Ling 120B: Syntax I

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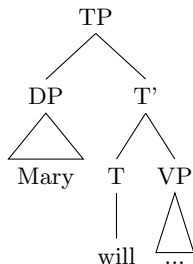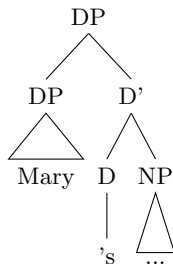
Subjects

Subjects across categories I

→ So far we only encountered two phrases with specifiers: TPs and DPs

(i) Specifier (or subject) of T or TP
(the subject of the sentence).
It can be a DP or a CP.

```
        TP
       /  \
     DP    T'
     /\    /\
    Mary  T  VP
          |   /\
         will  ...
```

(ii) Specifier (or subject) of D or DP
(the possessor)

```
        DP
       /  \
     DP    D'
     /\    /\
    Mary  D  NP
          |   /\
          's   ...
```

→ <u>VPs, APs and PPs can also have subjects</u>: let's talk about ₛₘₐₗₗ clauses!

Subjects across categories II

We know that a full sentence (=TP) can be embedded under another one.

(1)   Andi believes that [$_{TP}$ Sophie is going to win]

Today we are going to discuss cases where the embedded clause is smaller.

(2)   a. Fred saw John drunk
      b. Mary prefers her soup in a bowl
      c. I consider Bill smart
      d. Peter heard Mary leave
      e. Nico made Eve happy

First of all, we can show that they are constituents. We can coordinate them!

(3)   a. Fred saw [John drunk]   *and Mary sober*
      b. Mary prefers [her soup in a bowl]   *and her cereal in a mug*
      c. I consider [Bill smart]   *and his husband stupid*
      d. Peter heard [Mary leave]   *and the door close*
      e. Nico made [Eve happy]   *and the other candidate very sad*

What kinds of constituents are these?

Subjects across categories III

Some of them can have a *that*-TP counterpart:

a.   Peter heard [Mary <u>leave</u>] ∼ Peter heard that Mary <u>left</u>
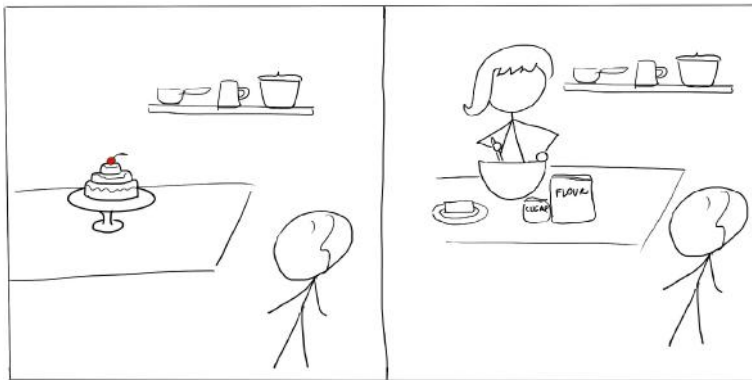b.   Peter saw [Mary <u>bake</u> a cake] ∼ Peter saw that Mary <u>baked</u> a cake

However they are incompatible with a bare verb:

a.   *Peter heard that Mary leave.
b.   *Peter saw that Mary bake a cake.
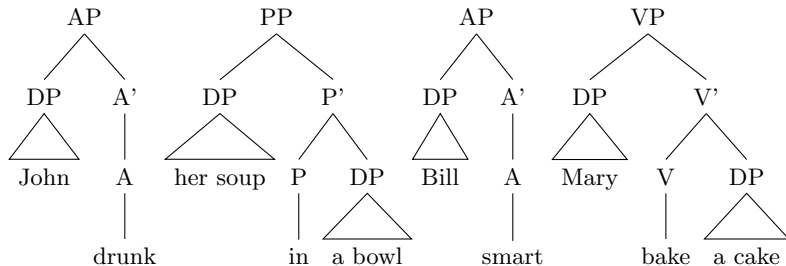
Subjects across categories IV

These two sentences seem to have different semantic requirements as well!

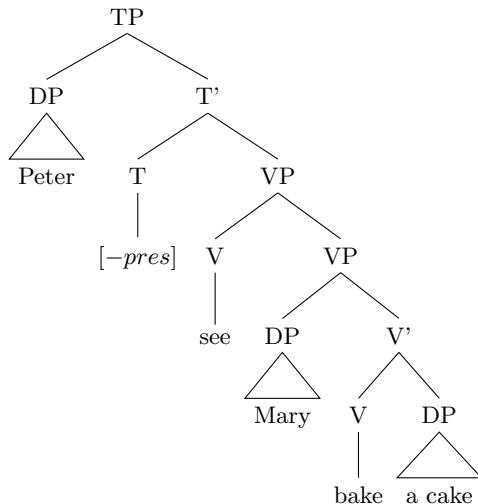(4) a. Peter saw that Mary baked a cake
    b. Peter saw Mary bake a cake

Subjects across categories V

These constituents lack the T-layer.

Subjects across categories VI

These small clauses can be the complements of verbs like 'see', 'hear', 'consider', 'prefer', 'make', etc. Here is the tree structure for (4-b):

Subjects across categories VII

Let's revise the lexical entries of VPs, PPs and APs to reflect these new discoveries!

<u>V-heads</u>

leave	V	free	(select DP)	
kiss	V	free	(selects DP)	c-selects DP
eat	V	free	(selects DP)	(c-selects DP)
give	V	free	(selects DP)	c-selcts DP, PP or c-selects DP, DP

<u>A-heads</u>

red	A	free	(selects DP)	
proud	A	free	(selects DP)	(c-selects *of*-PP or CP)

<u>P-heads</u>

in	P	free	(selects DP)	c-selects DP
with	P	free	(selects DP)	c-selects DP

Subjects across categories VIII

Practice: Tree drawing
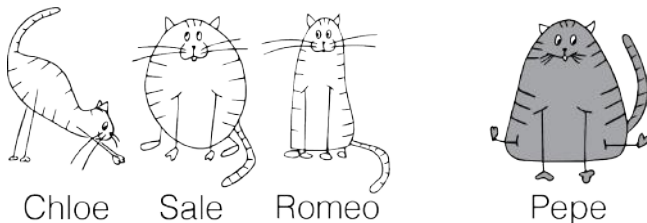Draw a tree for each of the following sentences:

a. Sanjay heard Bret cry for hours.
b. Bill made Mary anxious about her results.
c. His wife's boss saw Sue naked last night.
d. Trevor's boss made the customers satisfied and his employees upset.

.

Binding Theory

Binding Theory I

Binding theory is a theory of what controls possible coreference between different types of DPs in particular syntactic configurations.

→ Reference: The relation between a DP and the thing in the world that the meaning of that DP picks out.

→ Two DPs corefer if they refer to the same entity.

[DP Pepe] and [DP the gray cat] refer to the same individual in this context.

[DP Chloe] and [DP the skinniest cat] refer to the same cat in this context.

[DP Nico] and [DP your syntax professor] refer to the same person.

Binding Theory II

When can two DPs in a sentence refer to the same individual?

(5)   a. Sue thinks that she is the prettiest girl on earth.

      b. Sue loves her.

      c. Sue loves herself.

      d. She doesn't like Sue.

      e. The TA who graded her does not like Sue.

Here, I used colors, in linguistics we boringly[1] use indices[2] (even though, colors would be nicer!).

[1] Is boringly a word?

[2] You can pluralize 'index' in two ways: 'indexes' or 'indices' (the original Latin plural).

Binding Theory III

Indexation: Notational tool for keeping track of what DPs refer to.

Indices: i, j, k ...

(i) Two DPs with the same index refer to the same thing;

- Two DPs that have the same index are said to be co-indexed;

- Two DPs that are co-indexed are said to be co-refer (i.e. refer to the same entity in the world)

(6) I_i saw Fred$_j$ yesterday. [The poor guy]$_j$ was limping.

(ii) Two DPs with different indices refer to different things.

Based on their syntactic behavior, we need to distinguish among three kinds of DPs:

(A) Anaphors: itself, herself, yourselves

(B) Pronouns: you, me, us, him

(C) R-expressions: John, the professor...

Binding Theory IV

Quick note on notation:

Syntacticians will sometimes abbreviate two sentences that are otherwise identical, but have different indices. The two possible indices are separated by a slash (/) and the index that would make the sentence ungrammatical is marked with an asterisk (*).

(7)   John$_i$ loves himself$_{i/*j}$

is the abbreviated form of the following two sentences:

(8)   a. John$_i$ loves himself$_i$
      b.*John$_i$ loves himself$_j$

Principle A: Anaphors I

It seems that unlike pronouns and R-expressions, anaphors need a coreferential DP in the same sentence (we'll call this DP the *antecedent* or *binder*):

(9)   a. *Herself$_i$ is coming.   Anaphor: herself
        b. She is coming.   Pronoun: she
        c. Mary is coming   R-expression: Mary

> **Principle A (version 1):**
>
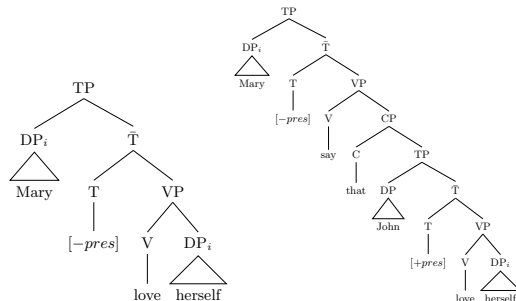> An anaphor must be coindexed with another DP in the same sentence.

Principle A: Anaphors II

Version 1 of Principle A is not strong enough: the binder cannot be too far away:

(10) a.*Mary$_i$ said that John loves herself$_i$.
    b. Mary$_i$ loves herself$_i$.

> **Principle A (version 2):**
>
> An anaphor must be coindexed with another DP in the same TP.

Principle A: Anaphors III

But the order seems to matter:

(11) a. Mary$_i$ loves herself$_i$.
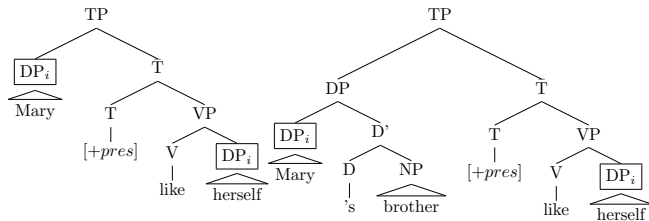   b.*Herself$_i$ loves Mary$_i$.

> **Principle A (version 3):**
>
> An anaphor must be coindexed with another DP which precedes the anaphor and is in the same TP.
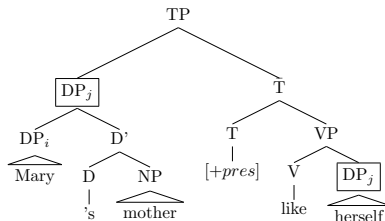
This does not work either:

(12) a. Mary$_i$ loves herself$_i$.
  b.*Mary$_i$'s brother loves herself$_i$

Principle A: Anaphors V

The reflexive must be included in the constituent that is sister of the antecedent:

(13) [Mary$_i$'s mother]$_j$ loves herself$_{j/*i}$.

This structural relation is 'c(onstituent)-command!!

> **C-Command:**
> Node A c-commands node B if
> (i) every node dominating A also dominates B;
> (ii) and A does not itself dominate B

Principle A: Anaphors VI

Principle A (version 4):

An anaphor must be **bound** in its binding domain.

→ *Binds*: A binds B if and only if A c-commands B and A and B are coindexed.

→ *C-Command*: The relationship between a node, its sister, and the stuff dominated by its sister.

→ *Binding domain*: The smallest XP containing the anaphor that has a subject.
→ *NB: According to this definition the anaphor can be the subject of the XP*

Principle A: Anaphors VII

Binding Principle A also applies to *reciprocals* like 'each other'

→ 'each other' requires an antecedent that is plural.

    (14) My sister and your friend clearly like each other.

    Next week we'll come back to *reciprocals!*

To recap, let's look at (15), which is a shorthand for the three different sentences below:

(15) Fred$_i$ said that [the child of [the neighbor]$_k$]$_j$ enjoys himself$_{*i/j/*k}$
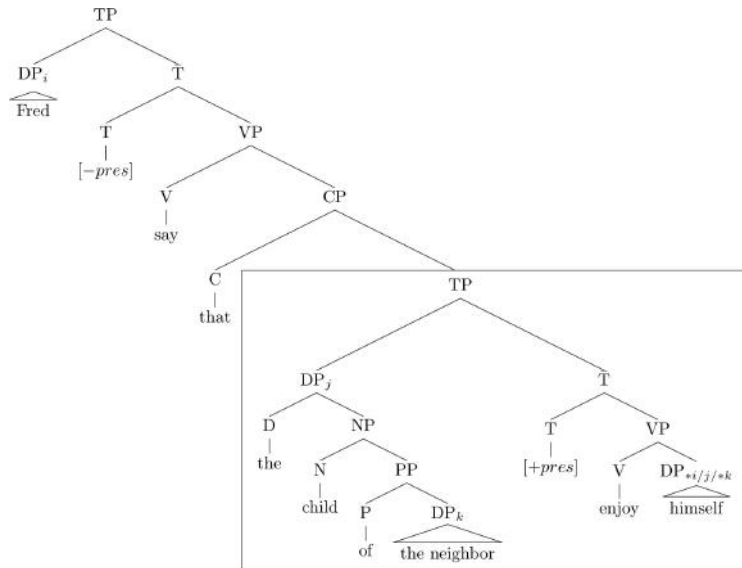
(16) a.*Fred$_i$ said that [the child of [the neighbor]$_k$]$_j$ enjoys himself$_i$
    b.*Fred$_i$ said that [the child of [the neighbor]$_k$]$_j$ enjoys himself$_k$
    c. Fred$_i$ said that [the child of [the neighbor]$_k$]$_j$ enjoys himself$_j$
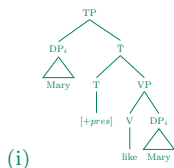
Principle A: Anaphors IX

(17) Fred$_i$ said that [the child of [the neighbor]$_k$]$_j$ enjoys himself$_{*i/j/*k}$

Practice

For each of the sentences below, (i) draw the tree structure, (ii) state the binding domain of the anaphor and (iii) indicate whether the sentence is expected to be grammatical or ungrammatical with the co-indexed antecedent. (18) is done for you!

(18) *Herself$_j$ loves Mary$_j$.

(ii) *the binding domain is the whole sentence.*

(iii) *BT does predict the sentence above to be ungrammatical: 'Herself' is not bound because the coindexed DP 'Mary' does not c-command it.*

(i)

(19) *Mary$_j$ heard John laugh at herself$_j$.

(20) John saw Mary$_j$ confuse herself$_j$.

(21) John$_j$ loved the new pictures of himself$_j$.

(22) [The biographer of [Nelson Mandela]$_i$]$_j$ appreciated himself$_{j/*i}$

Practice

Consider the following sentence. (i) Draw the tree structure, (ii) state the binding domain of the anaphor and indicate whether the sentence is expected to be grammatical or ungrammatical with the co-indexed antecedent.

(23) Alice guessed that Matt_i's brother gave himself_i a nice treat.

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