Other types of Movement

So far we seen Wh-movement, which moves certain types of (XP) constituents to the specifier of a CP.

Wh-movement is also called "A-bar movement".

We will look at two more types of movement.

The first of these is a type of head-movement. That is, an X^0 moves, not an XP. Specifically a V^0.

In effect, we have already seen this movement when we looked at matrix questions:

46a. What has he eaten?
   b. Why should she leave?
   c. Where can I go?
   d. Who must she interview?
   e. When is he leaving?

How do we get the word order in these sentences? In English (and other languages) matrix questions require a verb in C^0. Never mind *why* they do. Just take it as a given that they do.

How does the verb get there?

Certain verbs are already in I^0, among them auxiliaries *be* and *have*, the modals *can, could, may, might, should, must*.

For those, it is very easy to satisfy the requirement to have a verb in C^0:
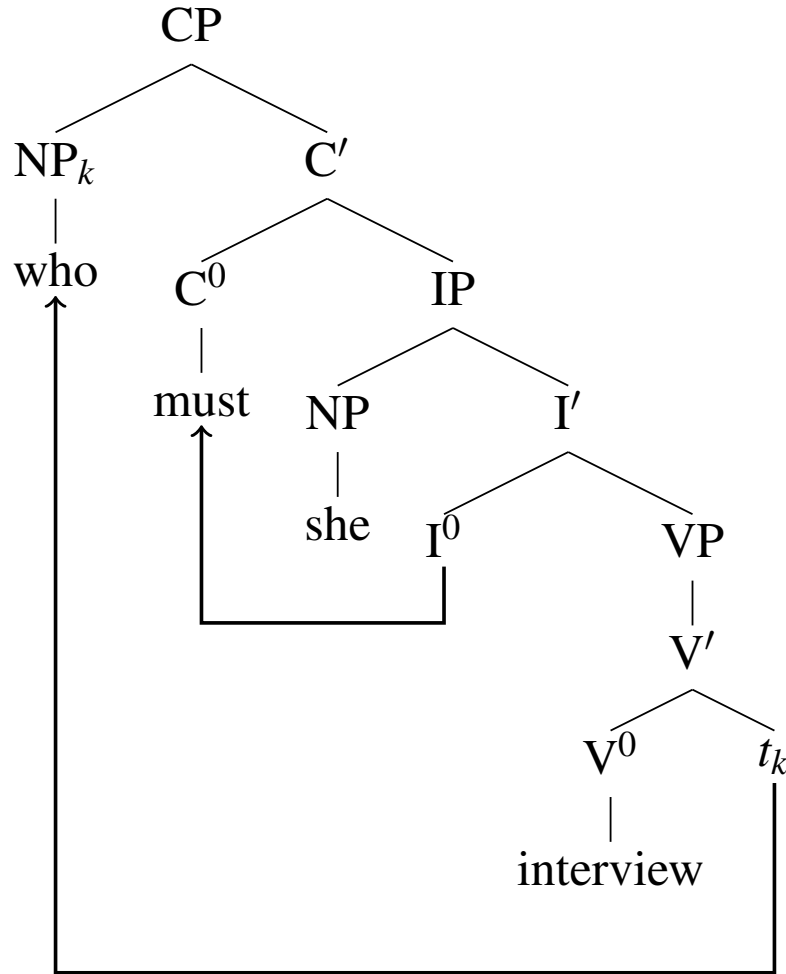
Head-movement!

When the verb cannot appear in I^0, as with all the lexical verbs in English, we get *do*-insertion.

Is *do* inserted straight into C^0 to satisfy its need for a verb?

No! It carries tense and agreement. So it is first inserted in I^0 and then moves to C^0 .

46d.

Did you notice that again, movement is to a c-commanding position?

CP
- NP$_k$
  - who
- C′
  - C^0
    - must
  - IP
    - NP
      - she
    - I′
      - I^0
      - VP
        - V′
          - V^0
            - interview
          - t_k

- I^0-to-C^0 movement causes "subject-verb inversion". Do you see why it would be called that?

Here are some other environments with I^0-to-C^0 movement in English (in addition to Wh-questions):

Yes/no questions:

47. Must he leave?

"Negative-inversion":

48. [Never before in my life] have I seen such a mess

49. [Only if you give me $10K]   will I give you my piano

48'. *[Never before in my life] I have seen such a mess

49'. *[Only if you give me $10K] I will give you my piano

50a. [If you give me $10K] I will give you my piano

   b. *If you give me $10K] will I give you my piano

- I^0-to-C^0 movement also causes a phenomenon called "Verb Second". Can you see why it would be called that?

51. [Where] <u>has</u> she gone?

52. [Which of the books I gave her] <u>has</u> she read?

53. [Never before in my life] <u>have</u> I seen such a mess

54. [Only if you give me $10K] <u>will</u> I give you my piano

V2: the verb comes directly after the first constituent and it doesn't matter how long the first constituent is:

55. [Which of the books that your uncle who studied at Stanford thinks were written by Tolstoy but were actually written by Dostoyevsky and were published by an obscure press] <u>has</u> she read?

- English used to be what is called a "generalized" V2 language. That is, it had V2 everywhere. Now it is a "residual" V2 language. That is, it has V2 in certain restricted environments, as we saw, but not everywhere:

56. Yesterday, John <u>left</u>

57. If it rains, she <u>stays</u> inside

However, there are plenty of languages that are generalized V2 today:

-The Germanic languages German, Dutch, Swedish and others

-The Kru language Vata (in Africa)

-The Indo-Aryan language Kashmiri (Indian subcontinent)

-The Arikem language Karitiana (Brazil)

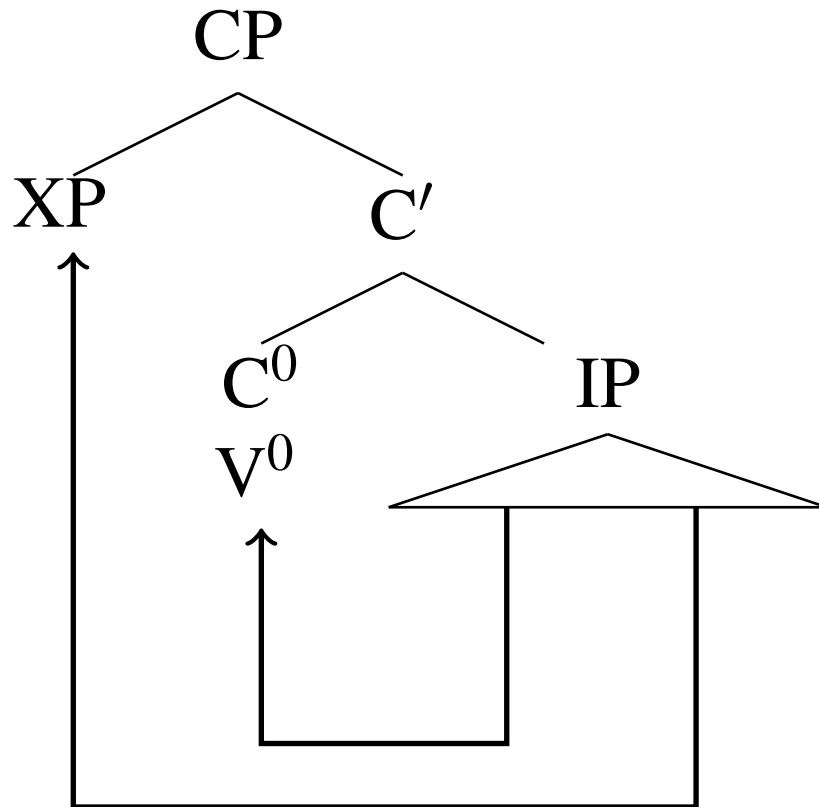Topicalization in a non-V2 L   or   Topicalization in a non-V2 L

IP
XP   IP

TopP
XP   Top′
          Top^0 IP
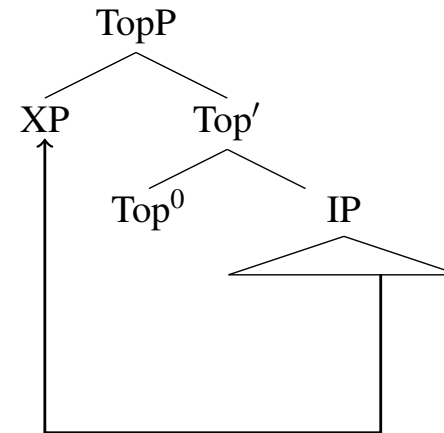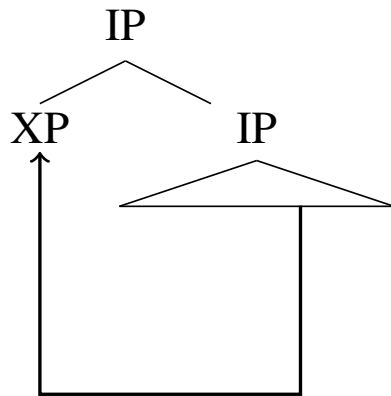
[Yesterday] she read a book
[If you give me $10K] I will give you my piano
[Susan] I really like

Topicalization in a V2 Language

Exactly like wh-questions in English

CP

XP   C′

    C^0 IP

    V^0

Here is some German. Notice how the verb comes immediately after the first constituent

58. [Gestern]   ist der Hans weggefahren.
       yesterday is the Hans left
         "Yesterday Hans left"

59. [Weil er krank ist] ist er zuhause geblieben.
       [because he sick is] is he at-home stayed
         "Because he is sick, he stayed home"

60. [Wenn es regnet] bleibt Katharina zuhause
        if   it   rains   stays Katharina at-home
         "If it rains, Katharina stays home"

61. [Den Hans] liebt die Maria
        the Hans   loves the Maria
         "Hans, Maria loves"

- Now look at these:

62. die Katharina liebt den Hans
    the Katharina loves the Hans
       S   V   O
  "Katharina loves Hans"

63. Ich glaube dass die Katharina den Hans liebt.
    I believe   that the Katharina the Hans loves
                      S   O V
  "I believe that Katharina loves Hans"

64. * die Katharina   den Hans liebt
    the Katharina   the Hans   loves
      S   O   V

65. * Ich glaube dass die Katharina liebt den Hans .
    I believe   that the Katharina loves the Hans
                      S   V   O

- German is SOV.
- SVO is the result of V2!
- V2 is I^0-to-C^0 movement
- The presence of the complementizer blocks I^0-to-C^0 movement

- It's not a matter of matrix versus embedded clauses because matrix clauses with a complementizer can't have V2 and embedded clauses without a complementizer can:

66. Dass er mir   so was   antun <u>kann</u>!
    that   he to-me such something on-do can
    "That he can do such a thing to me"

67. Ich glaube die Katharina <u>liebt</u> den Hans .
    I believe   the Katharina loves the Hans
    "I believe that Katharina loves Hans"

- Imagine that you find SVO sentences in the language you are investigating.

  Can you conclude that the language is V2?

No! It could be that this is a genuine SVO language.

In order to conclude that it is V2,

the verb would have to be in 2nd place <u>no matter what</u> the first constituent is:

Adv V SO

O V S

- "Verb second" is just a descriptive term for a phenomenon.

- The result is produced by I^0-to-C^0 movement.

- V2 is an example of a parameter.

- UG makes head-movement available for all languages. Some employ it in I^0-to-C^0 movement, which produces the strings that can receive the descriptive label "verb second".

Alright. So this is I^0-to-C^0 movement.
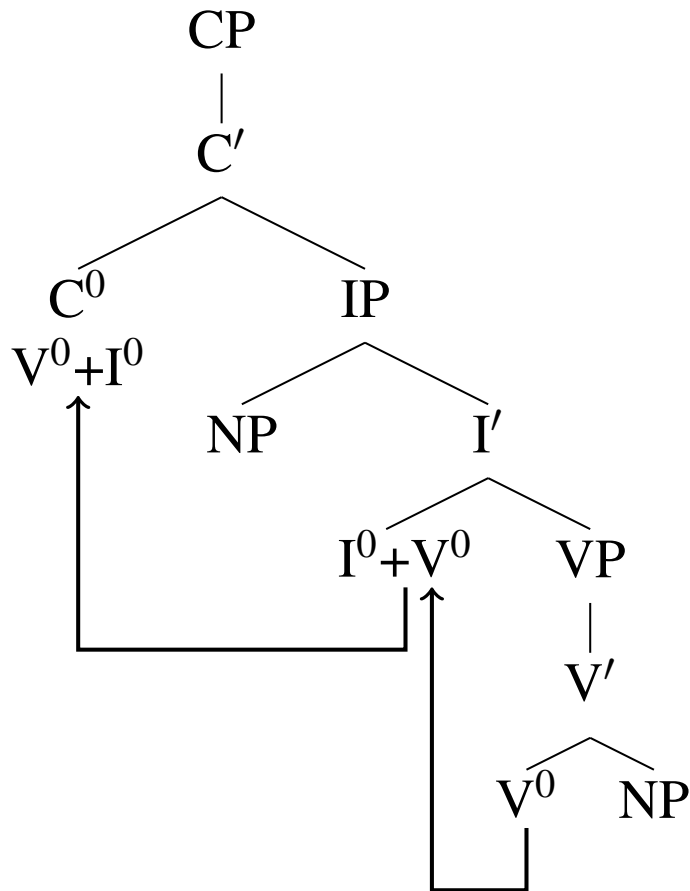# But how does the verb get to I^0 to begin with?

- via head movement from within the VP: V^0-to-I^0 movement
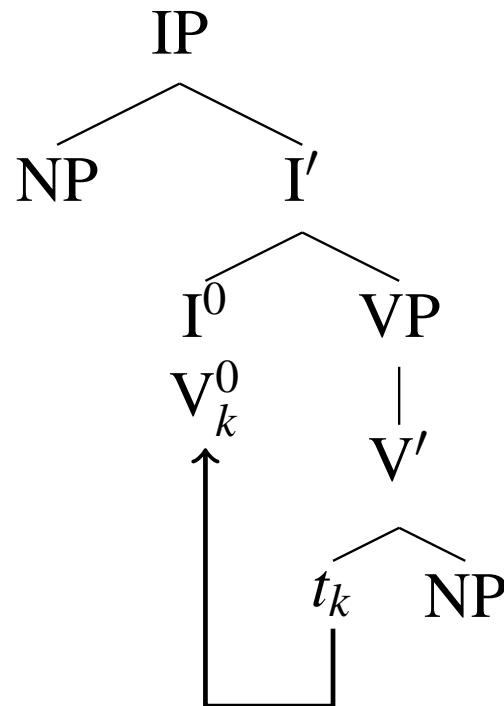
V^0 to I^0 to C^0

How do we know that it is the V^0+I^0 complex that moves up to C^0 and not just I^0 or V^o by itself?

Because the verb appears in C^0 completely inflected.

CP
|
C′
C^0 IP
V^0+I^0
        NP   I′
            I^0+V^0 VP
                            |
                            V′
                        V^0 NP

- To see V^0 -to- I^0 movement in simple action, one should really not look at English, because English has the added complication of *do*-insertion.
- So best to leave the question of English V^0 -to- I^0 for a more advanced class.
- A straightforward language to study V^0 -to- I^0 in is French.
- We saw that I^0 -to- C^0 movement was triggered by among others, the need to form questions in English.

What might trigger V^0 -to- I^0 ?

The need to get Tense and Agreement on the verb.

This predicts that a verb with tense and agreement will be

in a different position in the tree than an infinitival verb.

- So can how we tell whether V^0 -to- I^0 has taken place?
- Well, how could we tell if I^0 -to- C^0 movement took place?
- It affects the word order! The verb appears before the subject.

46d.

Who must she interview?
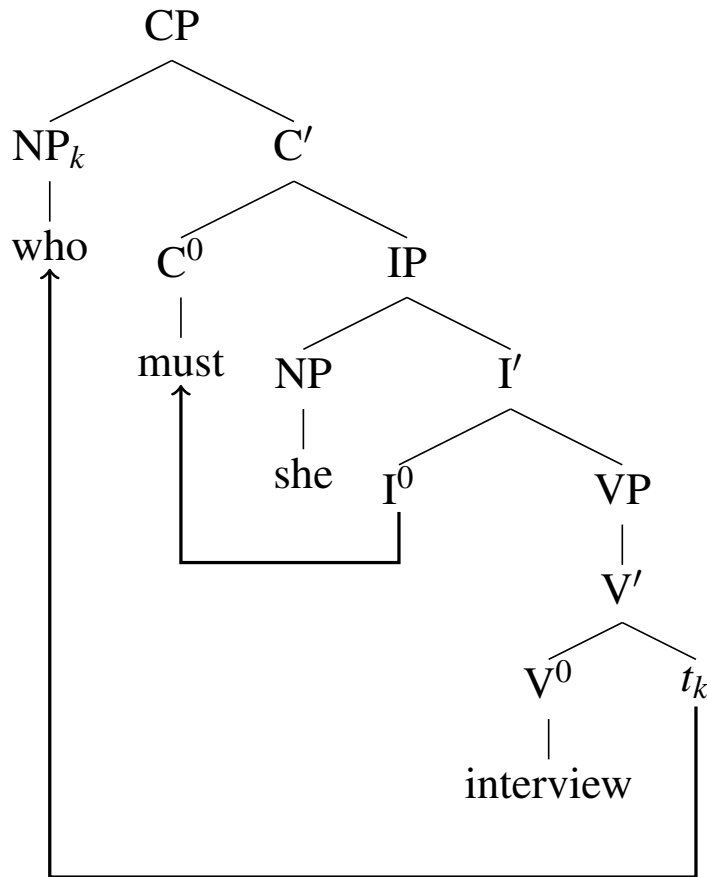
Maybe we should look for similar effects on word order with V^0 -to- I^0 movement: Let's assume that there is an element α, of which we are certain that it is generated under I^0 but above the VP. If, in a tensed sentence, the finite verb appears to the left of α, we can conclude that it has moved to I^0. If the finite verb appears to the right of α, we can conclude that it did not move to I^0. The infinitival verb would be predicted to appear after α.

NP_S $\qquad$ I^0 $\qquad$ α $\qquad$ V^0 $\qquad$ NP_O

NP_S V α $\quad$ NP_0 $\rightarrow$ V^0 -to- I^0
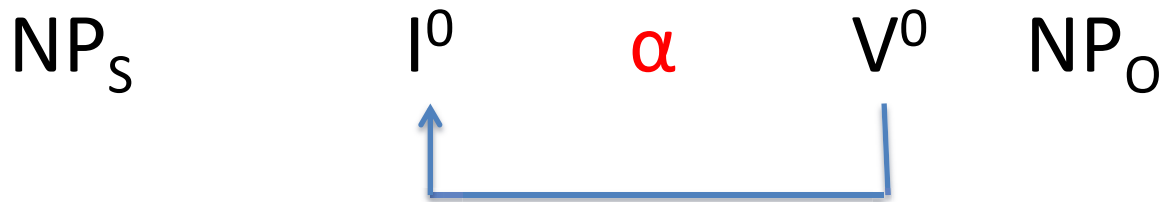
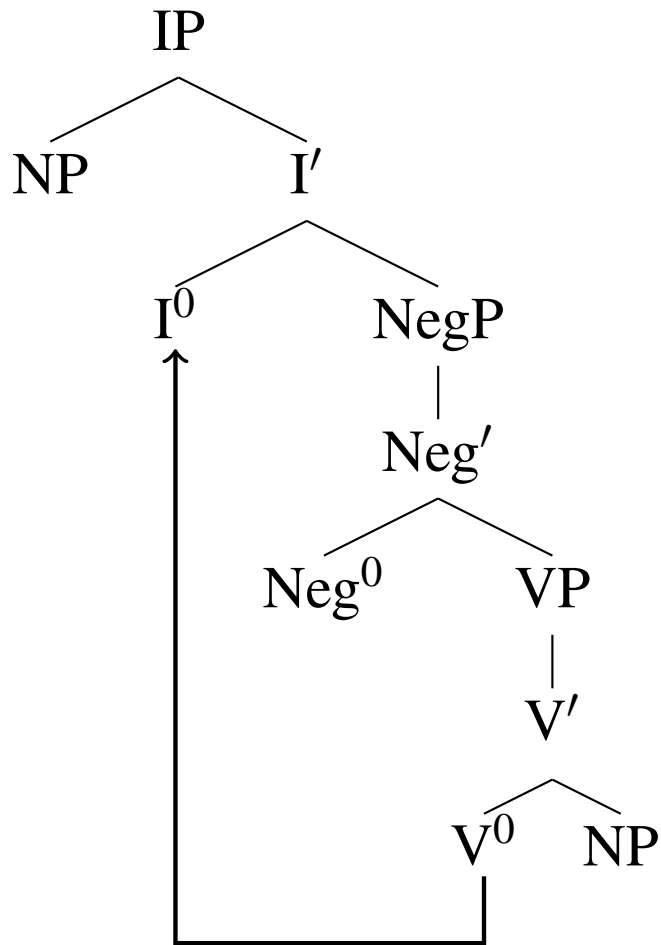NP_S $\quad$ α $\quad$ V NP_0 $\rightarrow$ no V^0 -to- I^0

- What are possible candidates for α ?

  -Negation

   - (certain) adverbs

- Prediction, just looking at negation:

 verb+T+A: NP_S V Neg NP_0

 infinitival verb: NP_S Neg V NP_0

(Emonds, Pollock)

The verb moving to pick up Tense and Agreement

IP
├── NP
└── I′
    ├── I⁰
    └── NegP
        └── Neg′
            ├── Neg⁰
            └── VP
                └── V′
                    ├── V⁰
                    └── NP

$$\text{IP}$$

$$
\begin{array}{c}
\text{IP} \\
\swarrow \qquad \searrow \\
\text{NP} \qquad \text{I}' \\
\end{array}
$$

20

The prediction is verified:
68a. Pierre (ne) voit pas Marie
   Peter   sees not Marie
   "Peter does not see Marie"

 b.*Pierre (ne) pas voit Marie
   Peter not sees Marie

69a. Ne pas voir Marie est stupide
   neg see Marie is stupid
   "To not see Marie is stupid"

 b.*Ne voir pas Marie est stupide
   see neg Marie is stupid

MIT OpenCourseWare
http://ocw.mit.edu

24.902 / 24.932 Language and its Structure II: Syntax
Fall 2015