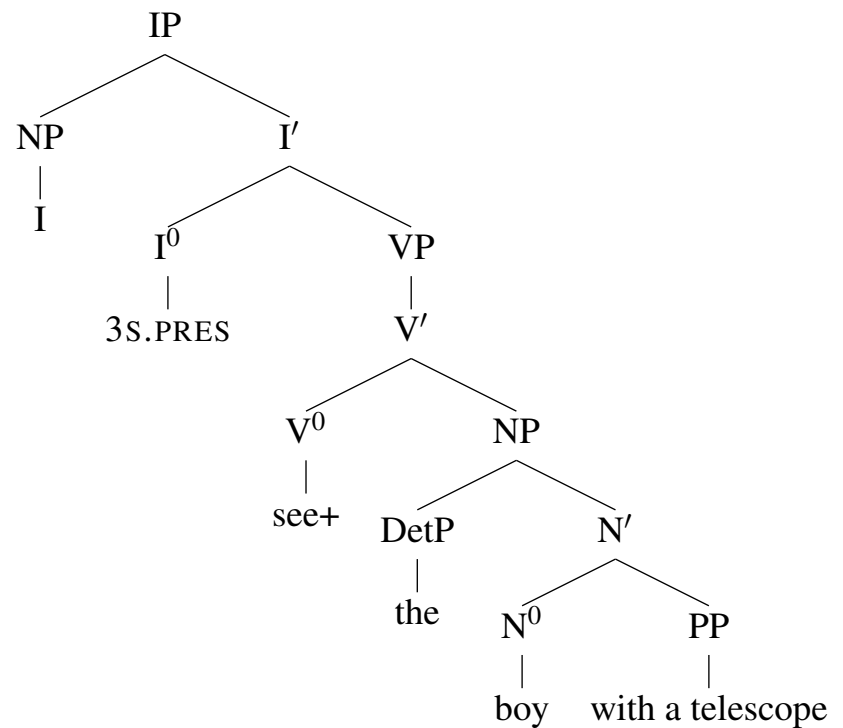
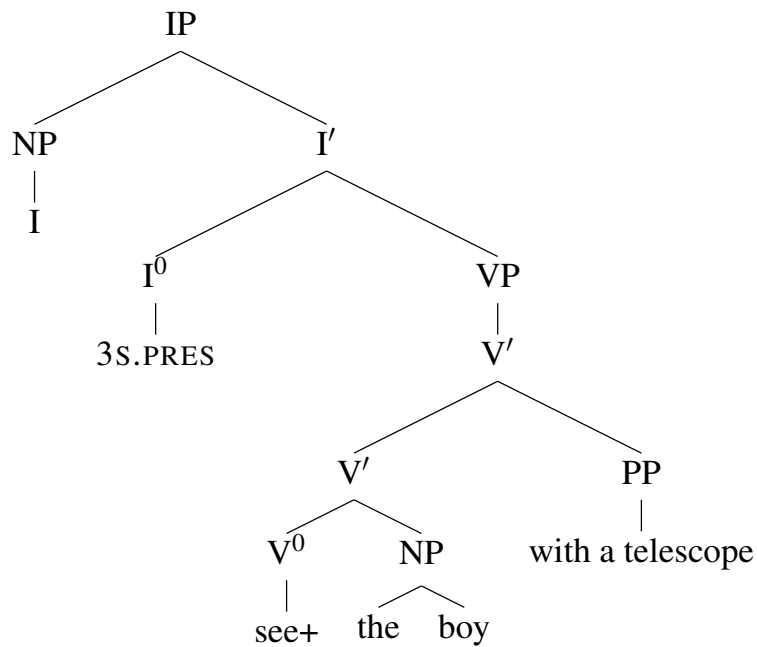


X'bar schema and Locality in Syntax

- The X'bar schema captures certain important locality conditions.
- Specifically, there are certain relations that a head can enter only with its specifier, complement or adjunct.
- And not with anything *inside* its specifier, complement or adjunct.
- We already saw one such case:

A head can be modified only by an adjunct within its own maximal projection:

1. I saw the boy with the telescope



Locality I: Theta-roles

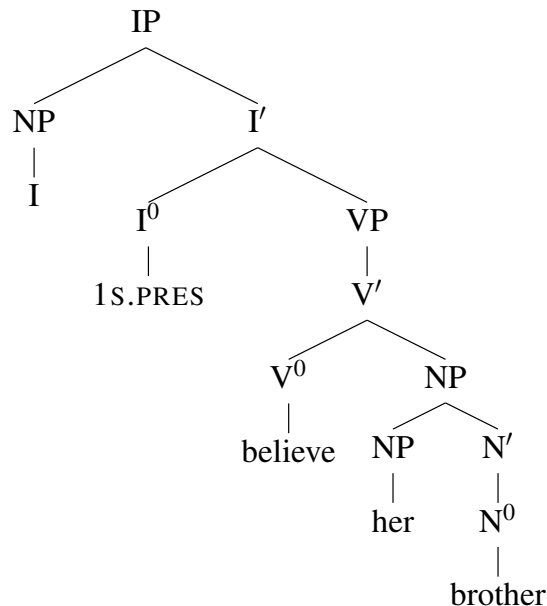
- A theme theta-role is given by a verb to its complement NP (we will not be discussing the agent theta-role):

2. I believe her

but not to an NP *inside* its complement:

3. I believe that she is the thief

4. I believe her brother

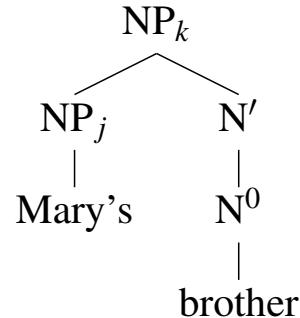
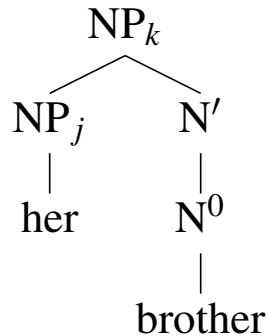


In (3) and (4) it is not conveyed that I believe her. That is *believe* does not assign a theta-role to *she* and *her*.

The locality for theta-role assignment to *she* and *her* by the verb is not satisfied.

The arguments that receive the theme-theta-role are the entire underlined constituents.

- Parenthetically:



Note the subscripts on the NPs. These subscripts are called “referential indices”. Whether they are letters or numbers or which letters or numbers they are is completely unimportant.

The only thing that is important is whether two referential indices are the same or not. If they are the same, the two NPs refer to the same individual in the model (or *corefer* or are *coreferential*). If they are not the same, the two NPs *do not corefer*.

And what about the N^0 .. on the N^0 . Referential indices are carried by maximal projections only.

Locality II: Case

- In many languages, nouns (and all nominal modifiers, including adjectives, and determiners) carry a morpheme that we call “Case”. There are languages with a very rich Case system.
- Have you heard of a language with rich Case morphology?
- In English, you can only see case on pronouns:
nominative: I, she, he, we, they
accusative: me, her, him, us, them
genitive: my, her, his, our, their

- In case you thought the following:

Nominative → agent

Accusative → theme

Genitive → possessor

think again:

5. He_{NOM} was arrested by her_{ACC}

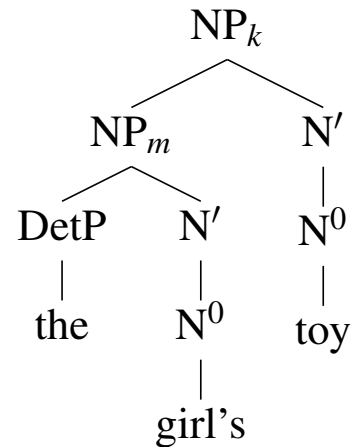
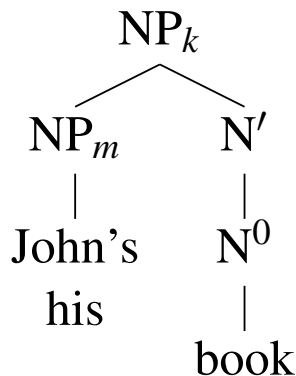
6. John's chair

The Genitive on *John* does not determine a particular relationship. The chair can be the one he owns, the one he designed, the one he photographed for *Architectural Digest*, the one he sat on, the one he is supposed to carry to a different room, etc.

In English (and other Ls) there is no connection between choice of Case and interpretive considerations like theta-roles.

- English nouns and names look the same in the Nominative and the Accusative. For example, *Susan, the boy* could be either NOM or ACC.
- English nouns and names in the Genitive, take “ ’s”: *The boy’s, Susan’s, the children’s*.
- One very important discovery in syntax was that languages that do not carry overt Case morphology behave just like the ones that do in one very significant respect.
- Transferred to within English, this means that nouns and names, which do not carry overt Case morphology, behave just like pronouns (which do make overt Case distinctions) do in one very significant respect.
(I will stop being mysterious about this soon)

- What are the environments in which the three Cases are assigned in English?
- Let me give away the environment in which Genitive Case is assigned: Genitive is assigned to an NP in the specifier of an NP:



Note: Case is a property and need of the entire NP, not of a N⁰. (*The Queen of England's hat*)

What about Accusative?

Let us start by placing an ACC pronoun in different argument positions:

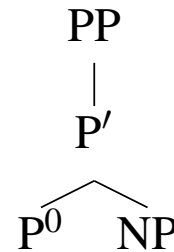
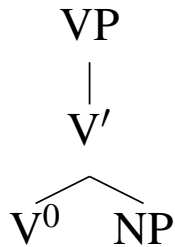
7. *Him saw Mary

8. Nicole believes him

9. * Nicole believes that him likes Mary

10. Nicole threw the ball to him

ACC is assigned to an NP in the complement position of a verb or the complement of a preposition.

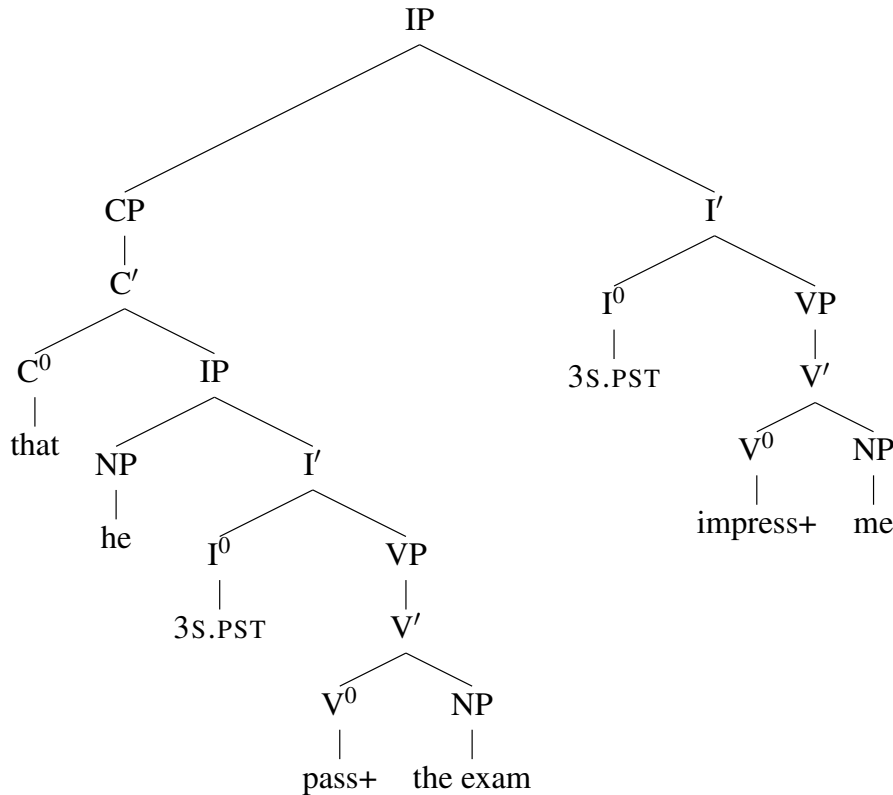


- What about Nominative? Where is it assigned?

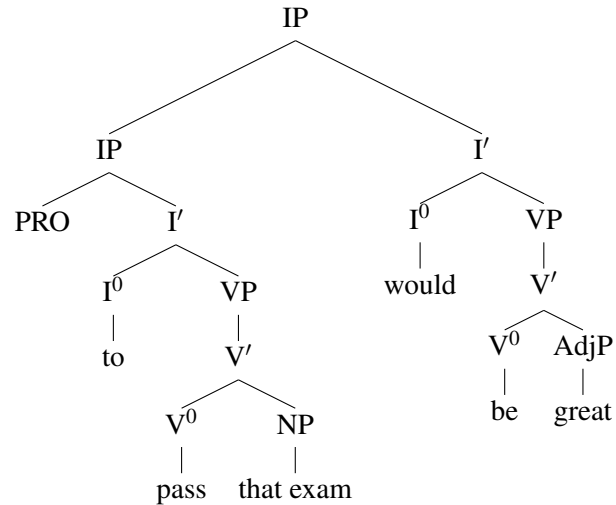
11. He passed the exam

H1: An NP receives Nominative when it is in the specifier of an IP

12. [That he passed the exam] impressed me



13. [to pass that exam] would be great



- I am putting aside the question of whether the sentential subject is a CP or an IP.
- When you hear (13) you understand that it is about somebody passing an exam. This agent of the passing of the exam is not pronounced. I represent it as “PRO” (for pronoun) in (13). This is an abstract element in the representation that will not preoccupy us right now.
- The sentential subject [to pass the exam] is infinitival. That is, the verb has no Tense or Agreement on it. Instead, what is called “infinitival *to*” is generated under I⁰.

Here are (12'-13) again:

12'. [That he passed the exam] was great

13. [To pass that exam] would be great

Look at (12'-13) side by side with (14)

14. * He to pass that exam would be great

And keep in mind our hypothesis for the assignment of Nominative Case:

H1: An NP receives Nominative when it is in the specifier of an IP

Does H1 make the right predictions?

No!

Why not?

An NP receives Nominative when it is in the specifier of a tensed IP. That is, an IP whose head I^0 carries features for Tense and Agreement.

English Case Recap

ACC

is assigned to an NP in the complement of a verb or preposition

NOM

is assigned to an NP in the specifier of a tensed IP

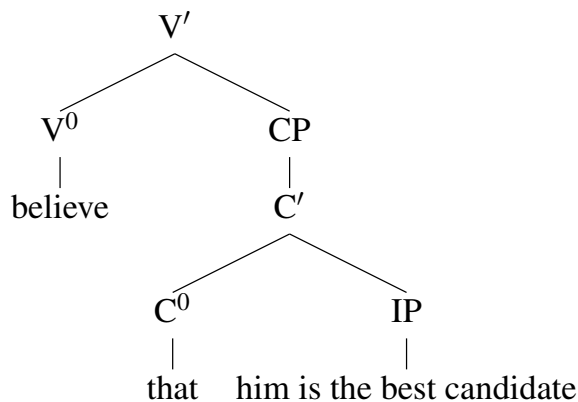
GEN

is assigned to an NP in the specifier of an NP.

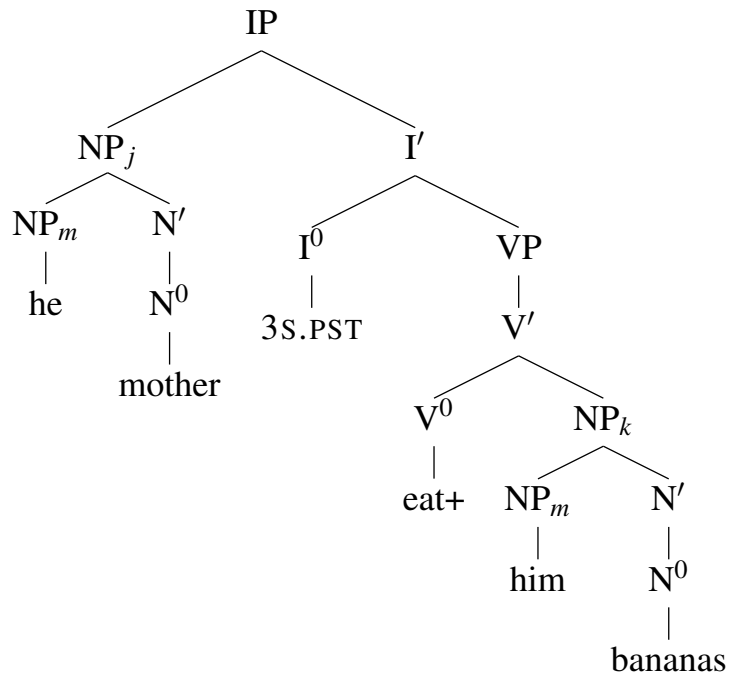
Back to Locality: English Case Recap again

- ACC is assigned by a verb or a preposition
- NOM is assigned to an NP in the specifier of a tensed IP
- GEN is assigned to an NP in the specifier of an NP.
- Case is not assigned *inside* these environments

15. * I believe that him is the best candidate



16. * He mother ate him bananas



17. His mother ate his bananas

- A head “governs” its specifier, complement and adjunct(s)
- But not *inside* them.
- Theta-roles and Case are assigned under government.

Questions so far?

Remember from before:

- “One very important discovery in syntax was that languages that do not carry overt Case morphology behave just like the ones that do in one very significant respect.”
- “Transferred to within English, this means that nouns and names, which do not carry overt Case morphology, behave just like pronouns do in one very significant respect.”
- This significant respect is that NPs need to be in a Case-assigned position, regardless of whether there is overt Case morphology or not (Vergnaud).

The Case filter

- Case Filter: *NP_{-Case}

The Case Filter holds regardless of the presence of overt Case morphology.

For example, (18) is a violation of the Case Filter (why?):

18.* He to pass that exam would be great

But so are (19a,b), even though there are no overt Case distinctions on English names and nouns:

19a. *Paul to pass that exam would be great

b. *This student to pass that exam would be great

Similar tests hold for other languages.

Case Typology

We have seen the Case Filter (said to hold universally)

We have seen the environments in which Case is assigned in English.

We have said that other languages make many more Case distinctions than English does.

Eg. **Finnish has 15!**

But Languages can differ a long another dimension (“parameter”) when it comes to Case.

A-type language

Subject Verb Object

Subject Verb

B-type language

Subject Verb Object

Subject Verb

What is English? A-type or B-type?

20. He saw him

21. He left

What would English have looked like if it had been B-type?

22. He saw him

23. Him left

These languages (what we here called “A-type”) are called Nominative-Accusative (NOM-ACC) languages.

Ergative – Absolutive languages

Many such languages!

Niuean (Austronesian, Polynesian –data from Clemens 2014)

24. Kua kitia e Sione a Peleni he fale.koloa haana

PFV see ERG Sione ABS Peleni LOC shop POSS

'Sione saw Peleni at his shop.'

25. To fano a Sione ke he taone apogipogi

FUT go ABS Sione GL LOC town tomorrow

'Sione will go to town tomorrow.'

More on the structural organization of Language: back to the beginning!

- Remember some of these sentences:

26. Mary_k thinks that she_{k/m} is smart

27. She_{m/*k} thinks that Mary_k is smart

28. [Her_{m/k} friends]_j think that Mary_k is smart

29. That she_{m/k} failed the exam really bothers Mary_k

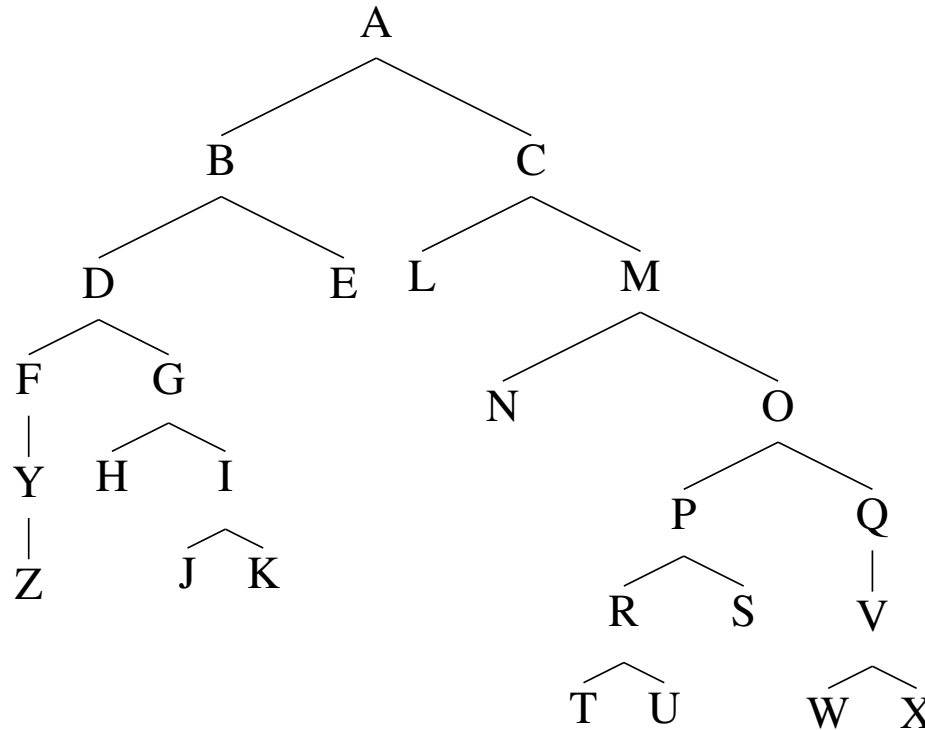
When is coreference permitted between the pronoun and the name and when not?

Now that we know how to draw trees, we can get to an answer.

C-Command

- There are many possible relations that one can define on a syntactic tree, but c-command is by far the most important one and it raises its head in many corners of the grammar.
- A node α c-commands a node β iff
 - Every node dominating α also dominates β
 - and
 - α does not dominate β , nor β α .

C-command practice!



Why did I not indicate XP or X' or X⁰ status?

Now look at (27,28) and formulate a condition on coreference between a pronoun and a name.

Version 1: If a pronoun c-commands a name, the pronoun and name cannot corefer.

What about these?

26. $Mary_k$ thinks that $she_{k/m}$ is smart

29. That $she_{m/k}$ failed the exam really bothers $Mary_k$

- The condition does not just hold for names, but for all “R-expressions”
- “R-expressions” are NPs that are referential by themselves, rather than get their reference from some other element, the way *she*, or *themselves* do.

30. $[The\ tall\ girl]_k$ thinks that $she_{k/m}$ is smart

31. $She_{m/*k}$ thinks that $[the\ tall\ girl]_k$ is smart

32. $[Her_{m/k}\ friends]_j$ think that $[the\ tall\ girl]_k$ is smart

33. That $she_{m/k}$ failed the exam really bothers $[the\ tall\ girl]_k$

So our condition should go from V1:

“If a pronoun c-commands a name,
the pronoun and name cannot corefer.”

to V2:

“If a pronoun c-commands an R-expression,
the pronoun and the R-expression cannot corefer.”

- Let’s introduce the term “binding”

A node α binds a node β iff

α c-commands β

and

α and β are coindexed

- If a node is not bound, it is free
- **V3: An R-expression must be free**

(i.e. an R-expression cannot be c-commanded by a co-indexed element)

Our V3 is what is famous as “Binding Condition C” (Chomsky 1981)

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