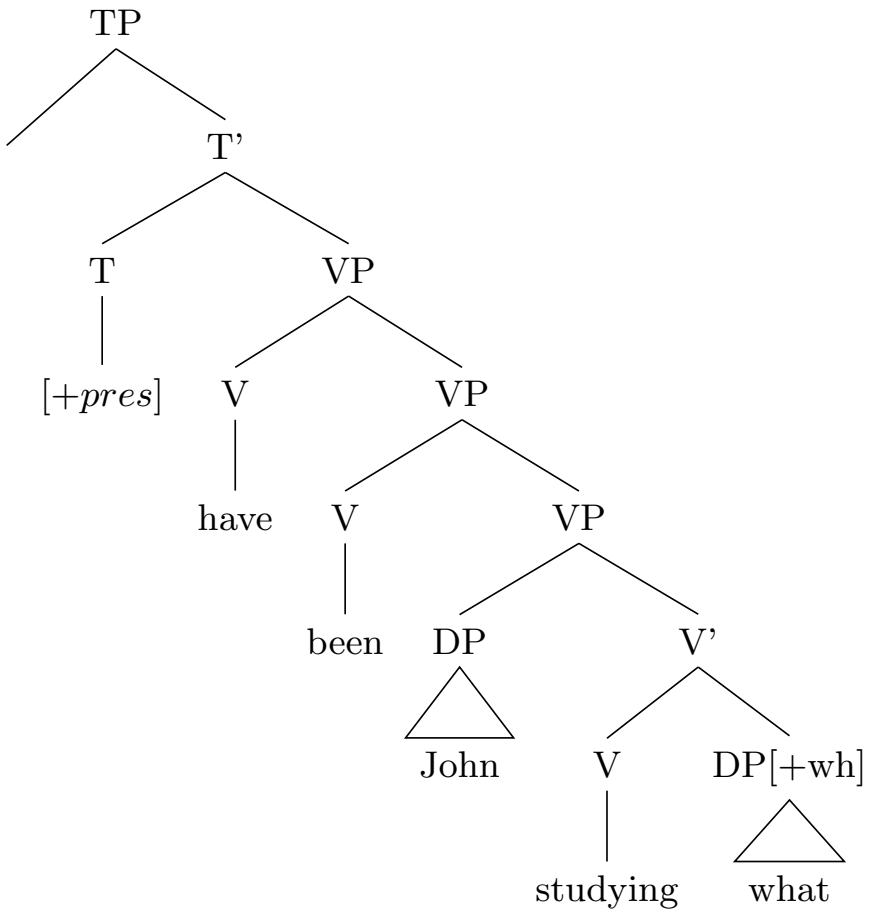


Step 2 Higher VPs headed by auxiliary verbs (No external arguments!)

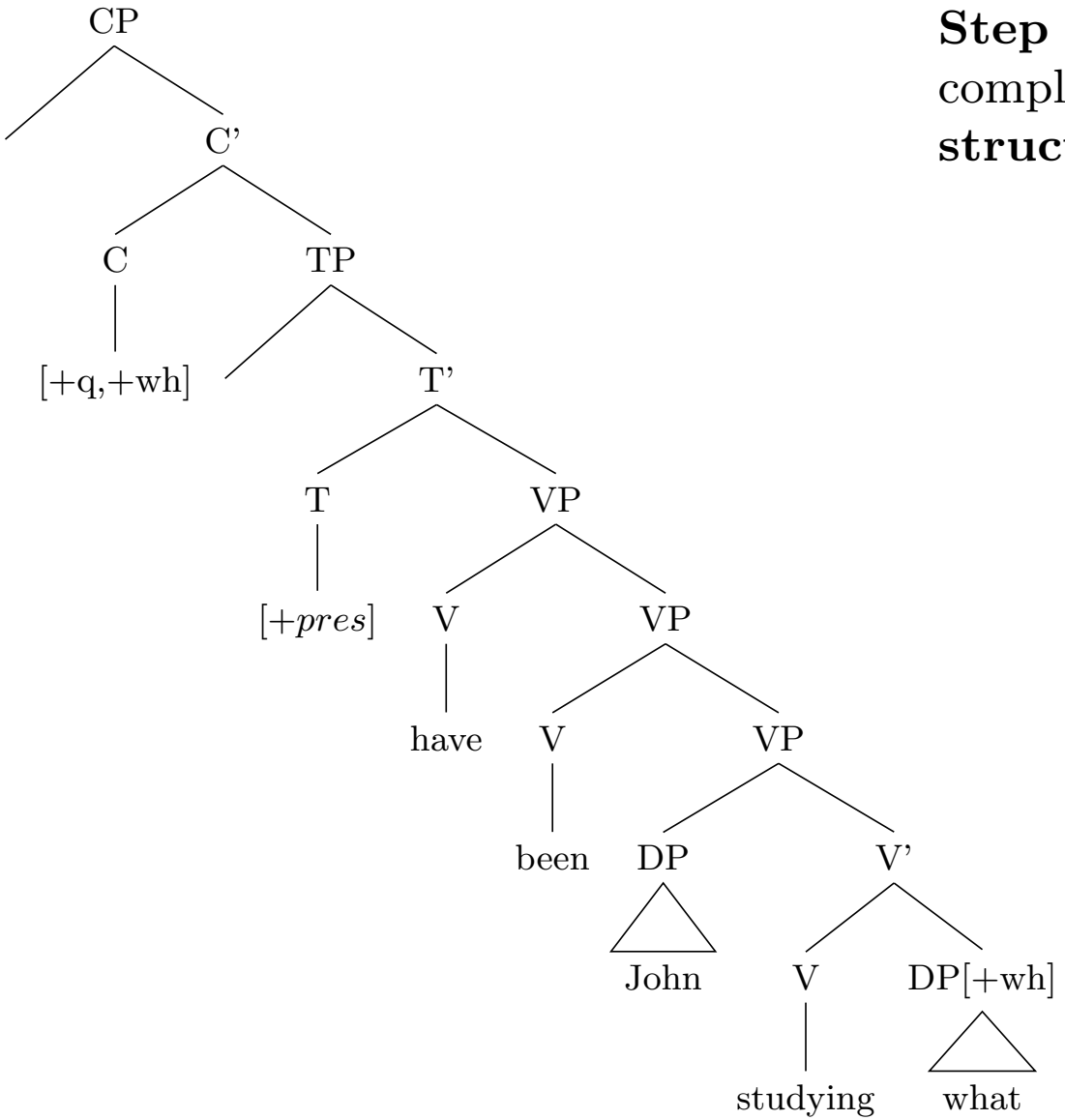


Wh-movement IX

Step 3 The TP:

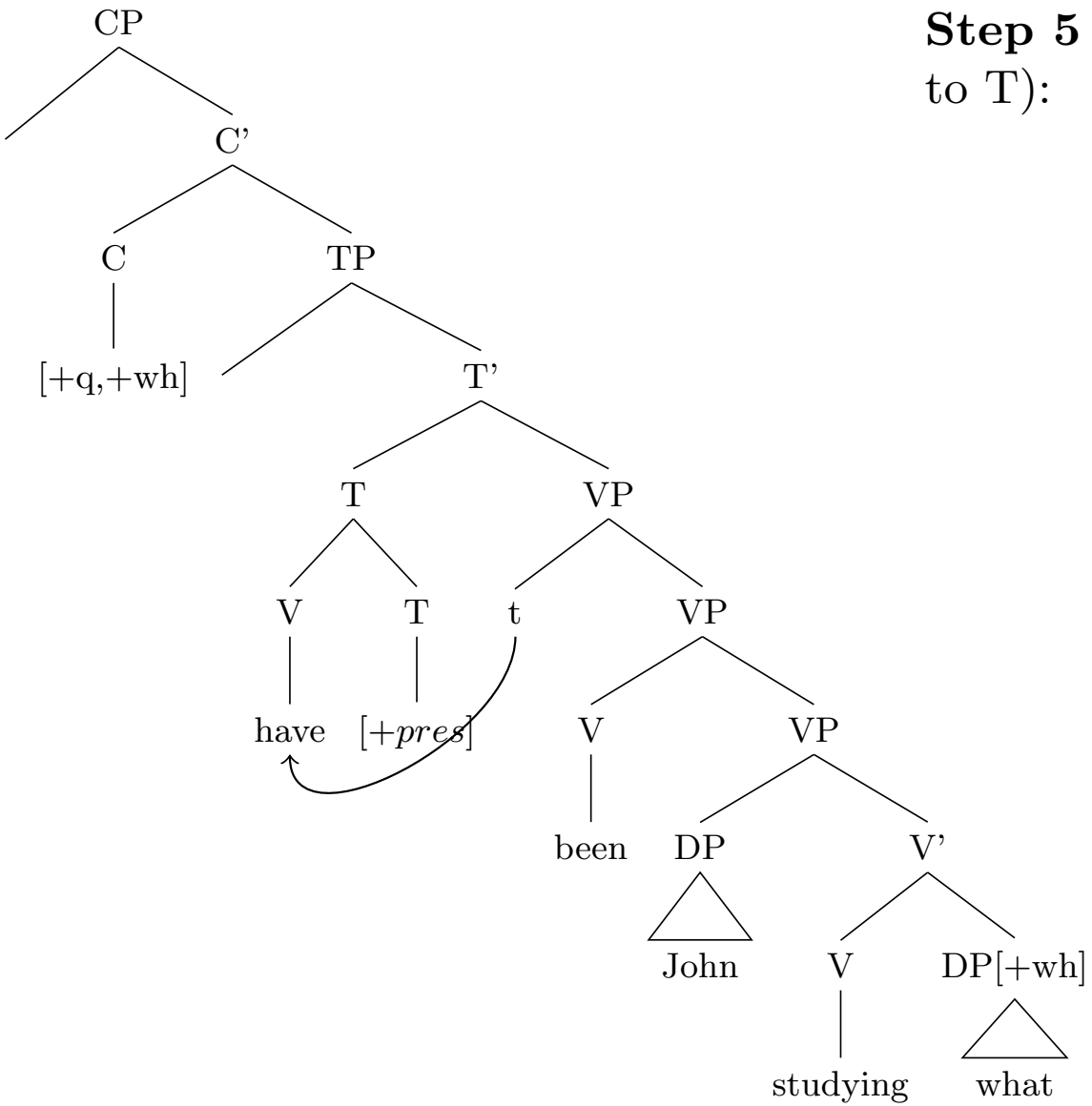


Wh-movement X



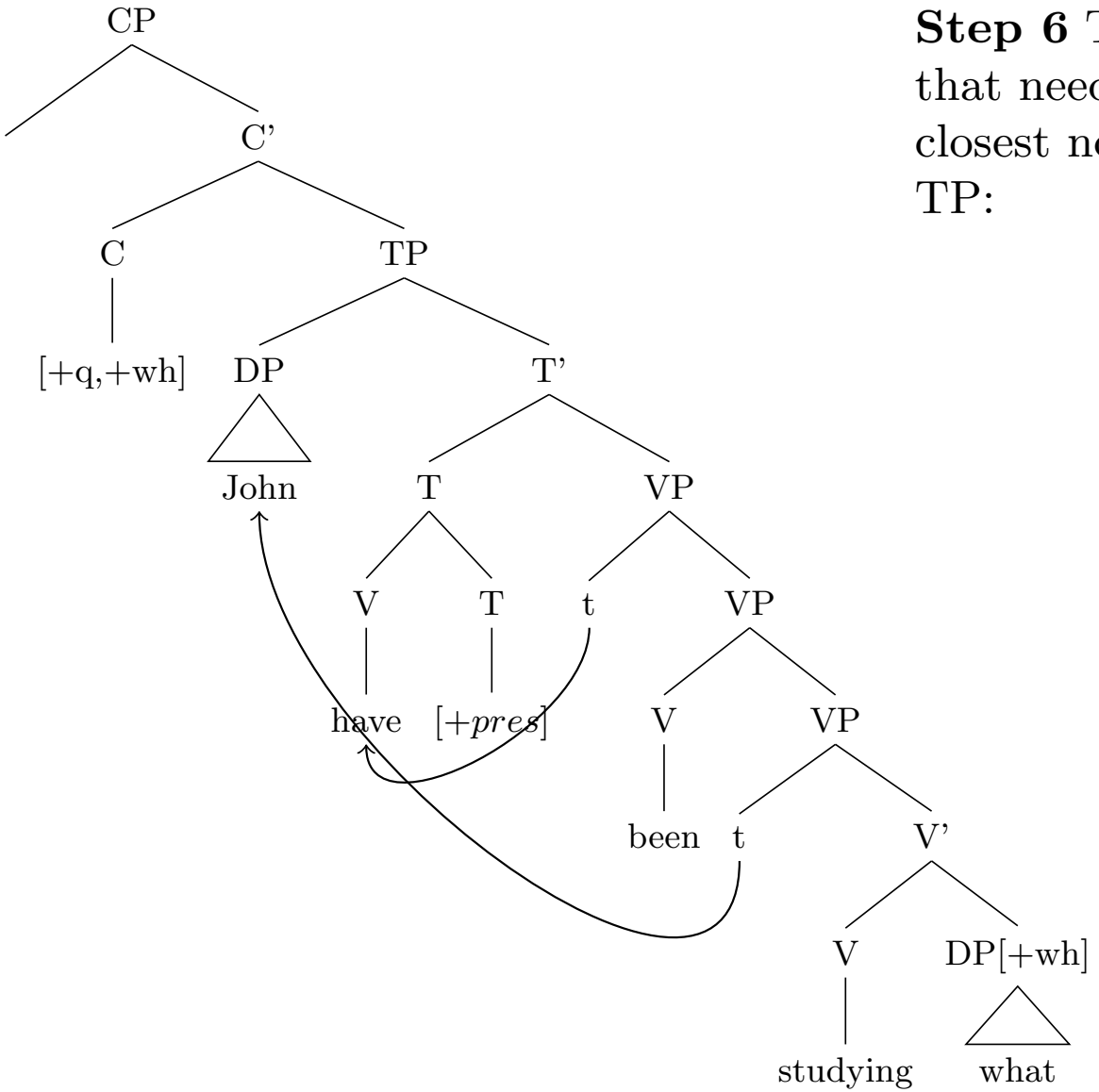
Step 4 Now we can merge the [+q,+wh] complementizer and get our **deep structure tree**:

Wh-movement XI



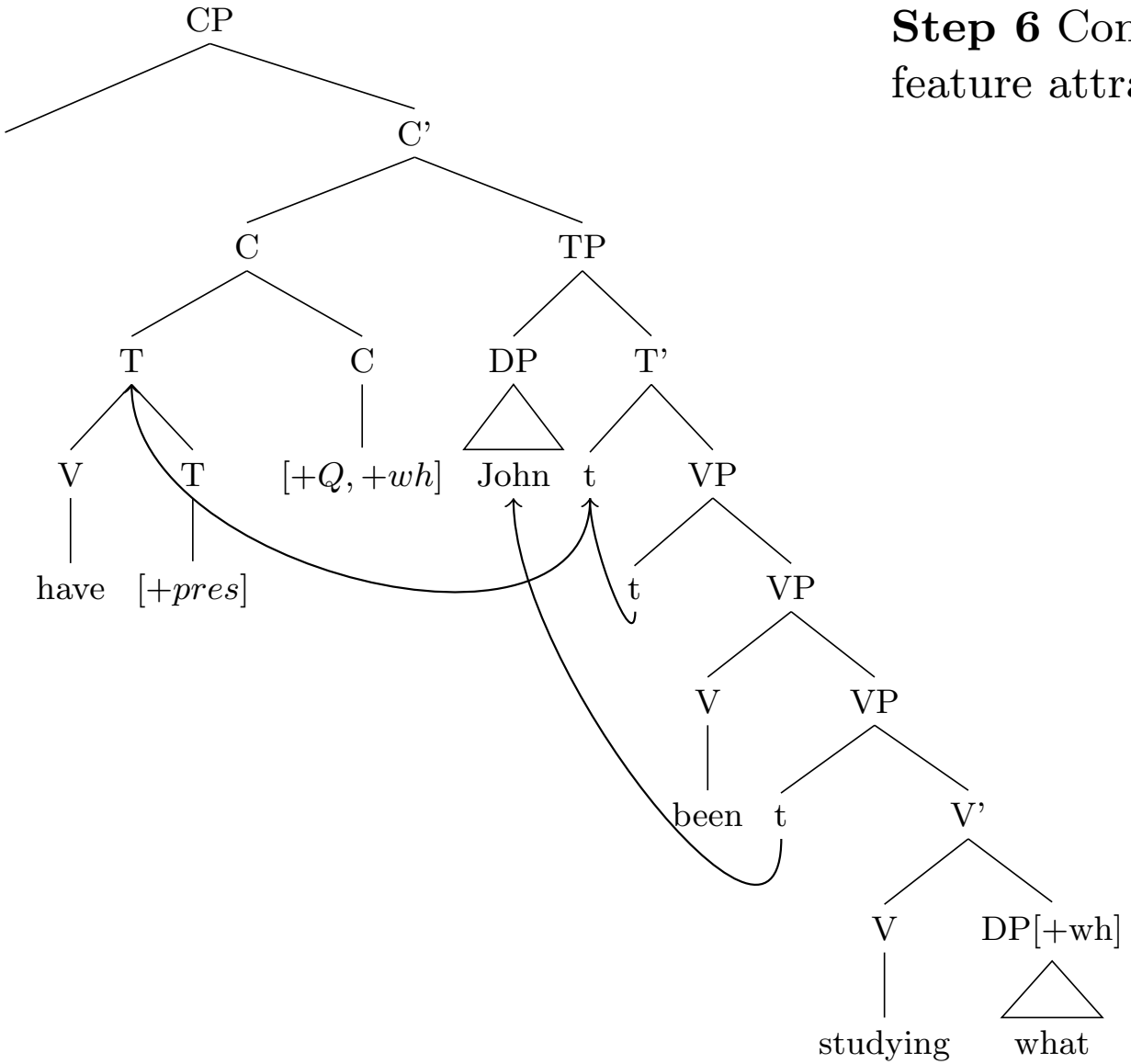
Step 5 The auxiliary can move to T (V to T):

Wh-movement XII



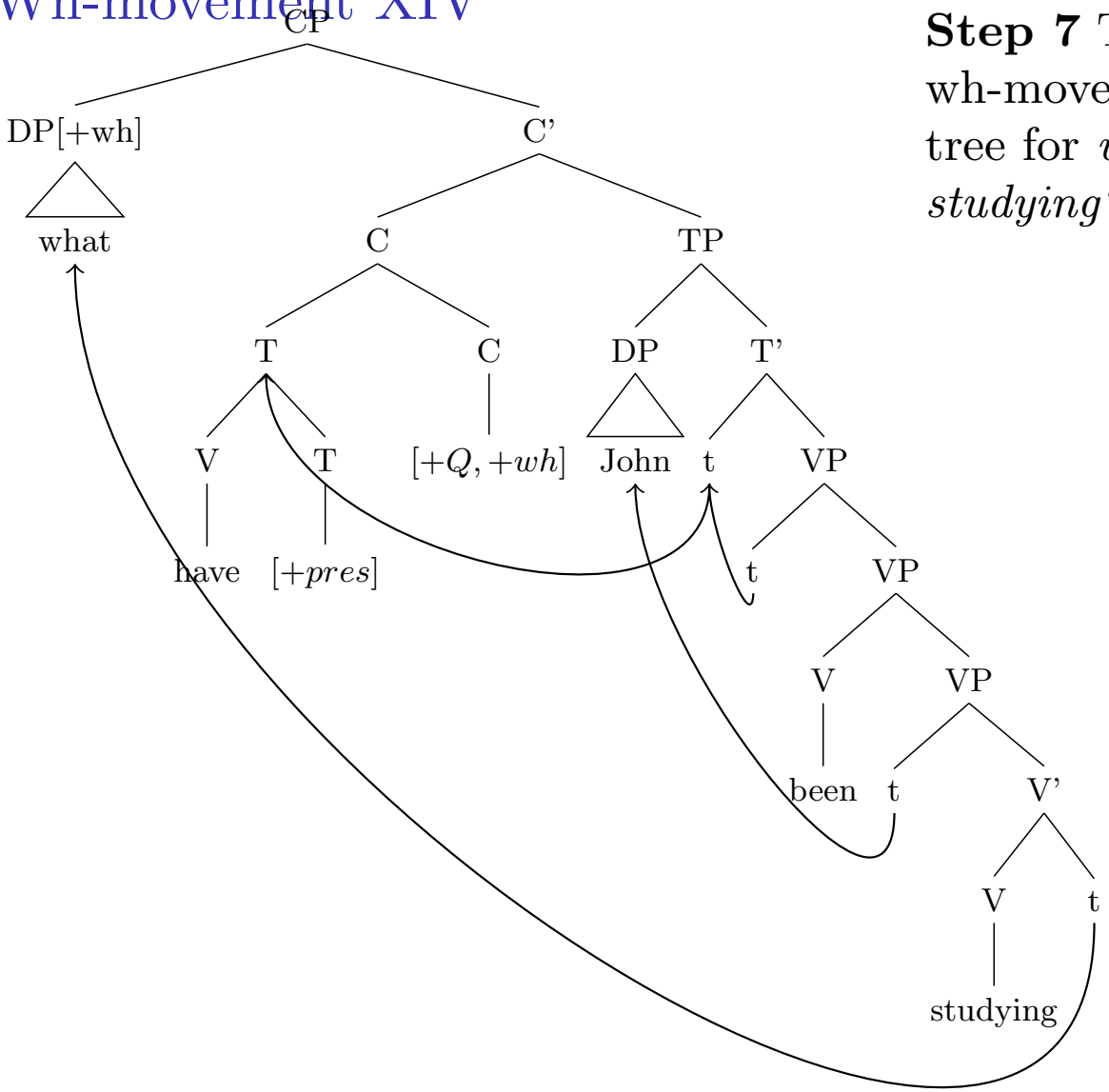
Step 6 The finite T has an EPP feature that needs to be satisfied. We move the closest nominative DP to Spec, TP:

Wh-movement XIII



Step 6 Complementizers with the [+q] feature attract what is in T:

Wh-movement XIV



Step 7 The feature [+wh] triggers wh-movement. This gives us the surface tree for *what has John been studying?*

Practice: Tree drawing

(21) Which book have you been talking about?

(22) What does Ron think that Peter should do?

(23) How did John address this issue?

(24) When will Mary call her brother?

(25) Which book did you give to Mary?

(26) Who did you give Ronny's book to?