

(1) *Italian*
Tuo fratello ('your brother'),
[CP a cui_i [TP mi domando [CP che storie_i [TP abbiamo raccontato t_i t_j ...
to whom I wonder which stories they-have told
era molto preoccupato ('was very worried').

(2)
* Tuo fratello,
[CP a cui_i 'to whom'
[TP temo [DP la possibilità [CP che [TP abbiamo raccontato tutto t_i]] ...
I-fear the possibility that they-have told everything, ...

CNP islands are respected, *wh*-islands aren't?

(3) Mi sto domandando [CP a chi_i
I am wondering to whom

potrei chiedere t_i [CP quando_j dovrò parlare di questo argomento t_j]]
I-may ask when I'll-have-to speak about this topic

(4)
* Questo argomento, [CP di cui_k mi sto domandando
This topic of which I am wondering

[CP a chi potrei chiedere [CP quando dovrò parlare t_k]]]
to whom I-may ask when I'll-have-to speak

mi sembra sempre più complicato
to-me seems ever more complicated

Italian bounding nodes: **CP** and **DP**. (Rizzi 1982)

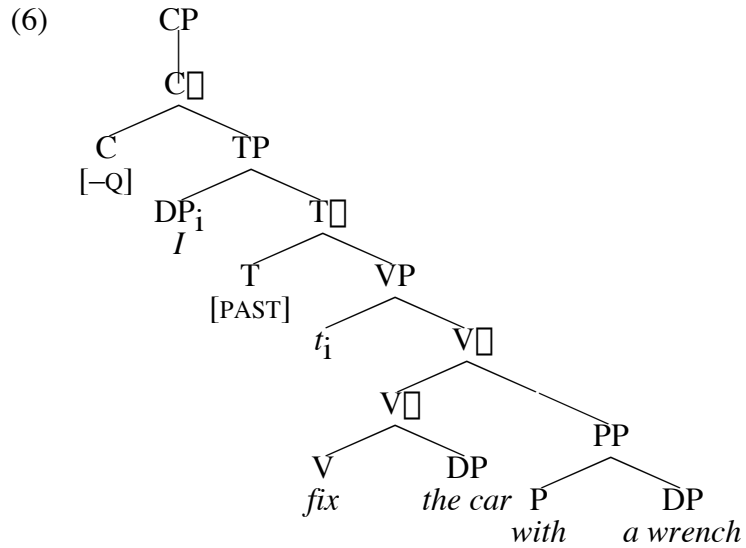
Argument *wh*-questions vs. **adjunct** *wh*-questions...

Argument *wh*-questions are subject *wh*-questions, object *wh*-questions.

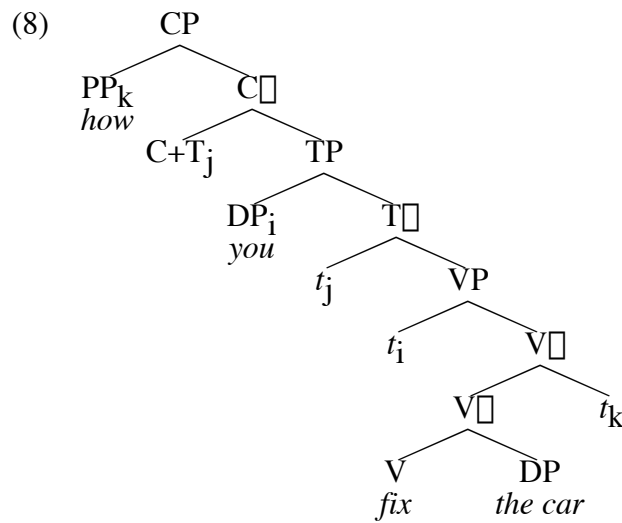
Who bought the book? What did Bill buy? What was eaten?

Adjunct *wh*-questions are those which question constituents which in a declarative would be adjuncts.

(5) I fixed the car *with a wrench*.



(7) How_i did you fix the car t_i ?



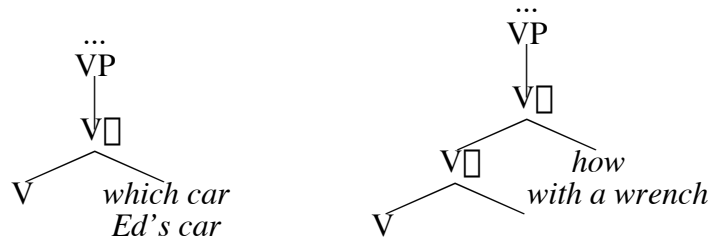
Adjunct *wh*-questions are more delicate than argument *wh*-questions.

(9) ?Whose car_i were you wondering how to fix t_i?
(Ed's car...I was wondering how to fix Ed's car.)

(10) *How_i were you wondering whose car to fix t_i?
(With a wrench...
I was wondering whose car to fix with a wrench.)

What makes these different?

(11)



(12) *How_i were [TP you wondering [CP whose car [TP to fix t_i]]]?
 (With a wrench...
 I was wondering whose car to fix with a wrench.)

(13) How_i did [TP you fix the car t_i]?

(14) How_i did [TP Bill say [CP t_i that [TP you fixed the car t_i]]]?

It appears that adjuncts are hyper-sensitive to Subjacency violations, but it possible to move an adjunct *wh*-word as long as it doesn't go too far.

Interestingly, *subjects* generally act like adjuncts—

(15) ? [Which car]_i do you know [CP how Bill fixed t_i]?

(16) * How_i do you know [CP which car Bill fixed t_i]?

(17) * Who_i do you know [CP which car t_i fixed (with a hammer)]?

(18) * Who_i do you know [CP how t_i fixed (the Pacer)]?

Usually...

(19) [Which chair]_i do you find [t_i will roll most smoothly]?

(20) [Which taxi service]_i do you consider [t_i most reliable]?

It kind of looks like “traces which get accusative Case” are safe.

Nailing down the precise formulation of this restriction is *very* complicated... (see Chomsky 1986, Rizzi 1990)

Here is a close approximation:

Empty Category Principle (ECP)

Traces must be properly governed

Lexical: N, V, A, P
Functional: C, T, D

Proper Government

\square properly governs \square iff

- (i) \square governs \square and \square is a lexical head
- or (ii) \square antecedent-governs \square .

Idea: (i) *accounts for* ?What_i did you say knew how Bill fixed t_i ?
(ii) *allows for* How_i did you fix the car t_i ?
“antecedent governs” means *How* and its trace are close.

Antecedent Government (first attempt)

\square , a moved category, antecedent-governs \square iff

- i) \square binds \square (c-commands & co-indexed)
- ii) no more than one bounding node dominates \square but not \square .

‘...if moving from \square to \square would not violate Subjacency’

- (21) ? Which song_i were [TP you wondering [CP whether [TP the band will play t_i]]]?
- (22) * Which band_i were [TP you wondering [CP whether [TP t_i will play that song]]]?
- (23) ? Which car_i do you know how to fix t_i ?
- (24) * Who_i do you know how t_i will fix the car?
- (25) Which band_i did you consider [t_i to be the best]?

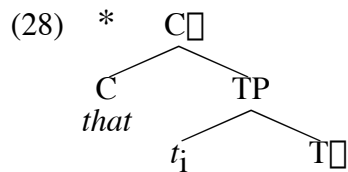
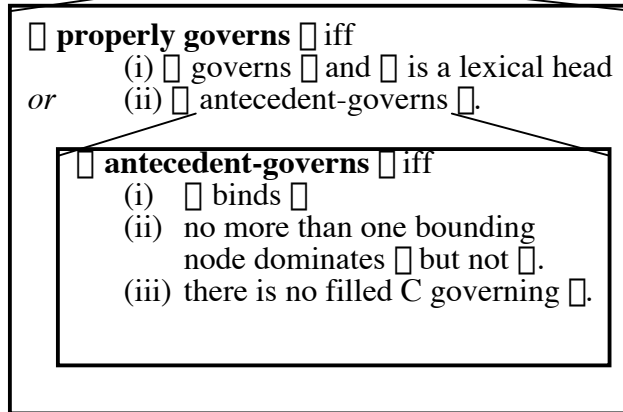
That-trace effect

- (26) What_i did you say (that) Bill would fix t_1 ?
 (27) *Who_i did you say (*that) t_1 would fix the car ?

This differentiates subjects and objects—it looks like a job for the ECP.
 When the trace must rely on antecedent government, *that* blocks it.

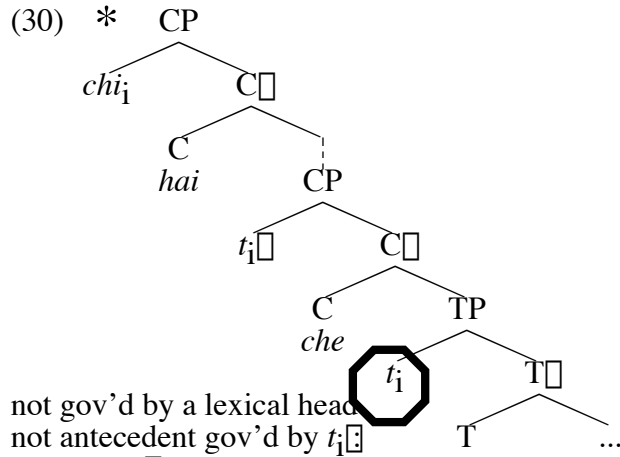
Empty Category Principle (ECP)

Traces must be properly governed



That-trace effects aren't universal, though...

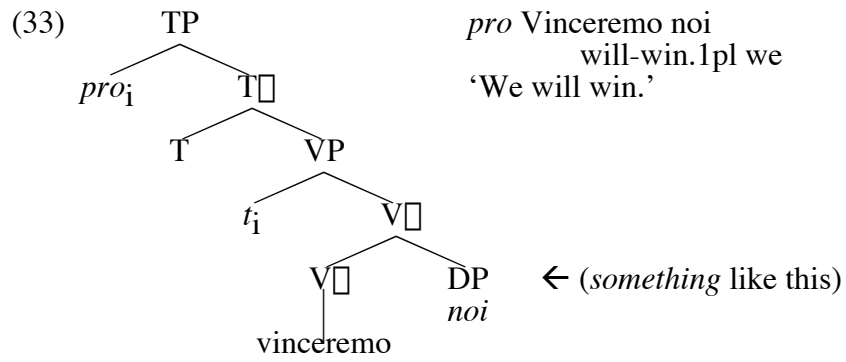
(29) *Italian*
 Chi_i hai detto **che** ha scritto questo libro?
 who have-you said **that** has written this book
 'Who did you say wrote this book?'



- t_i binds t_i
 - no bounding nodes intervene
- but*
- there is a filled C (*che*) governing t_i .

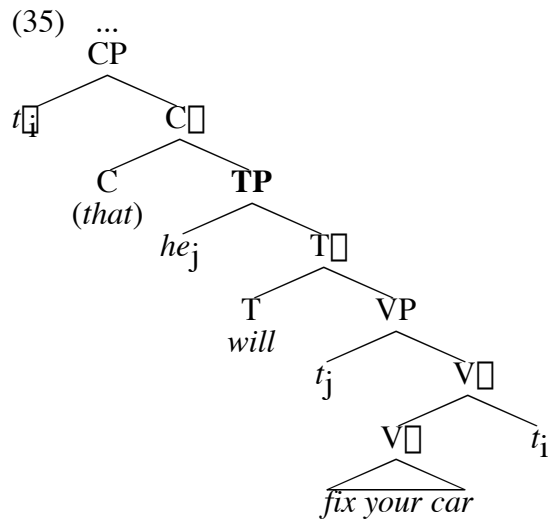
(31) Hanno telefonato molti studenti
 have.3pl phoned many students
 'Many students have phoned.'

(32) Vinceremo noi
 will-win.1pl we
 'We will win.'



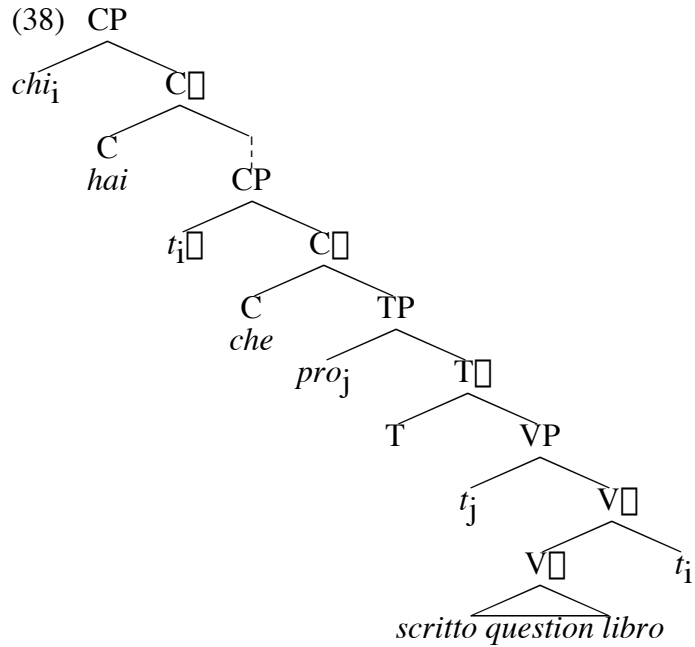
Can this help?

(34)
How_i did you say (that) he will fix your car *t_i* ?



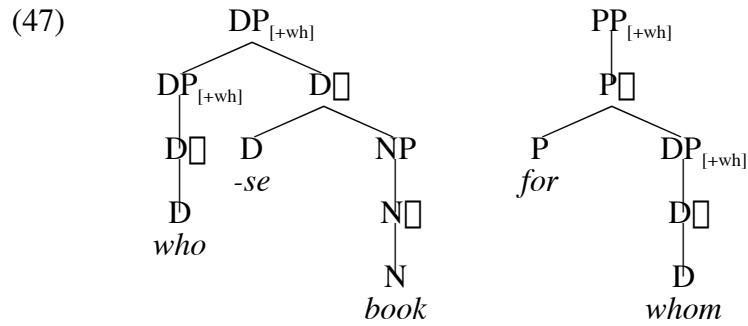
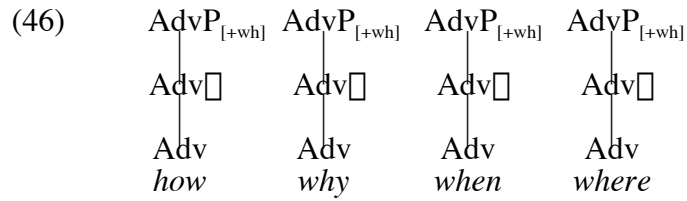
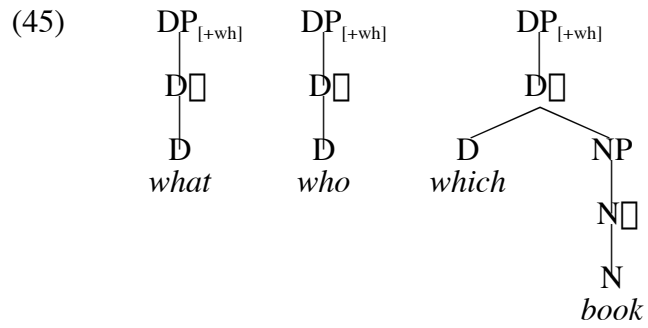
(36) *Italian*
 Chi hai detto **che** ha scritto questo libro?
 who have-you said **that** has written this book
 'Who did you say wrote this book?'

(37)
 [CP Chi_i [TP *pro* hai detto [CP *t*_i che [TP *pro* ha
 [VP scritto question libro] *t*_i]]]]



- (39) Mario E parla *Florentine It.*
 Mario SCL speaks
 'Mario speaks.'
- (40) E parla
 SCL speaks
 'He speaks'
- (41) * Parla
- (42) gl 'ha telefonato della ragazze
 SCL(M.SG) has phoned some girls(F.PL)
 'Some girls telephoned.'
- (43)
 Quante ragazze tu credi che gli abbia parlato?
 how.many girls you think that M.SG has.3SG spoken
 'How many girls do you think have spoken?'
- (44)
 * Quante ragazze tu credi che le abbiano parlato?
 how.many girls you think that F.PL have.3PL spoken
 ('How many girls do you think have spoken?')

The category of *wh*-words:

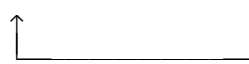


Pied-piping: [For whom]_i did you buy that bagel *t*_i ?

P-stranding: Who(m)_i did you buy that bagel for *t*_i ?

Relative clauses

(48) Bill heard [DP the speech_i [CP which_i [TP Mary made t_i]]].



Restrictive relatives restrict the reference of the *head noun*.
Semantically, we refer to something which is both:

- a speech
- and
- (something) which Mary made.

Appositive relatives don't restrict the reference, but provide additional information

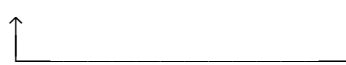
(49) a. Mary, who you met yesterday, just bought a house.
b. Mary, [CP who_i [CP you met t_i yesterday]], ...

Free relatives involve *-ever* and don't modify a head noun

(50) a. I will buy [whatever_i you sell t_i].
b. Whoever just arrived unplugged my lamp.

(51) a. Bill heard the speech [which Mary made].
b. Bill heard the speech [that Mary made].
c. Bill heard the speech [Mary made].

(52) Bill heard [DP the speech [CP Op_i (that) [TP Mary made t_i]]].



(53)

Diagram illustrating three CP structures:

- Tree 1: CP branches into Op_i and C. C branches into *that* and ...
- Tree 2: CP branches into Op_i and C. C branches into \emptyset and ...
- Tree 3: CP branches into *Which_i* and C. C branches into \emptyset and ...

Is it really *wh*-movement? What do we know about *wh*-movement?

(54)

* I know the way wh_i John wonders [wh -island why Bill went t_i].

(55)

* I know the way wh_i John made [CNP the claim that Bill went t_i].

(56)

* I know the way Op_i (that) John wonders [wh -island why Bill went t_i].

(57)

* I know the way Op_i that John made [CNP the claim that Bill went t_i].

So: • If relative clauses allow an *Op*, why can't *wh*-questions?
 • Why can you have *that* with *Op* but not with *which*?
 *I heard the speech wh_i that Mary made t_i .

Recoverability Condition

The content of a null category must be recoverable (from a co-indexed overt category in the sentence).

- (58) a. When did Mary buy the book?
 b. Where did Mary buy the book?
 c. How did Mary buy the book?
 d. * Op_i did Mary buy the book?

- (59) a. * Op_i did Mary buy t_i ?
 b. * Op_i did Mary give a book t_i ?

- (60) Bill heard the speech $_i$ [CP Op_i that [TP Mary made t_i]].

Doubly Filled Comp Filter

*[CP *wh*-XP *that / if / whether...*], if *wh*-XP is overt (non-null).

