Binding Theory:
Anaphors
More on binding
Wh- movement
Non-syntactic factors?
You are not your grammar

I-language
Chapter 8:
Anaphor Binding

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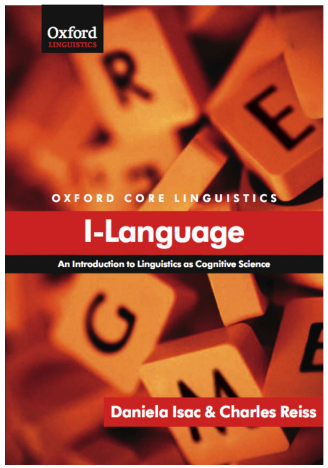

Outline

1. Binding Theory:
   - Anaphors
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   - Wh- movement
2. Non-syntactic factors?
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"The beginning of science is the recognition that the simplest phenomena of ordinary life raise quite serious problems: Why are they as they are, instead of some different way?" [Noam Chomsky, Language and Problems of Knowledge:43].

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Problem

Account for distribution and reference of anaphoric (reflexive) pronouns like *herself*.
[Note: we are **not** interested here in the homophonous form that is used for emphasis, as in *Mary, herself, killed the snake.*]

All and only

- Our model must not overgenerate or undergenerate.
- It must generate ALL AND ONLY the grammatical sentences

Some data:

a. *Mary$_i$ sees herself$_j$.

b. Mary$_i$ sees herself$_i$.

(subscript indices mark reference)

Hypothesis I:

herself must be preceded by a coreferent phrase.

More data:

c. *Mary$_i$ knows that Jane$_j$ loves herself$_i$.

d. Mary$_i$ knows that Jane$_j$ loves herself$_j$.

Hypothesis II:

No other noun phrase may intervene between *herself* and a coreferent preceding noun phrase.

More data:

e. *The teacher$_j$ Mary$_i$ likes flogs herself$_i$.

f. The teacher$_j$ Mary$_i$ likes flogs herself$_j$.

g. *A friend$_j$ of Mary's$_i$ flogs herself$_i$.

h. A friend$_j$ of Mary's$_i$ flogs herself$_j$.

i. Mary$_i$ told Sue$_j$ that Jane$_k$ likes her$_{i,j,*k,l}$.

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Hypothesis III:

An anaphor, like *herself*, must be bound in its clause.

Some definitions

- **Clause**: informally, let's just say that each verb and 'whatever goes with it' constitutes a clause.
- **Binding**: A constituent α of a sentence *binds* another constituent β just in case α and β are coindexed (coreferential) *and* α C-COMMANDS β.
- **C-command**: α c-commands β just in case α does not contain β, but every category that contains α contains β. (This is most easily seen if we draw trees for our sentences and translate *contain* to *dominate*.)

What are the c-command relations in this tree?

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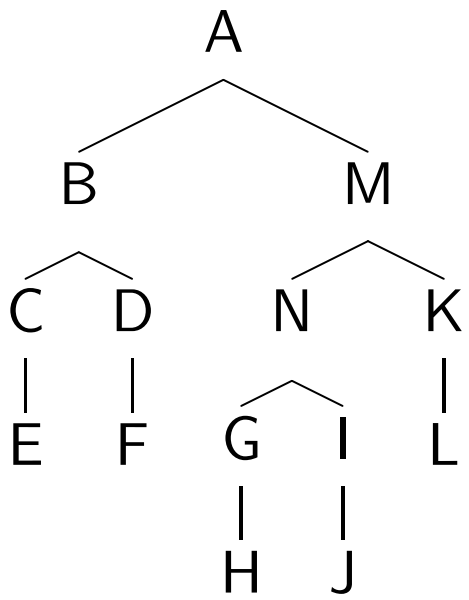
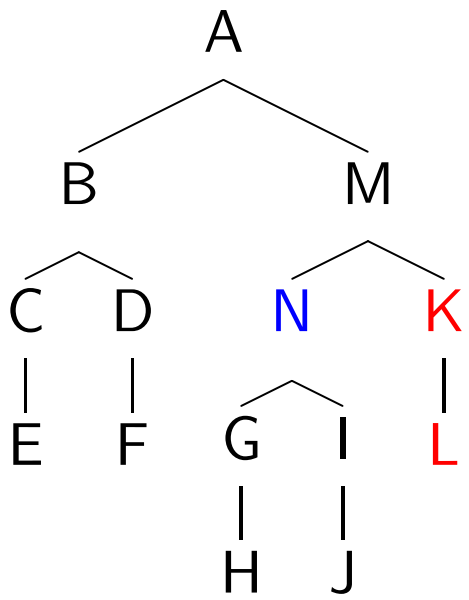


Here is what N c-commands



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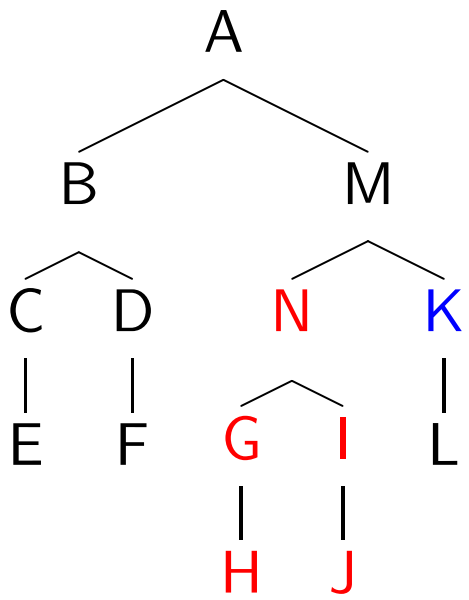
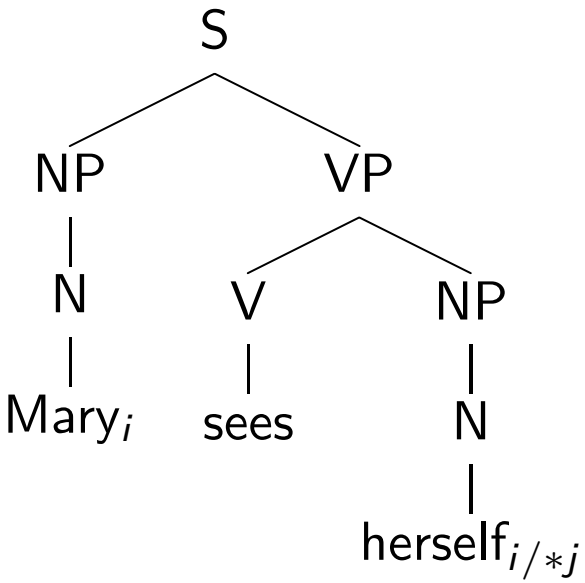


c-command

The relationship of c-command is not relevant only to binding phenomena. It is a relationship that pervades syntax. We'll come back to this.

Simple case

Mary_i sees $\text{herself}_{i/*j}$.



Simple case with indexes fixed

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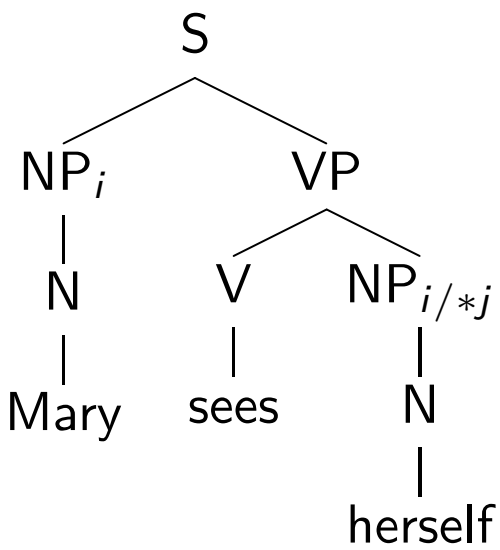

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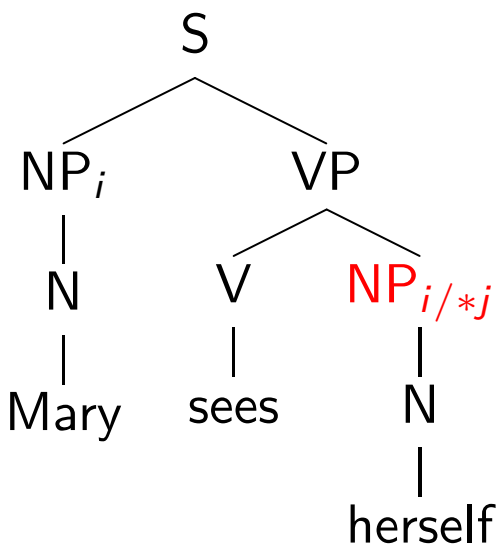

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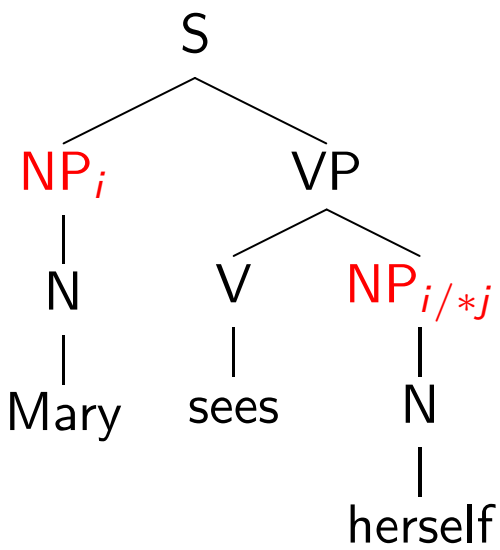
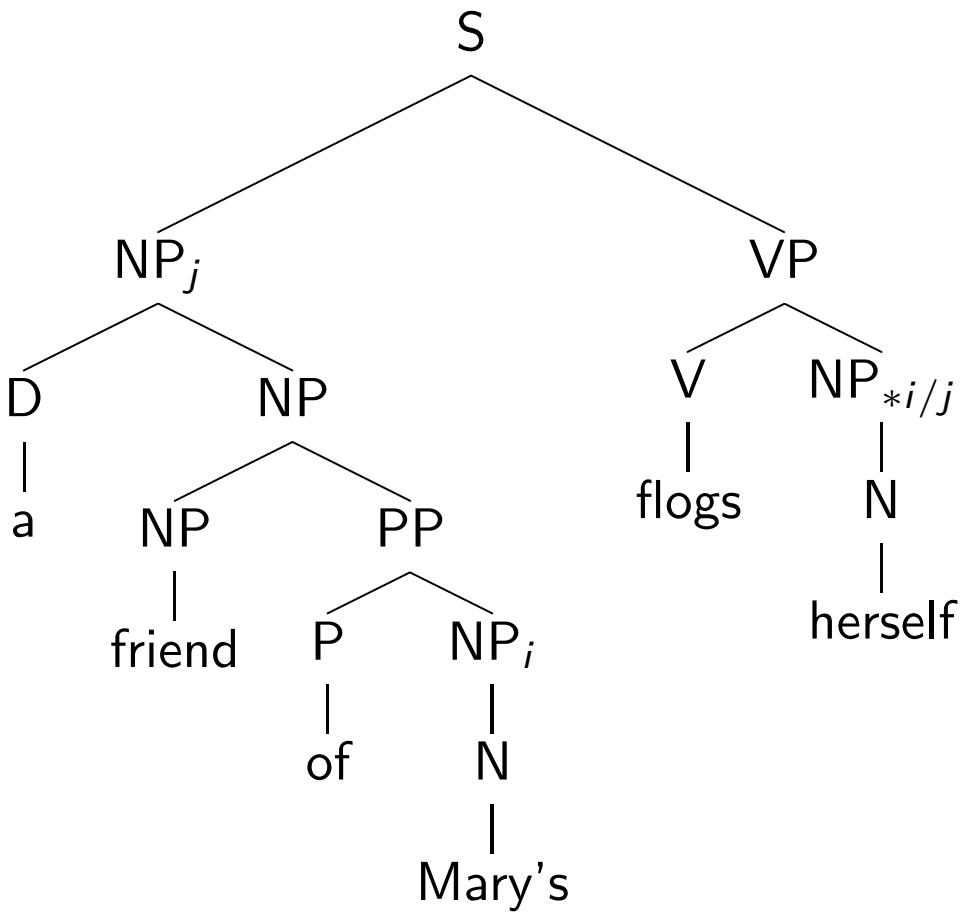


NP within NP

[A friend of Mary's$_i$]$_j$ flogs herself$_{*i/j}$.



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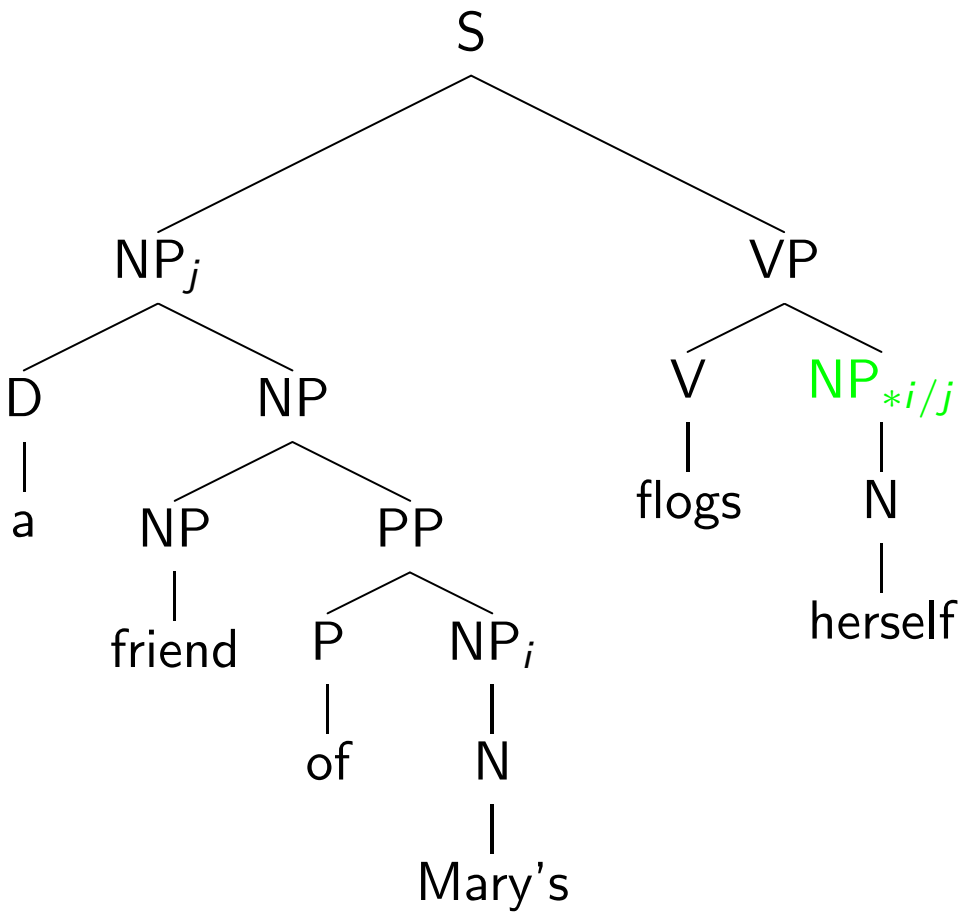

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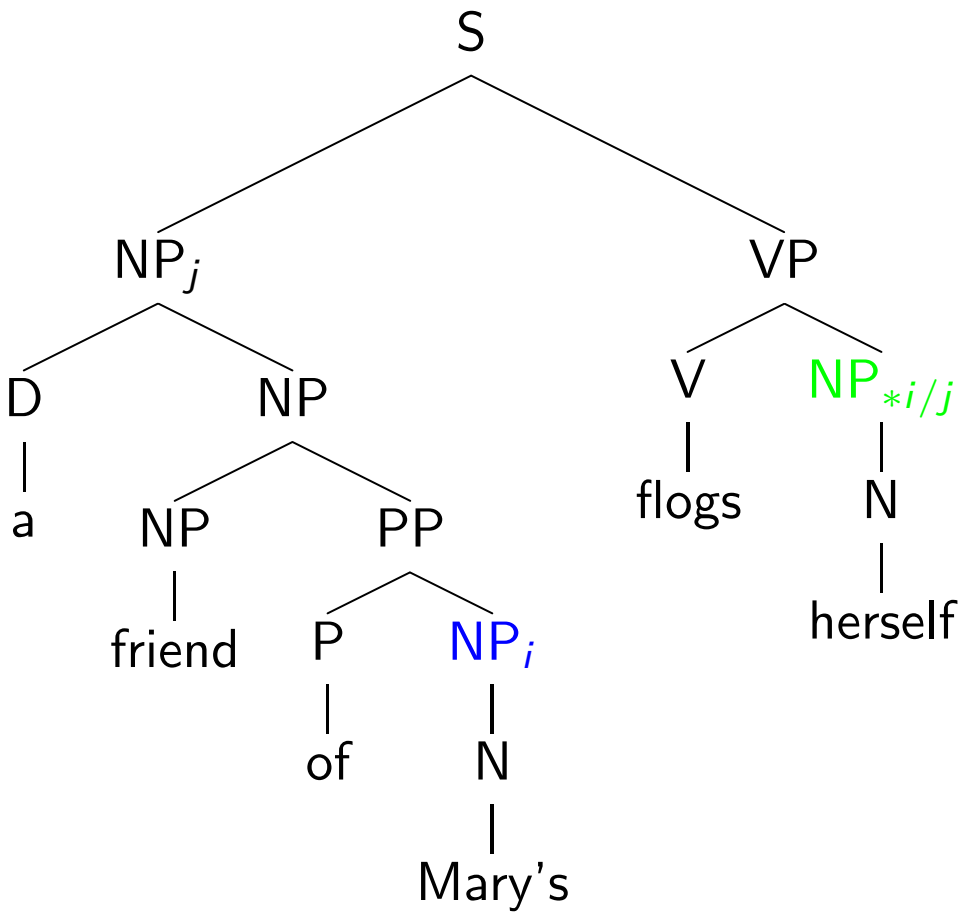

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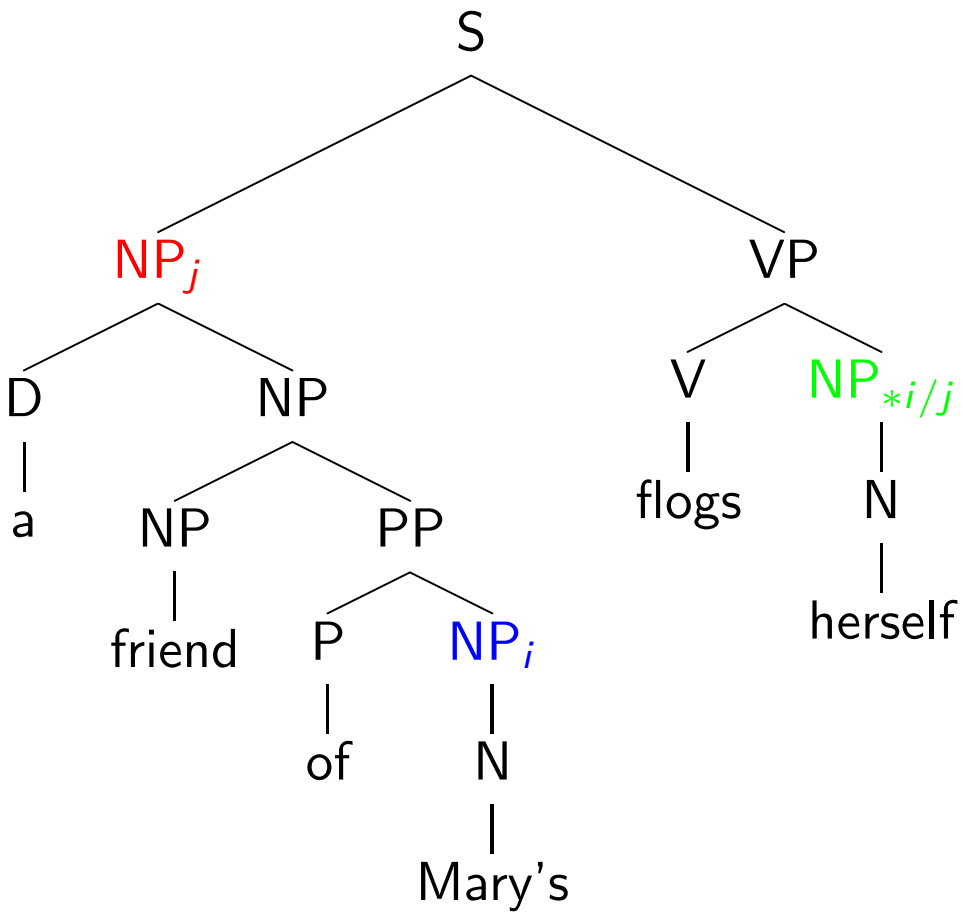
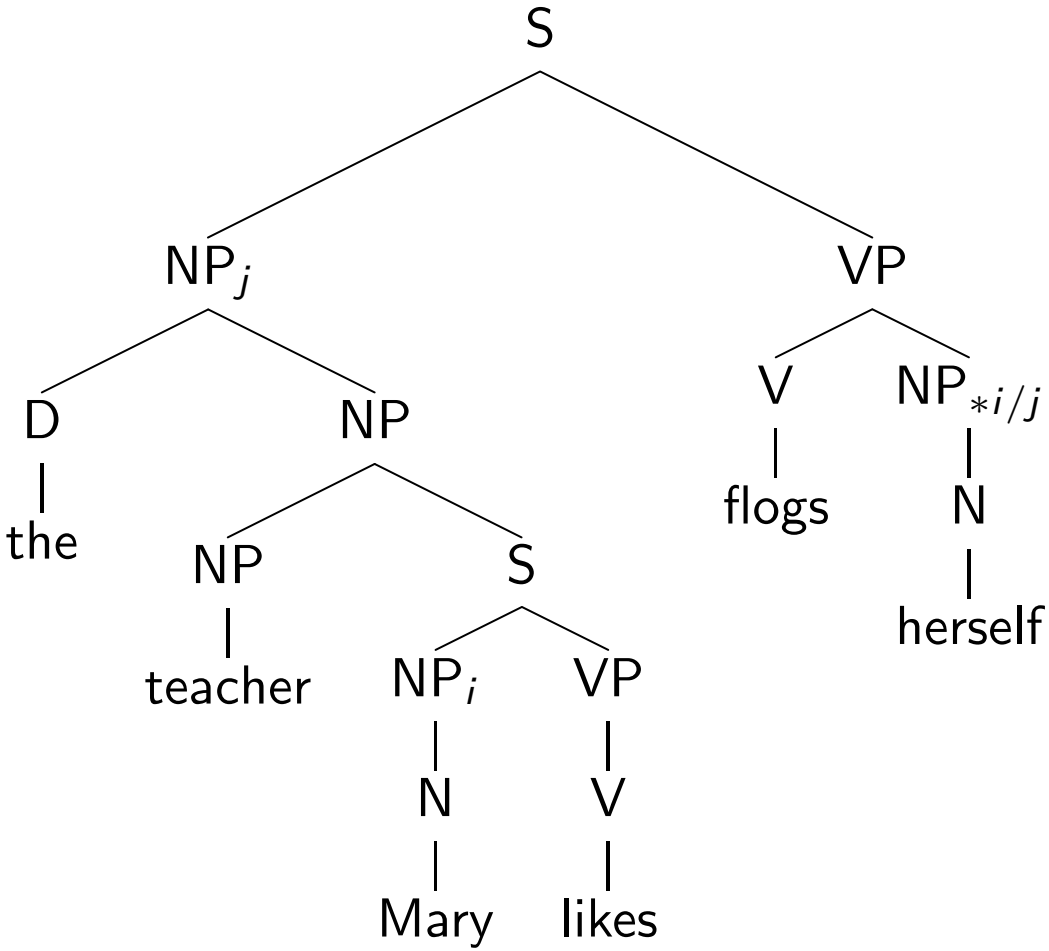


Relative clause

The teacher Mary likes flogs herself.



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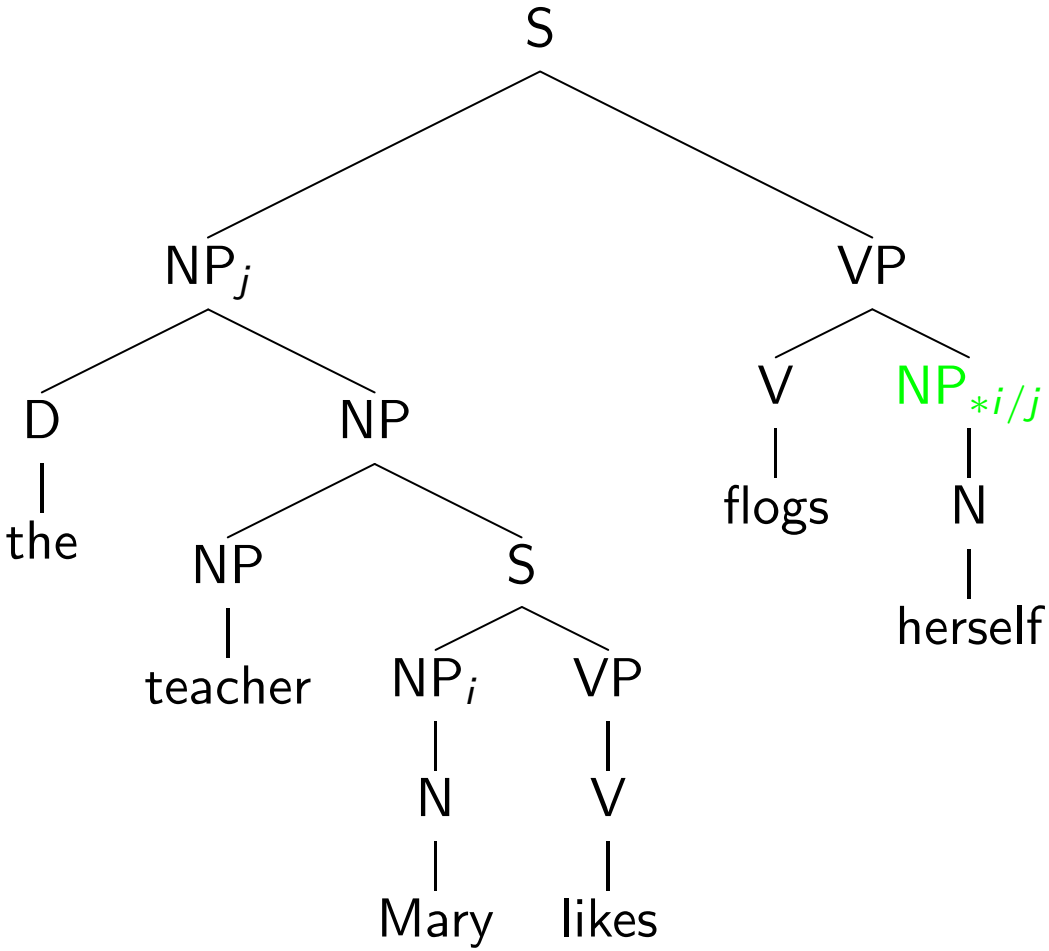

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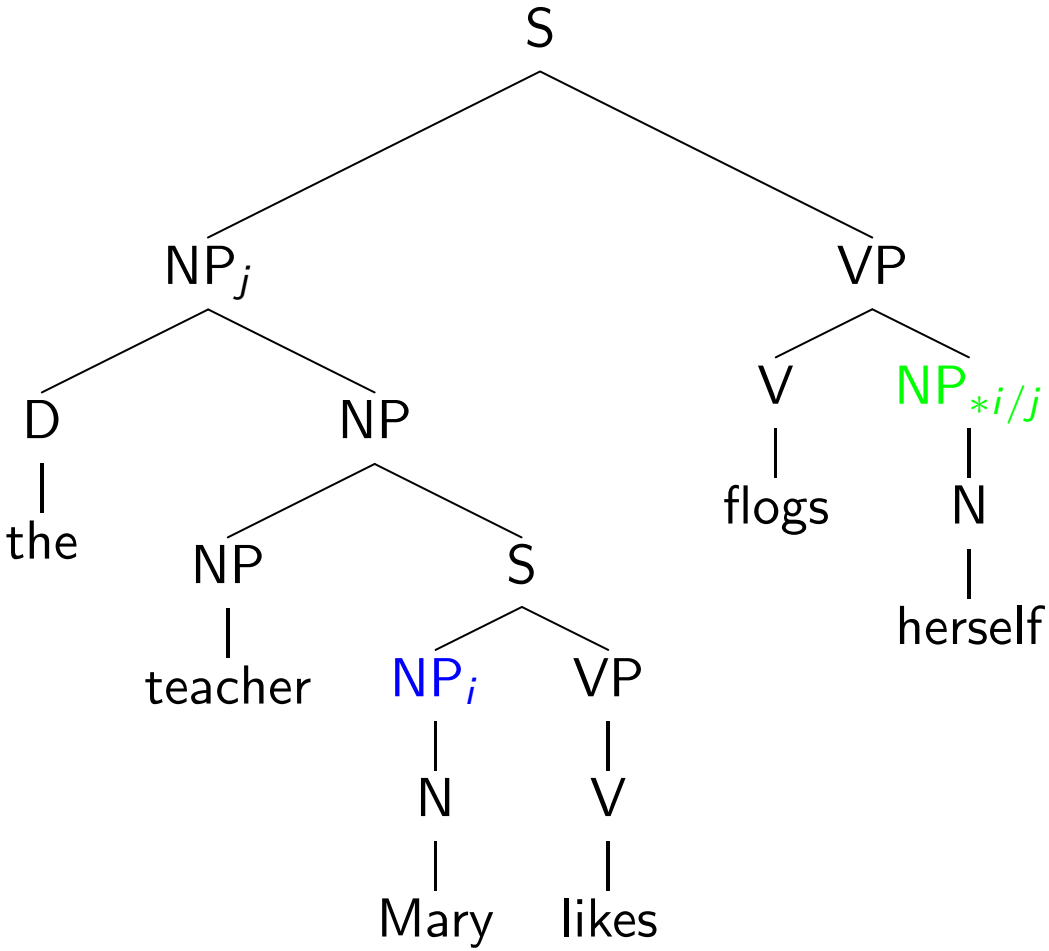

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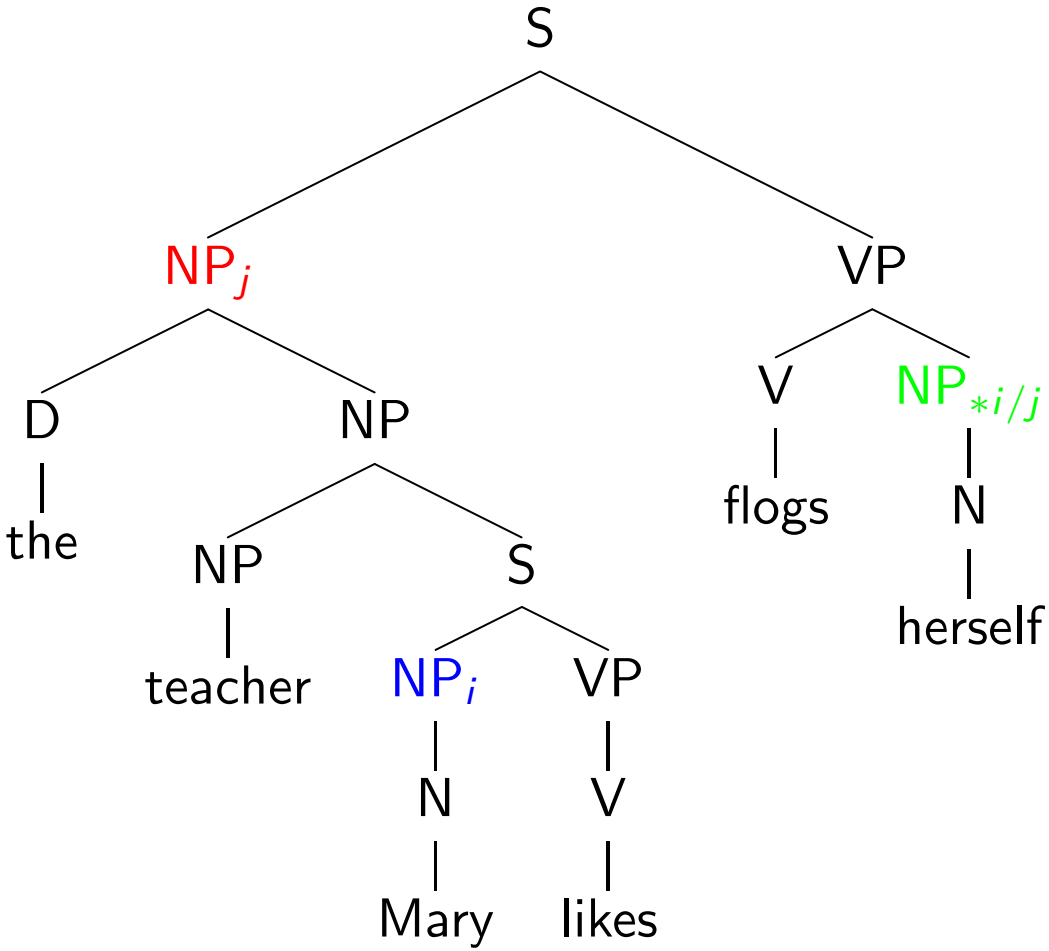
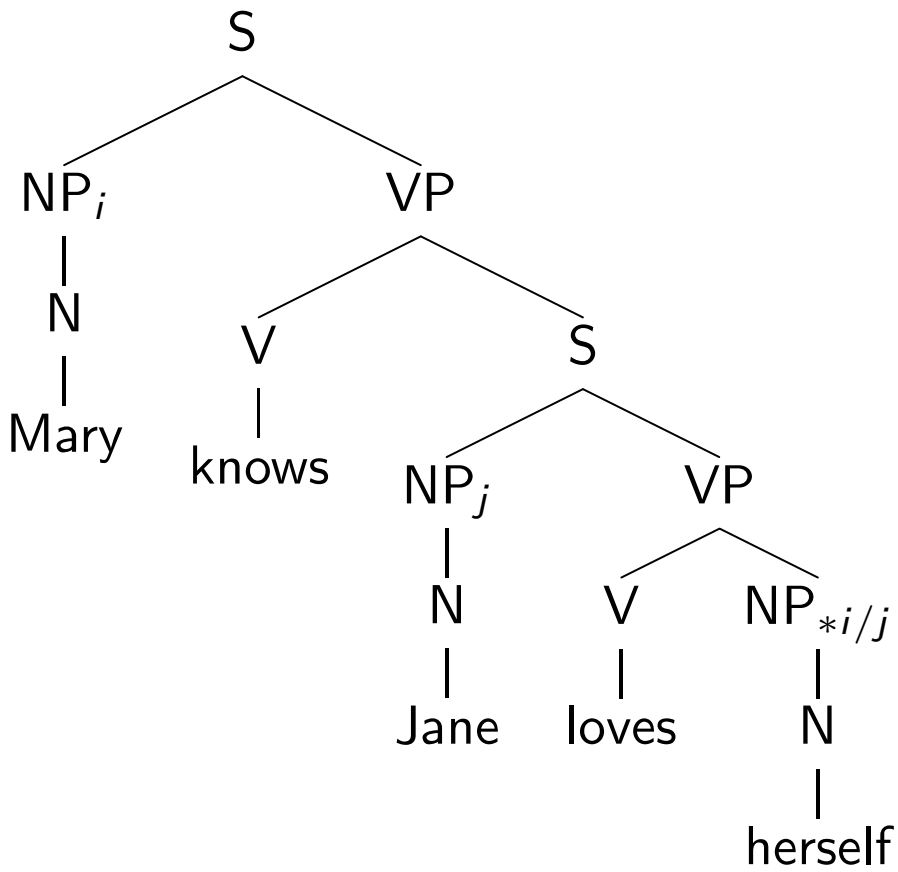


Embedded sentence

[Mary$_i$ knows [Jane$_j$ loves herself$_{*i/j}$]].



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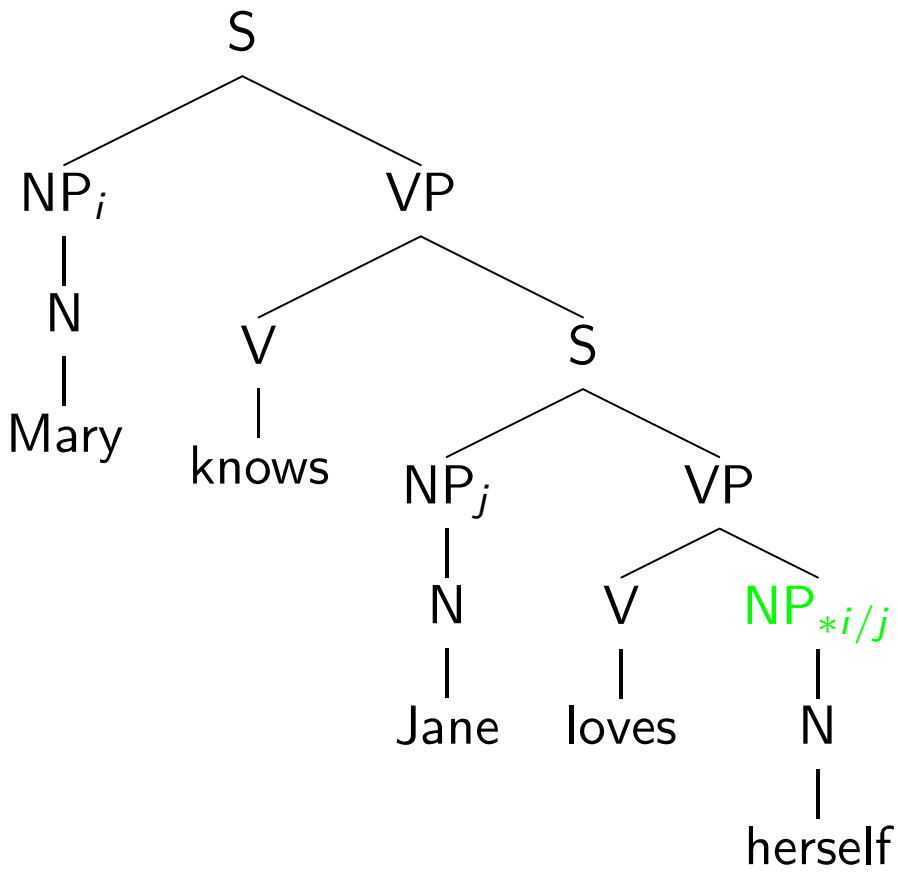

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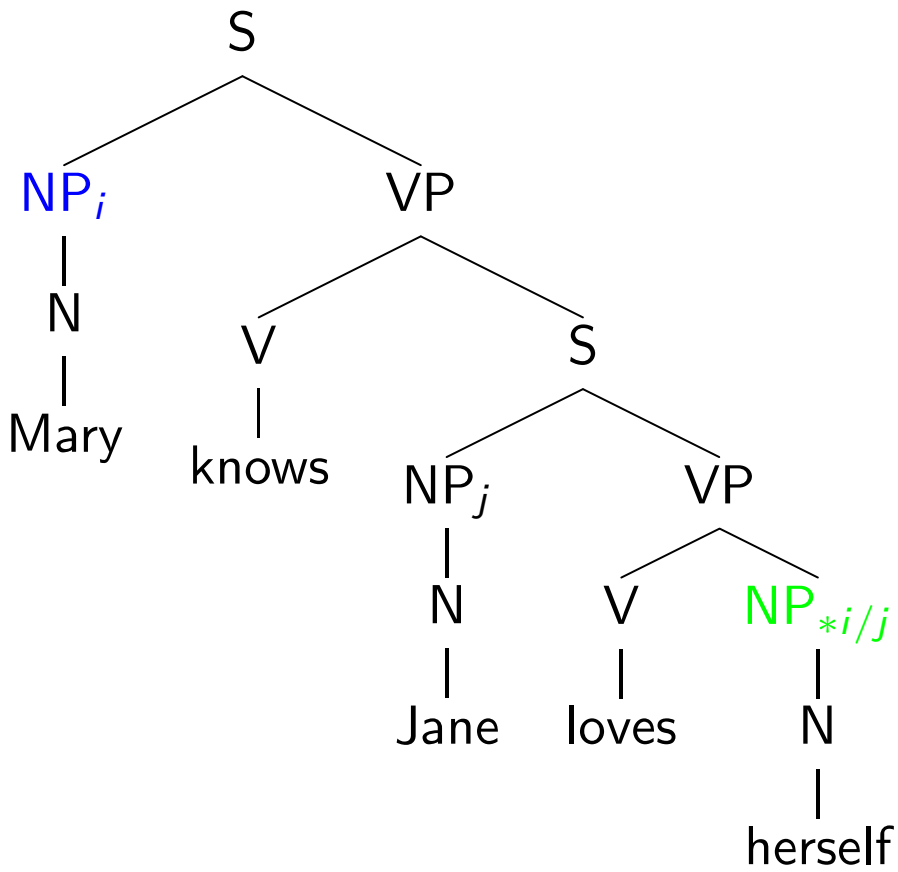

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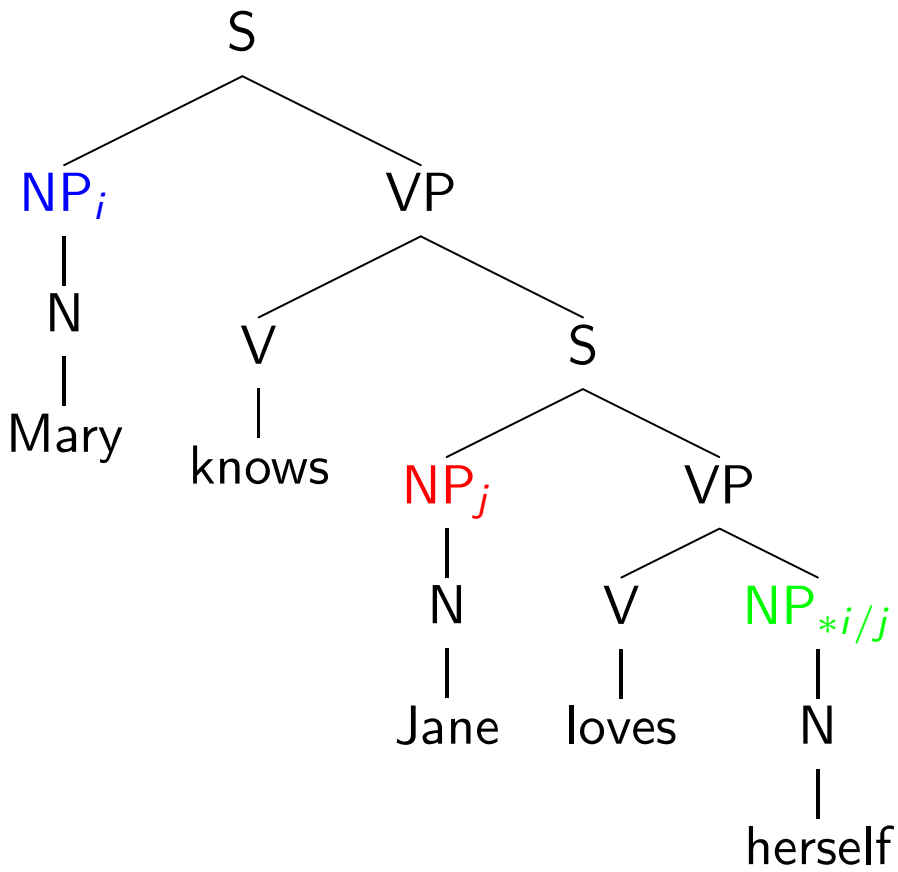

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Non-syntactic factors?
You are not your grammar

There are several types of evidence that support a structural, rather than semantic account of pronoun and anaphor (reflexive) distribution.

The binder is not always an agent or doer:

- *John saw himself.*
- *John looked at himself.*

This difference between agent and experiencer is overtly encoded in many languages.

Semantic account?

A semantic account wrongly predicts that the subject of passives could be anaphors:

- **Himself was shot by John.*

Anaphors can never be subjects because there is never anything high enough in the syntactic tree to bind them.

Although all our examples above involved subject antecedents of 'direct objects', there are other possibilities in English:

- *John wrote a letter to himself.*

himself is a recipient or beneficiary, not the result of the writing activity. Compare:

- *This letter wrote itself.*
- *The teacher assigned Mary herself as a buddy.*
- *The psychotherapist revealed Mary to herself*

Cross-linguistic variation

Binding phenomena vary across languages. For example:

i. Sigga$_i$ segir að Maria$_j$ elski sig$_{i/j}$

ii. Sigga$_i$ says that Maria$_j$ loves herself$_{*i/j}$

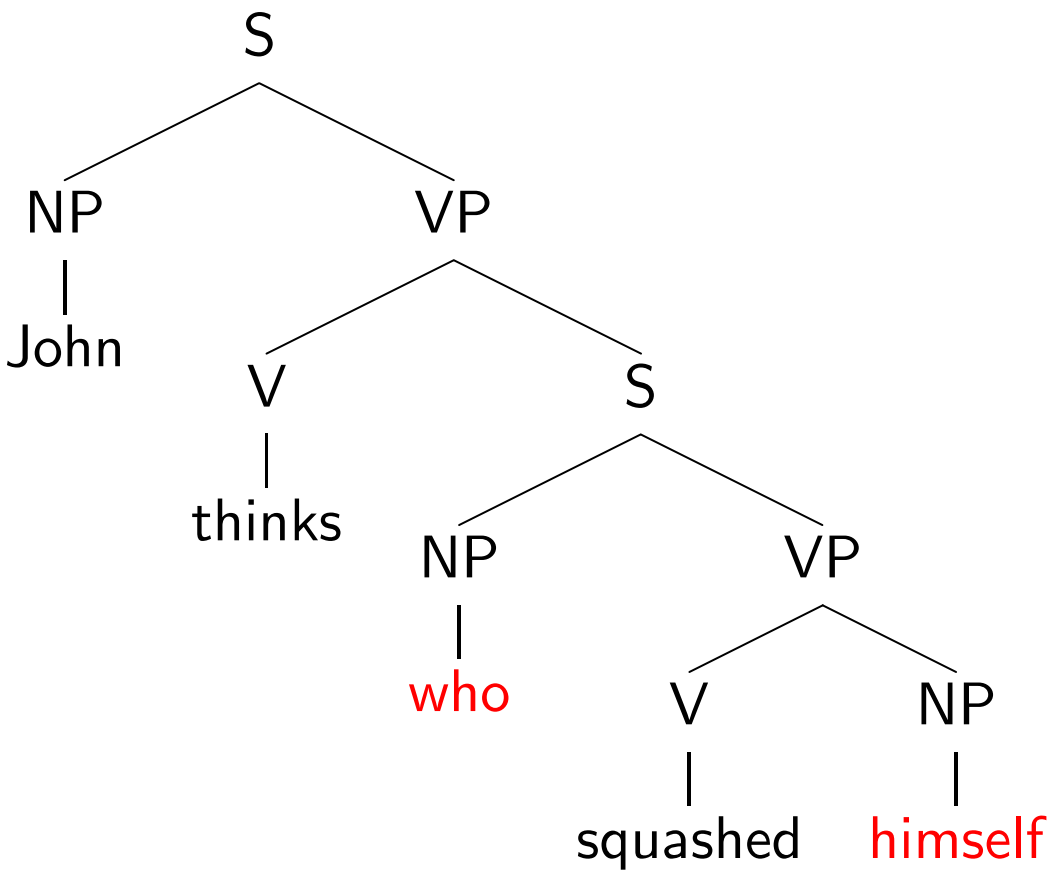
Structure dependence

- Binding of reflexives
- wh-movement
- *I know Mary's*
- stress assignment rules

Wh- movement

- John squashed Mike.
- Who did John squash?
- Who squashed himself?
- Who$_i$ does John$_{*i,j}$ think squashed himself$_{i,*j,*k}$?

Informal Deep Structure—shows only base positions



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Can non-structural factors influence interpretation?

- *Janie$_i$ asked Loretta$_j$ to fix her$_{i,j}$ bicycle*
  — at least two readings.
- *Rayette$_k$ asked Eve$_l$ to fix her$_{k,l}$ bicycle*
  — at least two readings.

Parallelism

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How many readings are available?

Janie$_i$ asked Loretta$_j$ to fix her$_{i/j}$ bicycle and Rayette$_k$ asked Eve$_l$ to fix her$_{k/l}$ bicycle.

— how many of the following readings are possible?:
i & *k*; *i* & *l*; *j* & *k*; *j* & *l*

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Sexism!

‘?’ The pilot called the flight attendant into the cabin because she needed his help.

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You are not your bank account.
You are not the clothes you wear.
You are not the contents of your wallet.
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Your grammar and you

Your grammar is only one aspect of you that determines what you say and how you interpret sentences.

What influences acceptability of sentences?

- John told Bill to kiss himself.
- John told Bill to kiss him.
- Bill kissed himself.
- Bill outlived himself.
- Mary told Bill to kiss herself.
- The pilot called the flight attendant into the cabin because she needed his help.

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