

Chapter 5: Head Movement

* Head Movement → The Auxiliary Movement which is in reality we deal with (Yes/No Questions).

and we look into 2 forms of English:-

1) Modern standard English (MSE) → Today's English.

2) Early Modern English (EME) → Shakespeare's style

↳ Ex: like saying → Saw you the king? → verb move
Did you see the king?

Did you see the king? → Aux Move

↓ I can speak English → sentence by itself / independence sentence
IF/That (Complementizer)

→ In the English we can form phrases with 2 basic operations:-

1) Merging 2) Movement

The Complementizer → the only category that has the ability to occupy position before independence phrase in the English language.

Page 66: 1) If you will marry me?

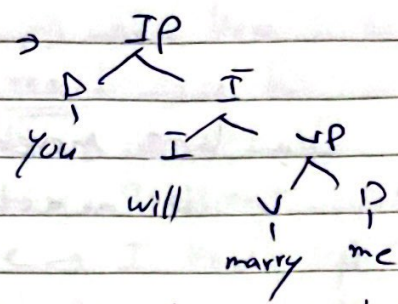
↳ will you marry me?

↳ he changes the complementizer phrase (IF) into Yes/No question (Interrogative Question).

* The complementizer represent strong category as he represent strong category → it has power to drag out weaker category from their position.
the auxiliary → is weak category.

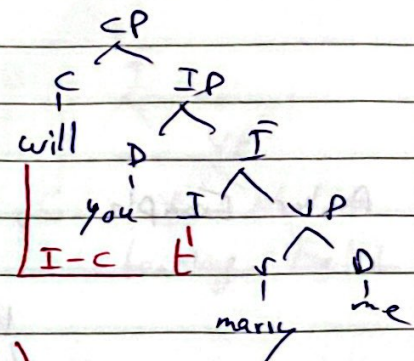
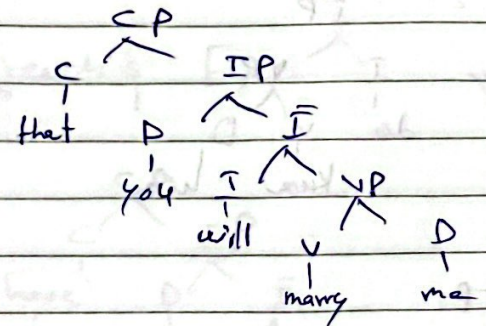
→ The position before independence phrase → can be filled by either an actual complementizer or by an auxiliary but not the 2 at the same time → EX: if will / that will (will if X because this position can be occupied by one and only one category).

1) You will marry me →



* then we have auxiliary movement → complementizer phrase
if you will marry me or that you will marry me

→ the auxiliary will moved out from its position (will you marry me)
So the (I) moves out from position and this position is reserved
will for a complementizer, even when we move (will) →
still the position is complementizer because the strong keeps power



* trace → copy

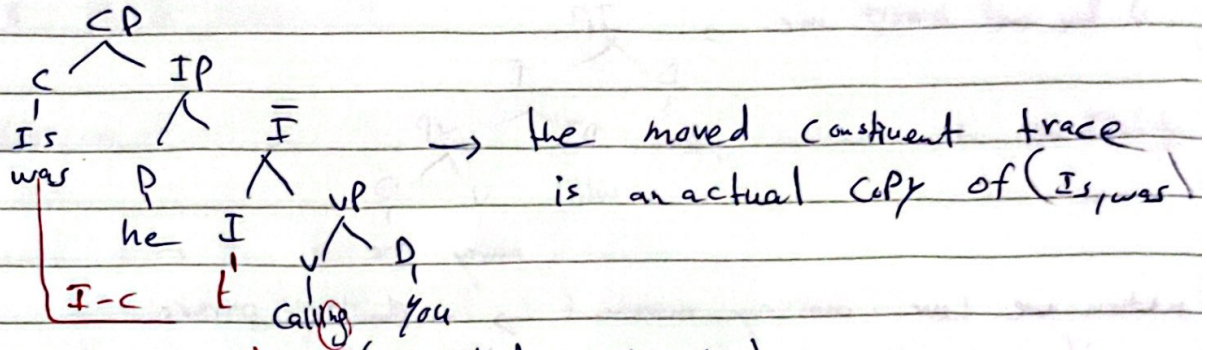
→ moving from I to C → called (I-C movement) this movement
is known (Head to Head movement) → because (I) is a
head and (C) is a head → they kept the same position
So (I) occupies I position within IP → becomes / occupies (C) position
within CP

* Trace Theory → moved constituents leave behind the trace
and that trace is actually a copy of them.

When we have head movement → the head moves from lower
position into higher position.

→ whether we use IF/will depends on structure dependence.
according to trace theory → a moved auxiliary (any moved constituents)
leaves behind the trace (the) is a copy of the moved constituent.

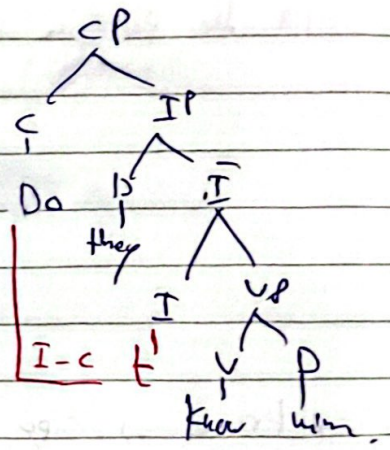
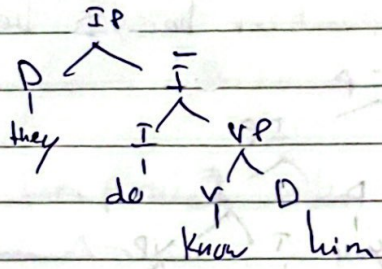
Ex:



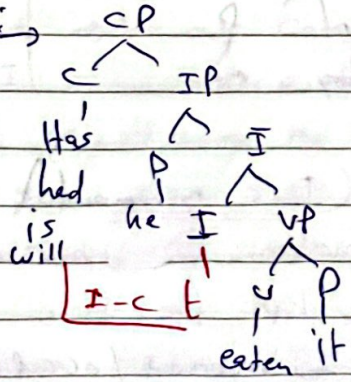
ad(cover) (preceded by verbs to be)

page 109:7) They ^I know him

do know him → the moved auxiliary



Another Example →



Page 110: Last resort principle: As long as I have an auxiliary in the sentence, there is no need for me to resort (go back to) to any thing, when you have an auxiliary → no need to resort

Ex: 1) I am teaching English
verb

2) I have been teaching English
verb

3) He has taught English.
verb

* Last resort principle → when there's no other way to have an auxiliary, then I resort → so this is the last thing that I do and the last resort → is actually the extraction of (Verb to do) when forming questions. when I don't have any auxiliary in the sentence like → I know him → in this sentence I actually resort to the last principle which is extracting (do).

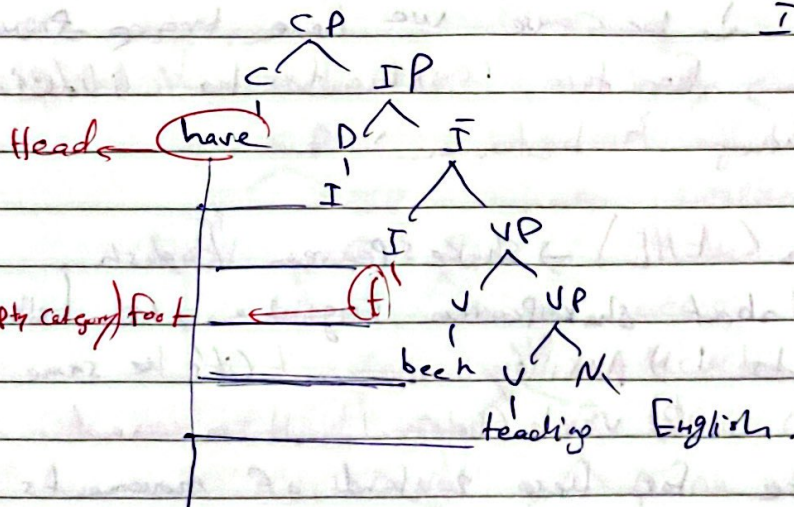
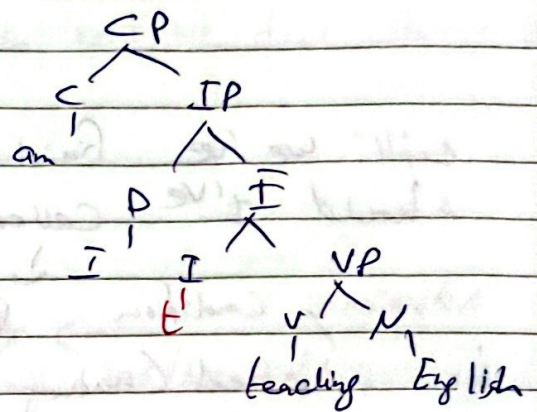
* The economy principle → it's imply two basic points
 1) moving the fewest constituents / the least amount of constituent.
 2) In the shortest distance.

I¹ am² teaching English.

↳ 2 constituents

I¹ have² been³ teaching English.

↳ 3 constituents



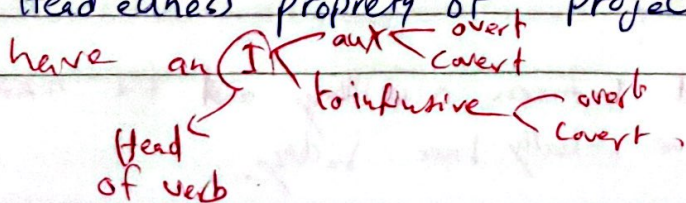
* The Head / moved Constituent C-commands trace

↓ controls (A relationship between two constituents)

we need evidence for the fact that moved constituent leave behind trace (Trace theory).

1) A moved constituent moves from a lower position to a higher.

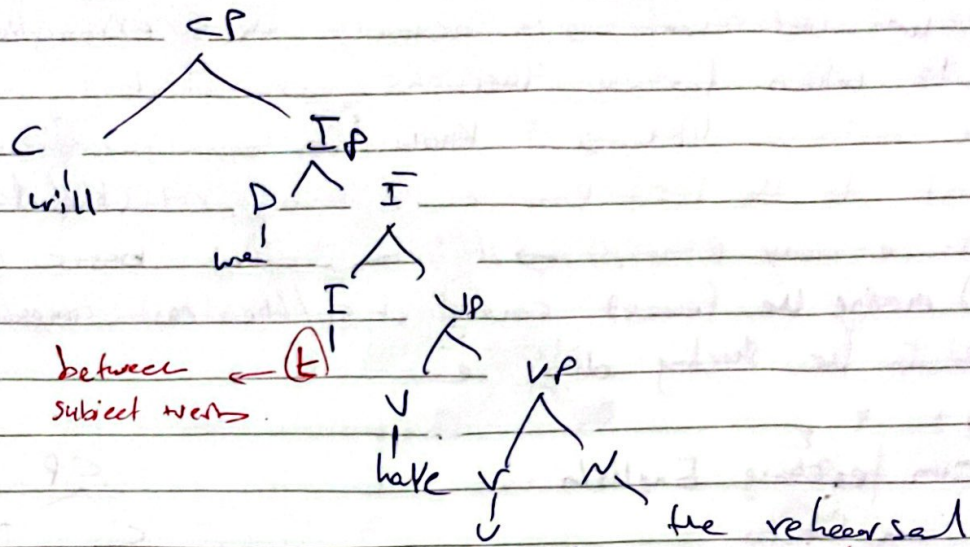
2) Head edness property of Projection → means every verb must



Ex: I reduced the price
 did reduce

3) Trace prevents Cliticization

Ex: will we have finished the rehearsal



will we've finished * finished
 should I've called the police ? * incorrect

↓ because we have trace prevents cliticization

Adjacency Condition → for two constituents to cliticize must be Adjacent (nothing in between)

* Early Modern English (EME) → Shakespearean English

when we talk about Shakespearean English, we talk about 2 important movements: 1) Auxillary movement (it's the same movement that we have today) 2) verb (lexical verb) movement.

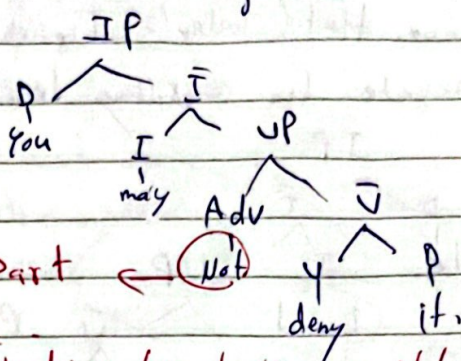
→ we have evidence for these 2 kinds of movements, in particular the verb movement through (not) -

① Negation → not in Early Modern English was positioned before the Auxillary and the main verb → like today's English.

Ex: You may not deny it
 You could not come here
 You can not deny it.

↓ positioned between auxillary and the main Verb. which we actually have today.

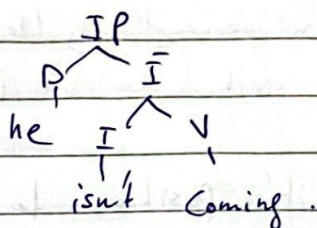
Page 114: In Shakespearean English, clauses containing a finite auxiliary are typically negated by positioning (not) between the aux and the verb



Not it's an adv, it's part of the verb phrase

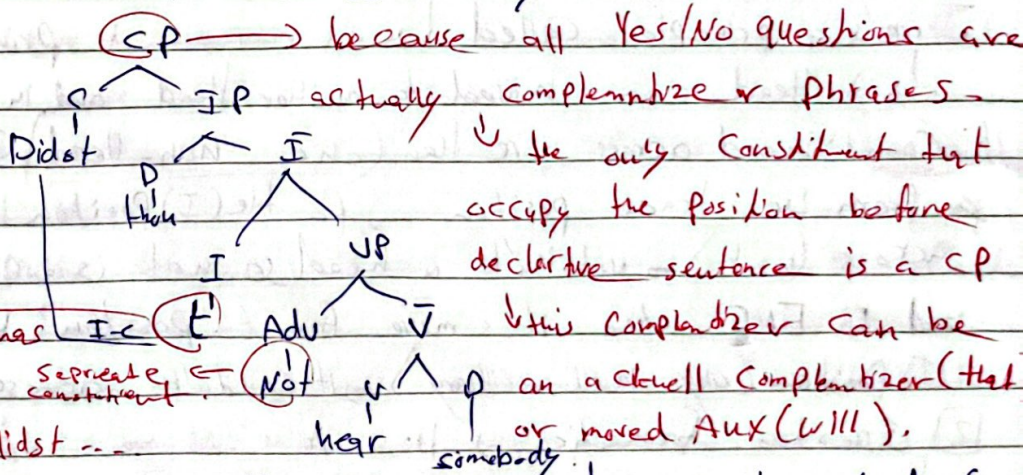
* whenever have (not) standing by itself → it's part of VP and VP gives the Adv and then V

Ex: He isn't coming → Not cliticizes to is. (we deal with it as one constituent).



means you

Page 115: Didst thou not hear somebody?



because the aux has moved out of I

it's actually Thou didst

separate constituent

because all Yes/No questions are actually complementizer phrases

the only constituent that occupy the position before declarative sentence is a CP

this complementizer can be an actual complementizer (that) or moved Aux (will).

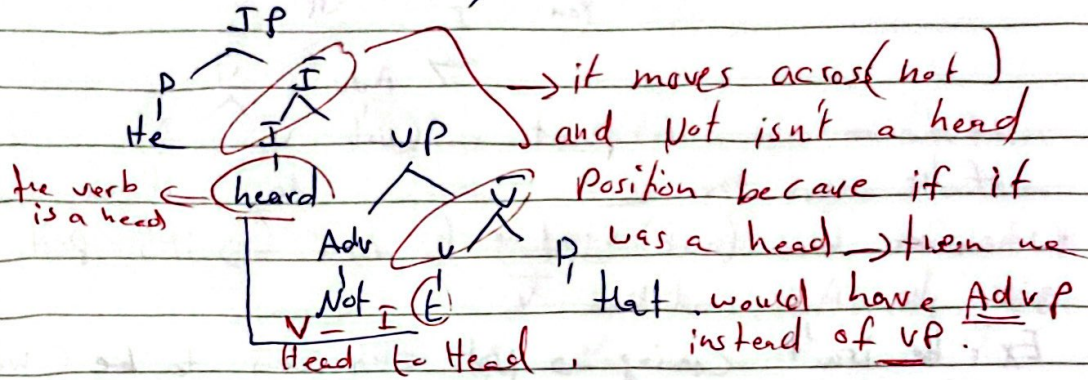
In Early Modern English → the verb could be positioned before (not) → Ex: you drank not the water

full lexical verb → called auxiliary less finite verb

could be directly negated

Aux less finite Verb

Page 116: He heard not that } → the main verb could be directly
 I care not for her. } negated.
 ↓ He did not hear that (Today's English) because in modern
 English we cannot negate the auxiliary less finite verb.



we have Head to Head movement → the verb occupies the position of (I) → because the verb (heard) is a Head and moves to occupy another head.

when verb moves out of its position to occupy an I position called (V-I movement)

There's a principle called Local movement principle (structure theory) → A head can move to another head and in the process of movement cannot move across more than one non-head constituent, so from the trace position → to the (I) position the verb head moves across (not) → not isn't a head so not is a part of VP.

and in EME when it's move from E position to occupy any (I) position (any null auxiliary) → it couldn't cross more than non-head.

(2) Question formation → the verb could be completely fronted at the beginning of the question (the interrogative sentence).

Ex: Saw you my master?

Drank you the water?

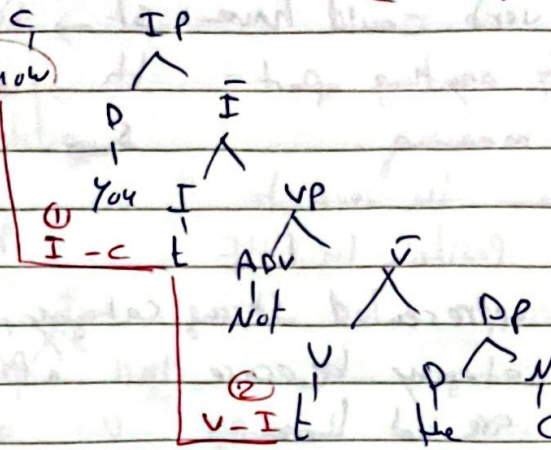
↓ the verb is completely fronted at the beginning of interrogative S

Know you not the cause?

→ it reflects 2 movement of the verb

CP → any question CP all the time
 ↓
 IP

is negated ← Know
 but negation isn't attached to it.



In this sentence we have 2 movements: 1) when the verb moves on from its position to occupy the (I) position (V-I) 2) when the verb moves from (I) to (C) (I-C) and this is called (V-I-C movement) and known with term successive cyclic movement / structure in which the verb moves out from its position to occupy the (I) position then to occupy the (C) position.

Locality movement → the verb moved across the Adv (not) and on its way to occupy C position it's also across (you) and Adv and D are not the head → meaning the verb could not directly access more than one movement at the same time. So we have 2 non head constituent but the verb can't be moved across them at time once.

Why should finite non-auxiliary verbs be able to move to inflection in Early Modern English? Because the verb in EME represent Strong Category, But in MSE, the verb represent weak category (INFL).

→ what is make a verb strong or weak?

↳ the different inflections that the verb carries.

In today's English → the only morphemes that the verb carried almost nothing

↳ play → I, you, we, they → we don't know which one of these pronouns specifiers is used with the played → can be any noun or pronoun verb play unless → we produce a sentence.

means → the verb doesn't reflect any morphological aspect means that

derivational morpheme
means (one)

but, in EME → the verb could have: st → thou didst see the king
* The verb don't specify anything apart from the lexical meaning.
th → used with 3rd person singular
s → like: He speaks / speaks
Languages
disappear in today's English.

↳ Because the verb represented strong category, but in today's English the verb is weak category because all affixes aspect and inflectional aspects are not there.

* The difference between Early Modern English and Modern English is:

1) EME was Null subject language.

Ex: Hast any more of this?
↓ means you

st → used with singular / second person (2nd s).

2) live(s), sir.

↓ He (the speaker and listener know that we talking about someone).

But Today's English was non null subject.

[2] In EME → the verb was strong category but today it's weak category.

[3] The verb could move out from its position carrying 3

major features: 1) phonetic features 2) grammatical 3) semantic

↓ Ex: know you not the answer → you do not know the answer

↓ we move the verb as it's phonetically (all phonetic features are carried) → In (EME).

In MSE → from through Percolation / attraction,

I only moved the grammatical (do) aspect through percolation.
Percolation → we extract one aspect out of many only grammatical aspect: (verb to do).

Do you know the answer.

* All Yes/No questions are actually (CP).

Percolation = attraction = Last resort principle (verb to do).

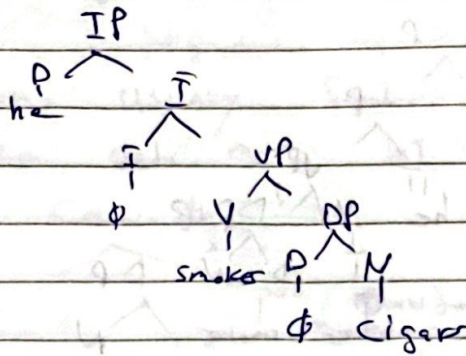
I can teach English

she is teaching English

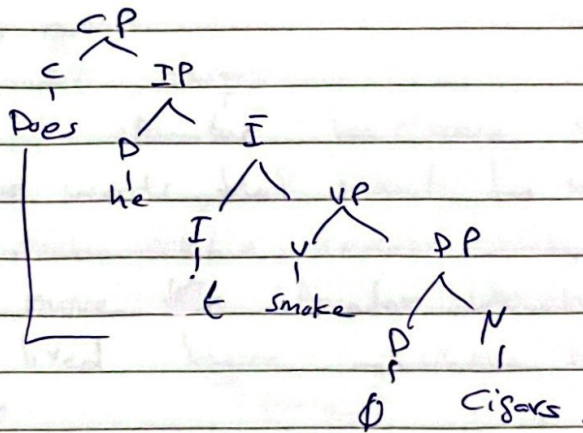
next month my friend (will) have been imprisoned for
lexical verb.

Exercises 1-5:

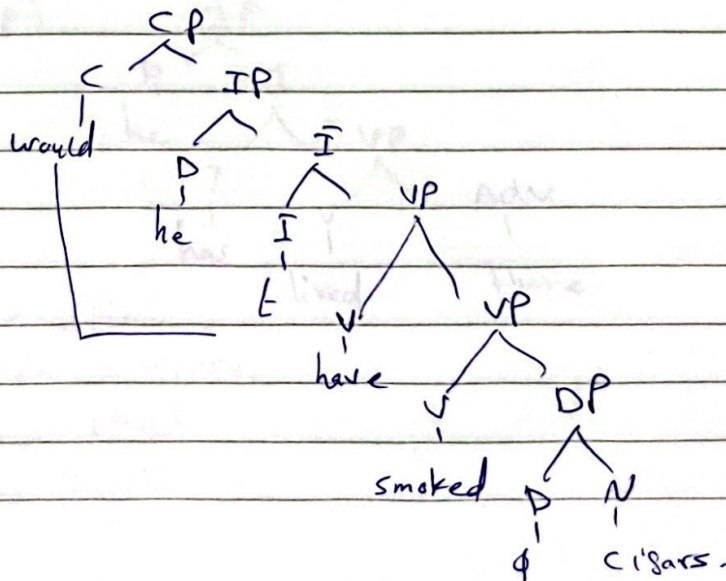
1- He ^{does} smokes ^d cigars.



5- Does he smoke cigars? → Head movement

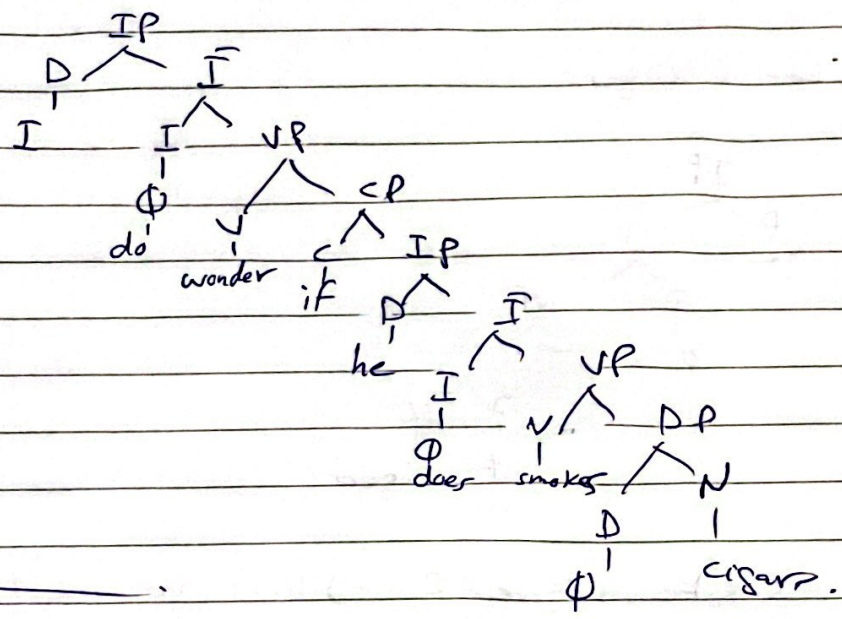


6- would he have smoked cigars? → Head movement



I → aux: do I → does D

I wonder if he smokes cigars.



Chapter 6: operator movement

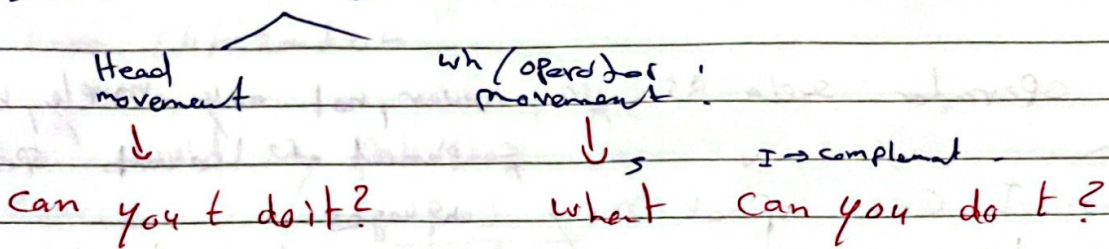
* operator movement → wh movement (forming wh questions)

we have 2 major operators:

① wh operator ② Negative operator

→ wh questions usually function as a complement of the verb and then gets move to be the specifier of C/aux

↳ Ex: I can do it.



① wh → ② aux → ③ s → ④ v → always

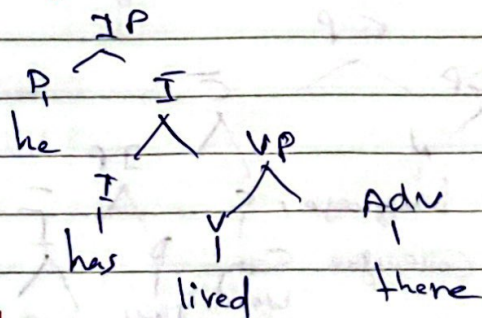
we usually move the operator because wh/operator carries features of the words that want to move → Ex: where → place, time → when, person → who, reason → why (we moved the features)

and we usually move the operator which carries these features

Ex: He has lived here → where has he lived?

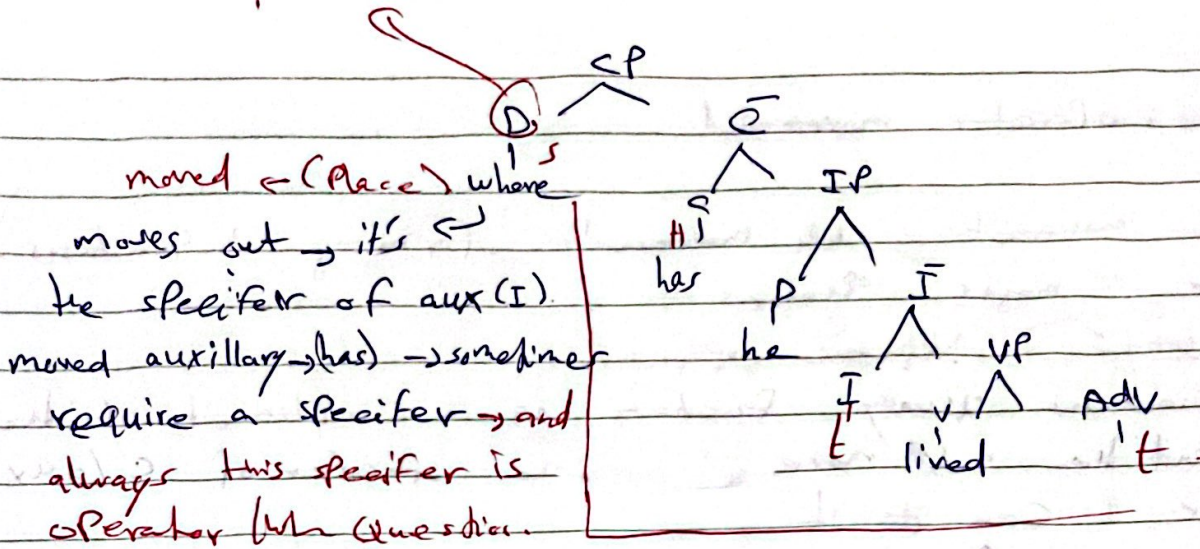
He lives here → where does he live?

* All questions are (CP)



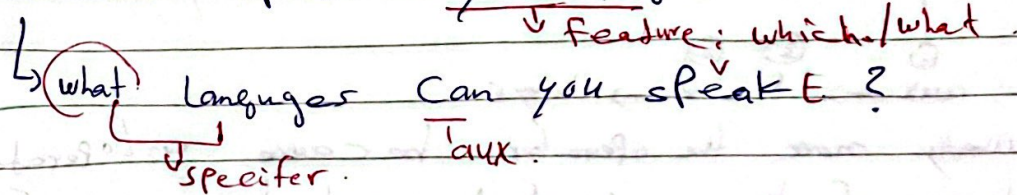
* features: manner → how
 possession → whose
 thing → what
 who → people

Always be operator /wh → D. or DP.



⊕ Negative operator: such as → no, never, not only, rarely, barely, seldom

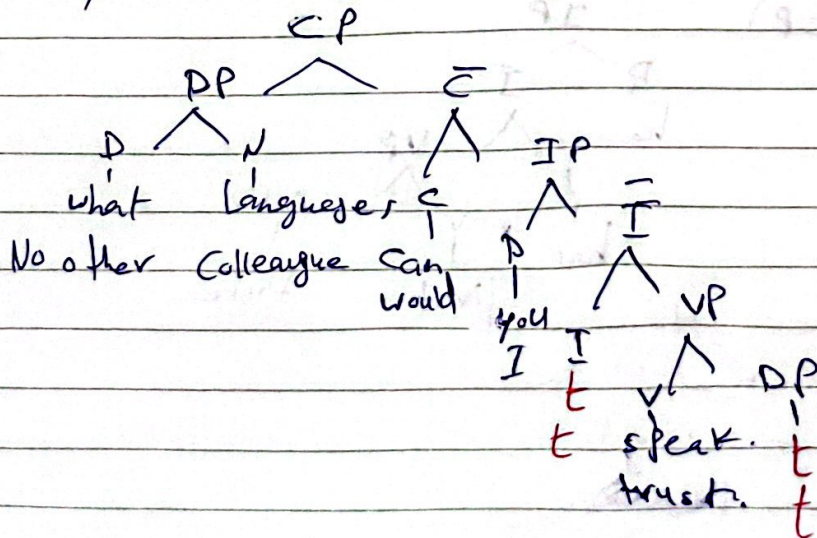
Page 130: I can speak many languages.



I would trust no other colleague
 No other colleague would I trust t?

*When we have the negative operator at the beginning → must have subject verb inversion

Ex: Not only do I speak English?



we have evidence that a moved operator leaves behind the trace (trace theory) which says any moved constituent leaves behind the trace.

[1] I wanna contraction.
want ^ to

Ex: I want to go → I wanna go (I can contract because they next to each other)
I want ^{who} (Ali) to go → I wanna Ali to go x.
_{between} ↳ not acceptable.

[2] "have" cliticization.

Ex: I would say palestinian student have got most out of the course.

↳ which student would you say t have got most out of the course?

which student would you say 've got most out? ^{* incor}

↳ because we have a trace → trace prevents cliticization
we have trace between say and have → palestinian student and this gives an evidence that moved operator leaves behind the trace
↳ students

* wh / operator movement was positioned as a complement of the verb then it gets move to be the specifier of the auxiliary.
complementizer (either an actual c or an auxiliary).

↑ I can make salad
OP ↳ can I make salad?

↳ sometimes aux require specifier and that specifier is all the time an (operator).

↳ OP can I (t) make (t)?

* why does the operator move out from it's positioned

* Enlightened self-interest principle \rightarrow reflect \rightarrow altruism

\rightarrow altruism means \rightarrow a certain constituent moves out from its position to satisfy the need of other constituents. (to sacrifice something that's belong to you for others.) \rightarrow so the operator moves out from its position when the specifier moves out. This happens because the aux needs the specifier \rightarrow the operator sacrifices its position to make the aux satisfy.

* Economy principle requirement \rightarrow reflect 2 requirements:

1) moving the fewest constituents.

2) moving constituent through the shortest distance.

Ex: I can make fruit salad with as many as different kinds of fruits. \rightarrow what \rightarrow the shortest distance

(when we moved we moved the features of the actual constituents.)

the economy principle reflects another principle called (the minimality condition) or = minimal link condition

\rightarrow we should moved the fewest constituent + shortest distance

which book = which book did you read?

what car = what car have they ticketed?

whose house = whose house has been burned?

\rightarrow we still need the minimality condition principle

I read the book of the man who lost all his family members during the war in Gaza \rightarrow 16 constituents replaced by 2 word
 \rightarrow which book did you read? (which book)

Ex: They ticketed John's car which he bought last month from the car dealer by the sea. 14 \rightarrow replaced by (wh operator)

\rightarrow whose car did they ticket?

Minimality \rightarrow (part) of the Economy principle.

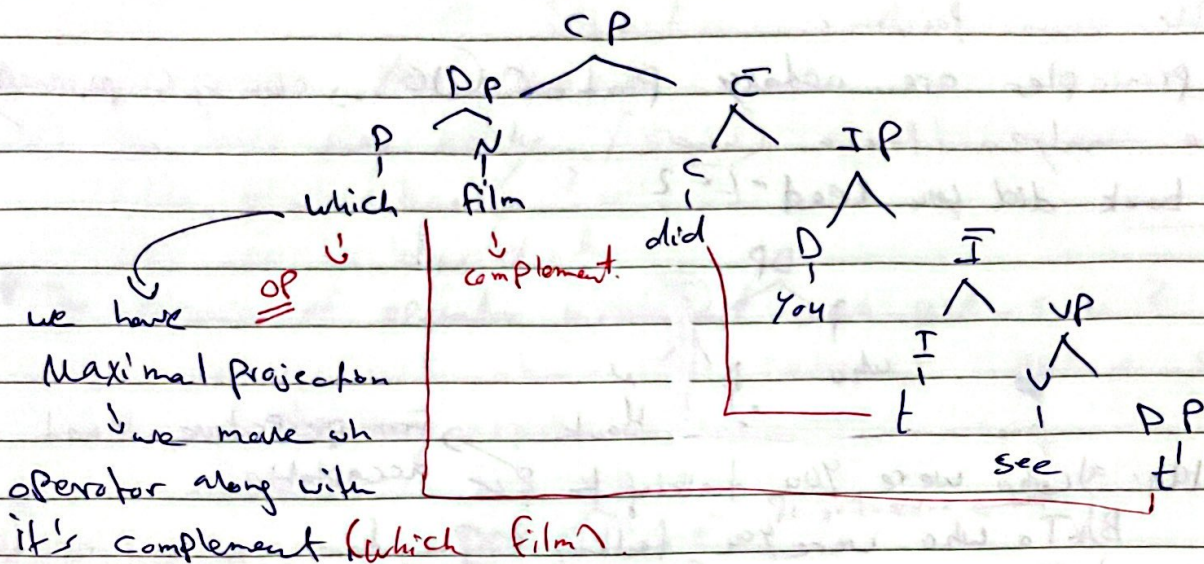
when we moved the operator along with its complement.

↳ called Maximal Projection = chain uniformity or (uniform chain)

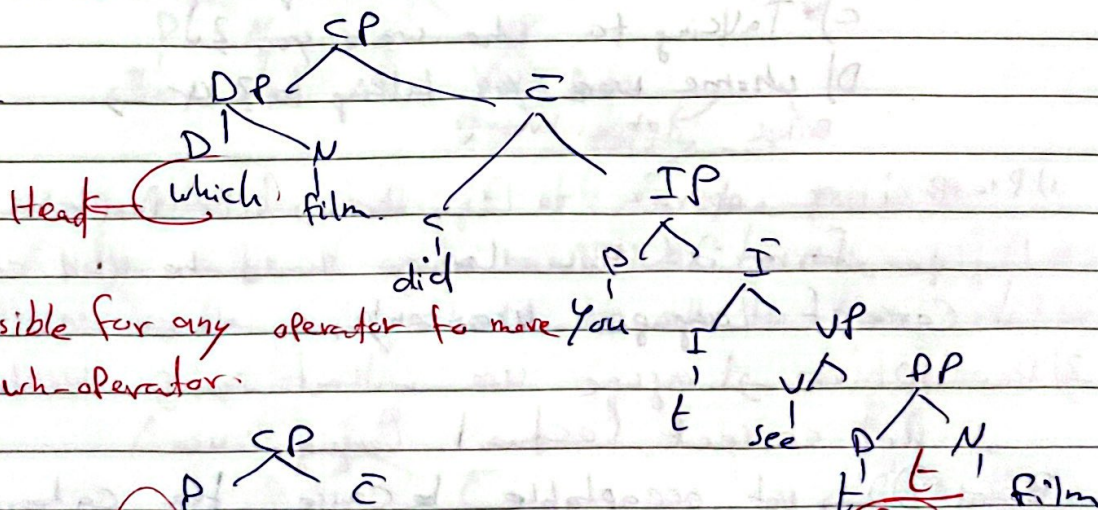
↳ Some books refer back to this process as (Pied-piping).

↳ we moved both the operator along with its complement

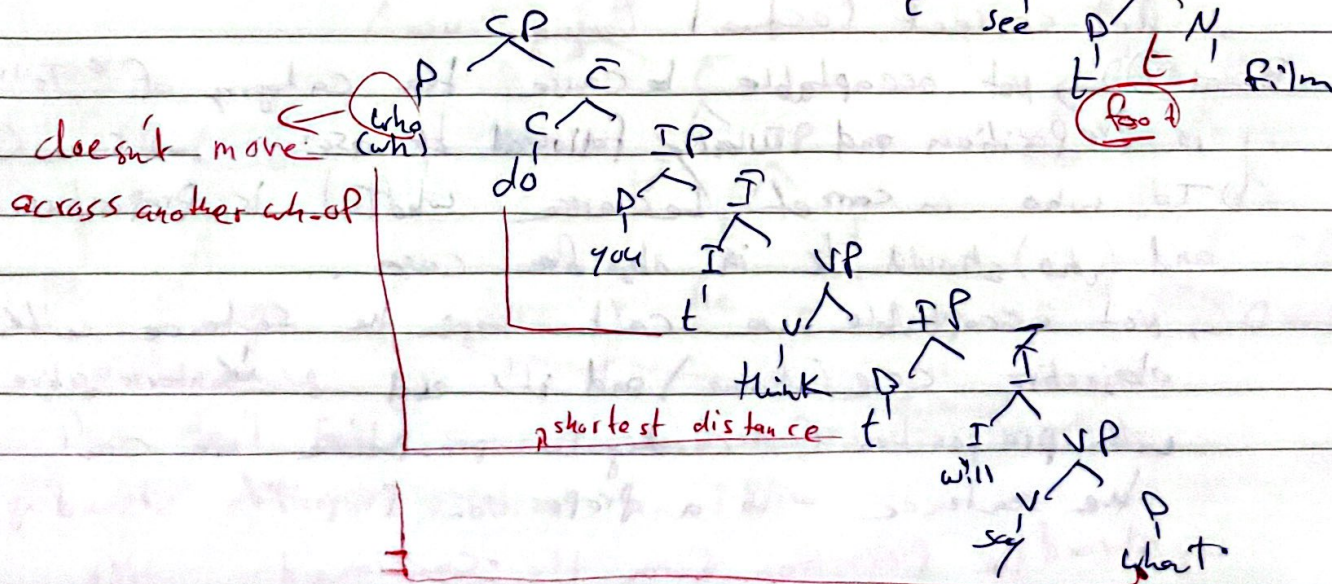
Ex: which book, whose house.



Page 138:



Rule: it's impossible for any operator to move across another wh-operator.



* If we are to form any wh operator/question and if you want to move 2 wh operator in the same sentence

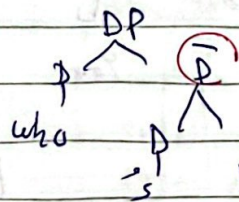
→ If there's one preceding the moved operator → then the movement is incorrect.

B) What who do you think will say? → ungrammatical / incorrect because we can't have 2 wh operators at the same time in the same position.

All of principles are actually part of (UG) → Chomsky's philosophy.

How we analyze / parse (where).

↳ whose book did you read "t"?



Page 140: a) ^{American} who were you talking to? → acceptable. From perspective is not acceptable.

B) *To who were you talking to? → these are not acceptable

C) *Talking to who were you?

D) ^{British} whom were you talking to? → unacceptable. objective

1) Prescriptive approach in linguistics → tells people what the correct language form is (How language should be used correctly.)
↓ Correct language use only.

2) Descriptive → language use without saying whether it's correct or not correct (actual language use).

B → Not acceptable because the category of "To" is preposition and usually followed by a (noun) → case (objective).
↳ To who is correct because (To) is preposition and (who) should be in objective case.

D → Not acceptable we can't begin the sentence with objective case (whom) and it's end (interrogative) with preposition (according to prescriptive we can't end the sentence with a preposition (preposition stranding))
→ strand the preposition from its complement. lost

1) He is coming tomorrow.

↳ Feature: Time / when

↳ when is he coming? → it's an echo of "he is coming tomorrow"

* echo question → keep the operator in its position (situation)

2) They cleaned the office

↳ what

↳ what did they clean?

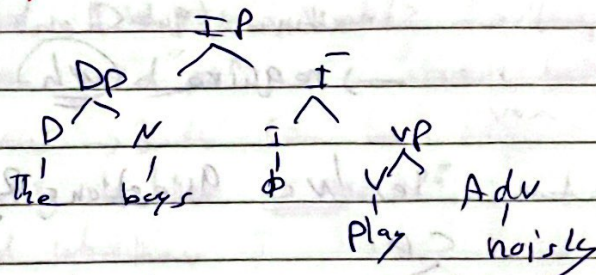
3) The boys play noisily

↳ who plays noisily? ✓

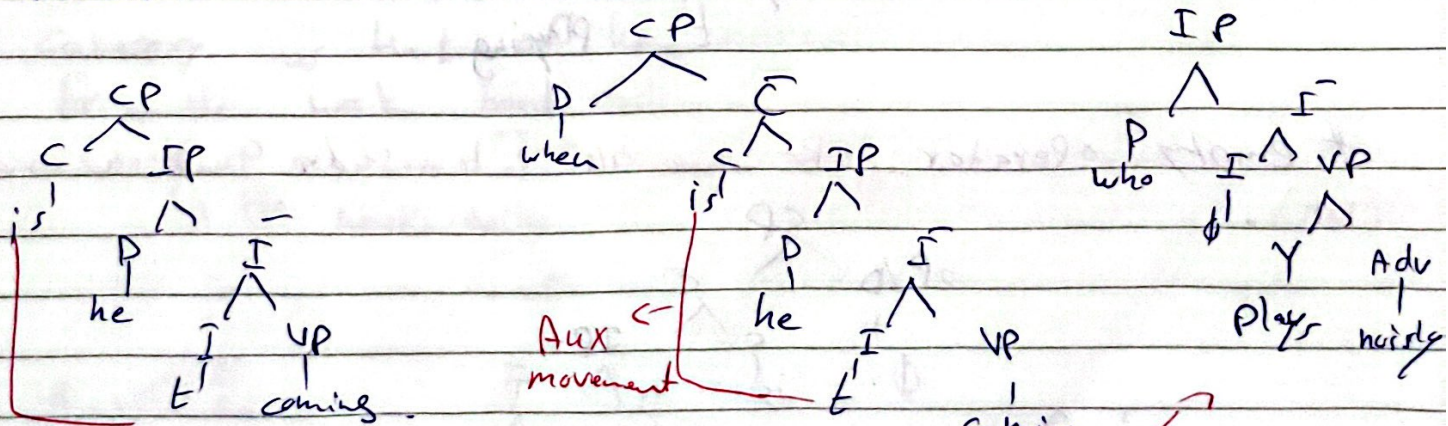
what do the boys do?

* The formula of operator movement → wh-aux-s-v ?

Note: when we ask about the subject → there is NO Subject Auxillary inversion.



* we should deal with the verb if it's in the present regardless of the subject or the number of the subject (if it's singular or plural) → the verb should be all the time in the present.



* when we don't have subject verb inversion

↳ we draw tree diagram as an (IP).

The Police Kill Thieves.

↳ Who kills thieves?

↳ The boys are playing noisily.

actual
complementizer
aux

That the boys are playing noisily makes me angry.

or Are the boys playing noisily?

* Nothing in the English precedes the statement except (Complementizer)

↳ the aux that never takes specifier (structure dependence)

The moved aux sometimes requires a specifier, if it's required that specifier have to be an (operator).

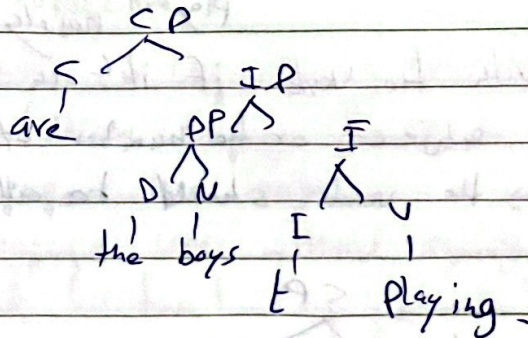
(that) doesn't take specifier.

↳ what is more important/significance in the interrogative phrase

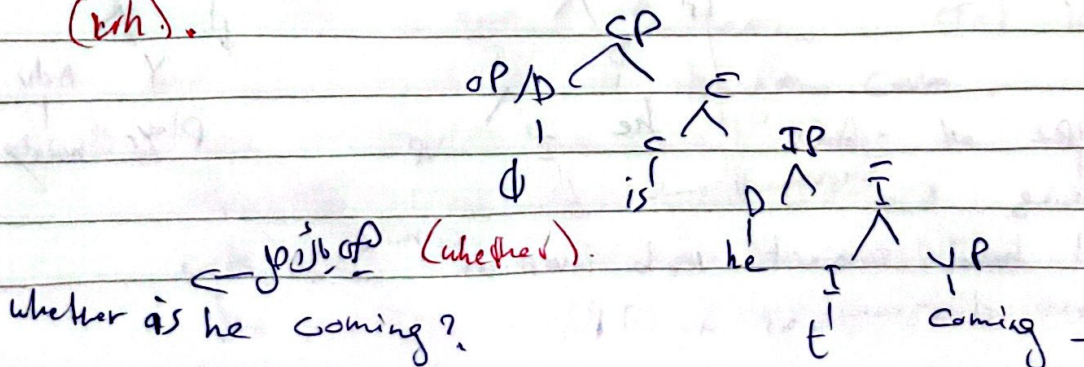
↳ All Interrogative structure / questions regardless whether

they are ^{wh} Head mov → require (wh)

↳ where is the operator in Yes/No questions? empty operator



↳ empty operator. ↳ Because all interrogative questions require (wh).



↳ part of (whether).

whether is he coming?

Page 145:

We need evidence of empty operator:

- 1) EME → They have more than one way on forming Yes/No questions
whether had you rather lead mine eyes your master's heel.
↳ 1) They could use aux in the beginning like saying: 'Didst thou?'
2) Could front the verb → Heard you somebody?
3) Could use whether.

In Early modern English → they could use it as an (overt) in their yes/no questions.

2) Reported speech:

Are you feeling better? , he asked

↳ He asked (whether) I was feeling better.

- 3) Both of them can be answered by either Yes or No
when he asked, Did you vote for Larry Loudmouth?, I said "Yes" and you said "No"

- 4) Tag Questions → Both can be tagged by (or not)
Are you feeling better or not?

↳ He asked whether I was feeling better or not.

↳ Substitutional Test: when you substitute one word for another in a certain structure, if the grammaticality of the structure remain intact → the substitutional word has the same category as that of the original one.

Ex → He work hard → Adv

↳ He works quietly so I substituted the word. Adv
↳ adv.

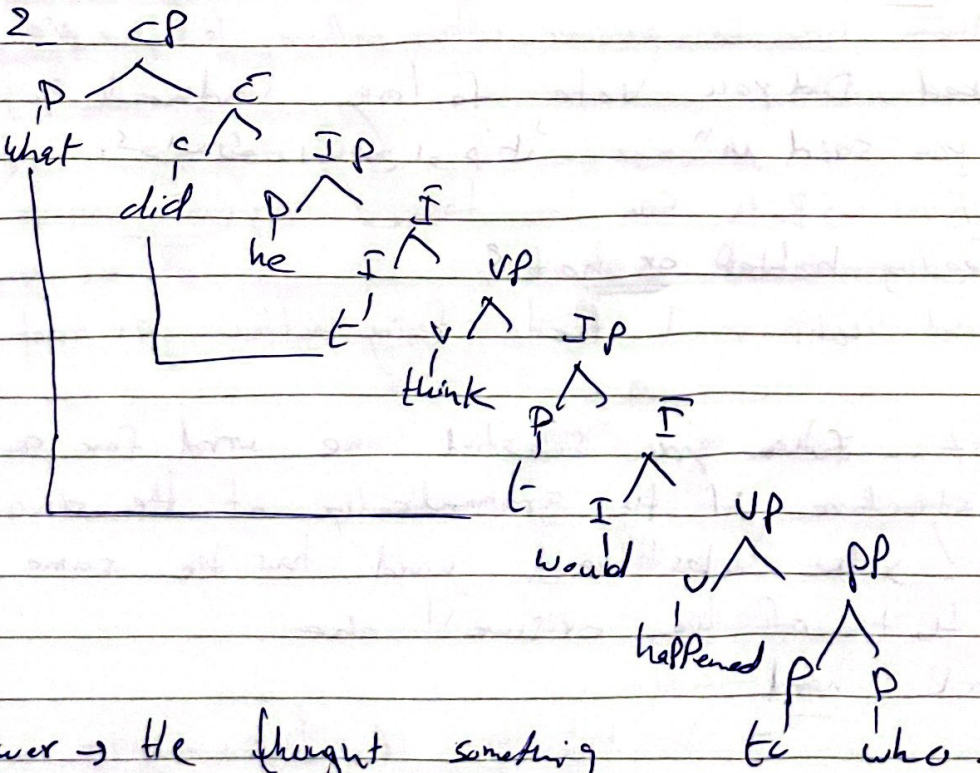
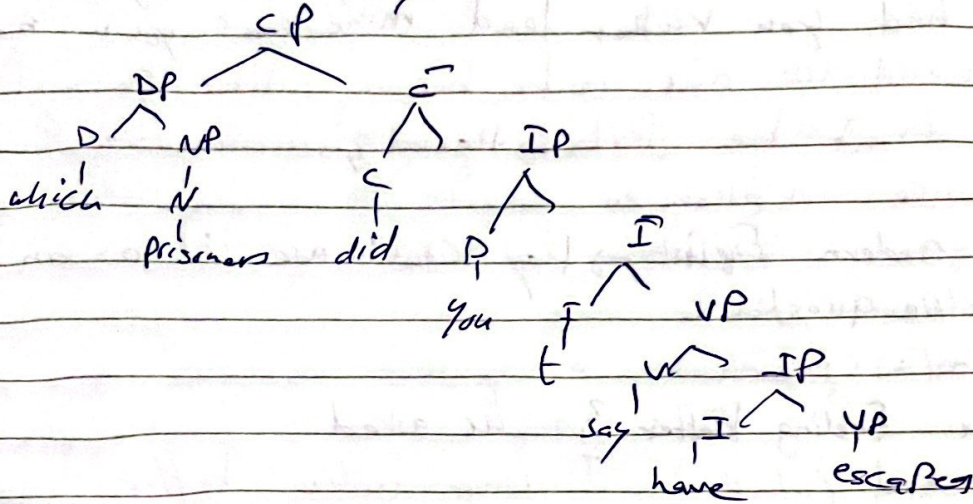
Aux
N
Adj
Adv

violated → violates

any moved constituents must have a trace
wh can never cross over.
Another wh operators

Exercises page 148:

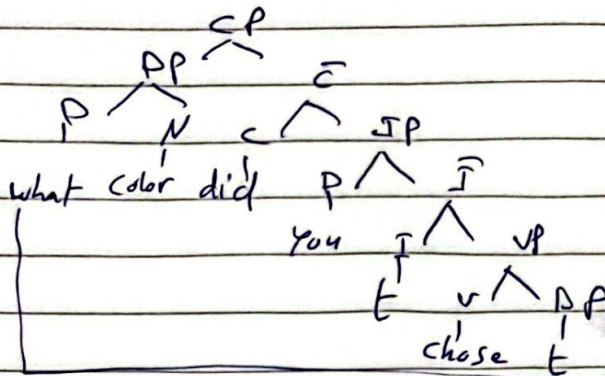
1- which prisoner you say have escape ?



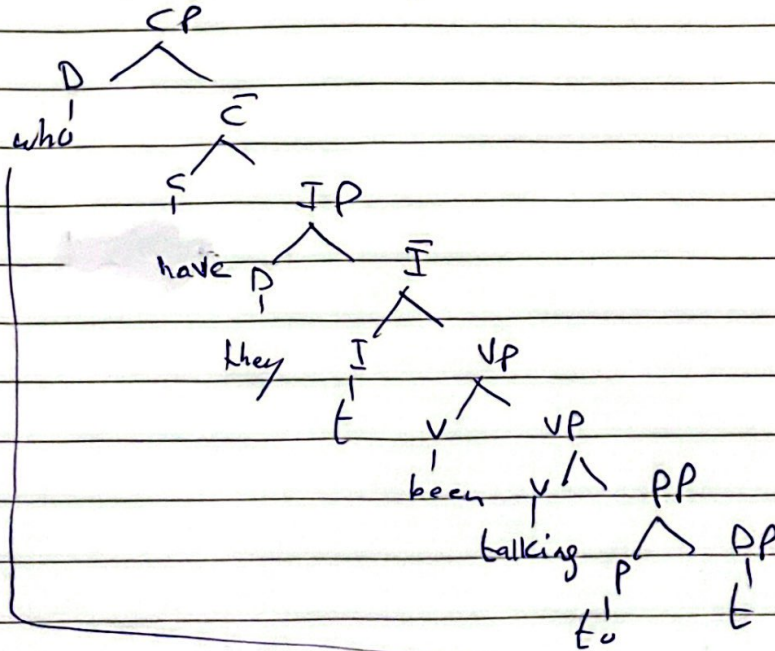
Answer → He thought something would happen to Jack.

to → objective
(case)

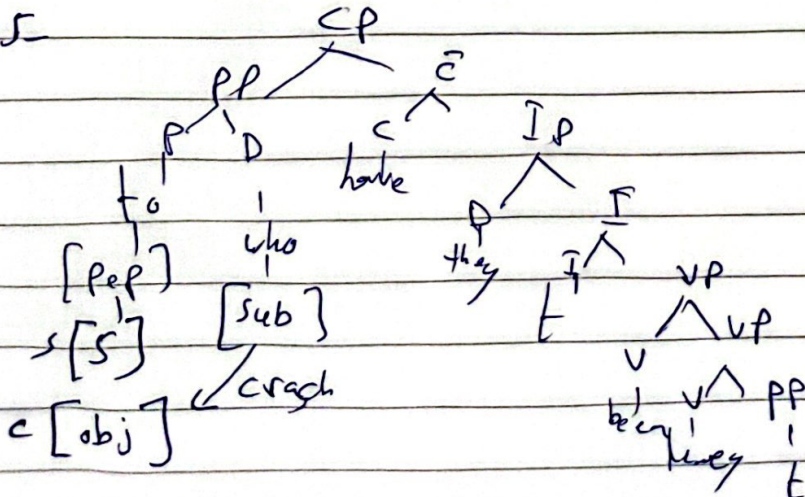
3 - what color did you chose?



4. who have they been talking to ?



5



5. Do you feel better?

