Where am I?

- HUL242: **Fundamentals of Language Sciences**
- **Syntax (Lecture-5)**
- Thursday, April 3

Review: Phrase structure rules in English

1. CP → (c) S or (c)TP
2. TP/S → {NP/CP} (T) VP
3. NP → (D) (AdjP+) N (PP+) (CP)
4. PP → P (NP)
5. AdjP → (AdvP) Adj
6. AdvP → (AdvP) Adv
7. VP → (AdvP+) V ({NP/CP}) ({NP/CP/PP}) (AdvP+) (PP+) (AdvP+)
8. X → X conj X (to conjoin two words)
9. XP → XP conj XP (to conjoin two phrases)

(Note: these rules can't generate all the English sentences. We still need to advance these rules, but they are enough for this course.)

Languages with a flexible word order: movement

- Possible word orders in Latin

a) Mīlitēs urbem dēlēbunt.
Soldiers city destroy.FUT.3PL
"The soldiers will destroy the city."

b) Mīlitēs dēlēbunt urbem.
c) Urbem mīlitēs dēlēbunt.
d) Urbem dēlēbunt mīlitēs.
e) Dēlēbunt mīlitēs urbem.
f) Dēlēbunt urbem mīlitēs.

- What is the PS rules for TP and VP in Latin?
  Idea: (a) shows the basic order: TP → NP VP, VP → NP V

- Others are derived by a "transformational rule" (i.e., movement).

Languages with a flexible word order: movement

- When a single pronounced item enters two (or more) dependencies in a structure, it is called ‘movement’ (also called ‘displacement’).

- **“movements” do not have to respect PS rules.**

Hindi: A flexible word order language

- Possible word orders in Hindi

1a. sipɑhi: ʃəhəɹ ko nəsʈ kəɹ dẽge.
b. sipɑhi: nəsʈ kəɹ dẽge ʃəhəɹ ko.
c. ʃəhəɹ ko sipɑhi: nəsʈ kəɹ dẽge.
d. ʃəhəɹ ko nəsʈ kəɹ dẽge sipɑhi:.
e. nəsʈ kəɹ dẽge sipɑhi: ʃəhəɹ ko.
f. nəsʈ kəɹ dẽge ʃəhəɹ ko sipɑhi:.

- What is the PS rules for TP and VP in Hindi?
  Idea: (a) shows the basic order: TP → NP VP, VP → NP V

- Others are derived by a "transformational rule" (i.e., movement).

Movements

Some transformational rules in English

- Yes-no question : Head movement
- Wh-question : Phrasal movement
- Topicalization : Phrasal movement

Yes-no Question

Yes-no Question: Data

Declarative/Statement	Yes-no question
1. Mary could see the cat.	Could Mary ___ see the cat?
2. Mary is reading a book.	Is Mary ___ reading a book?
3. Mary was reading a book.	Was Mary ___ reading a book?
4. Mary will read the book.	Will Mary ___ read the book?

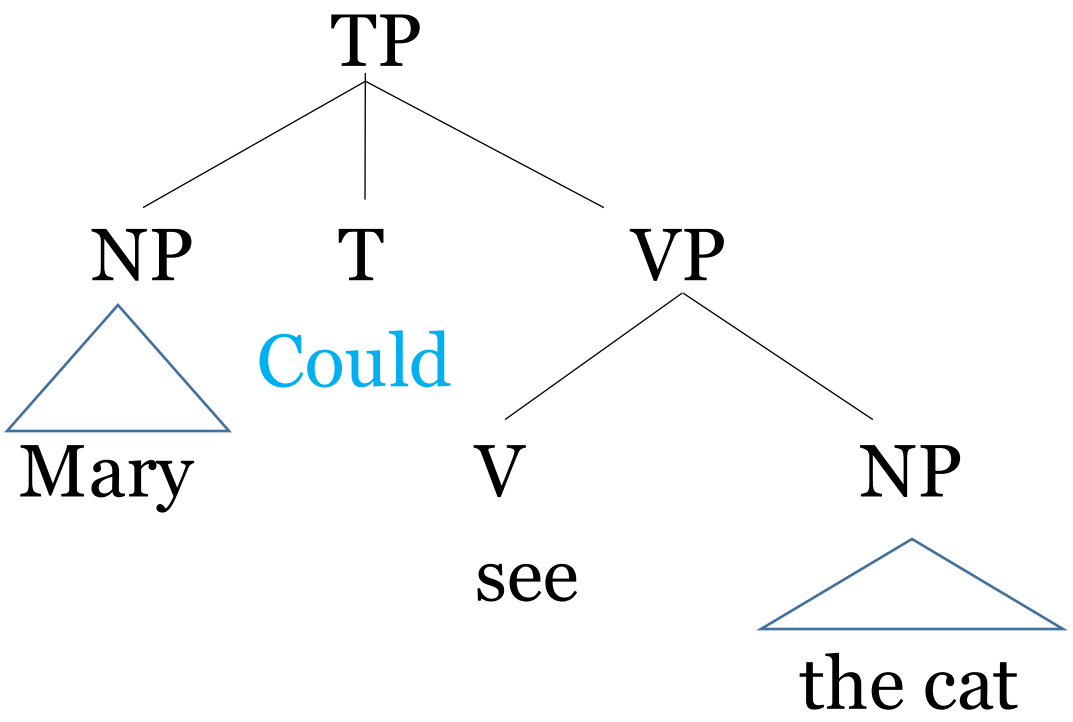
Generalization:

- Move the 'Aux/tense' to the front of the sentence.
- But where?

The rule for Yes-no question

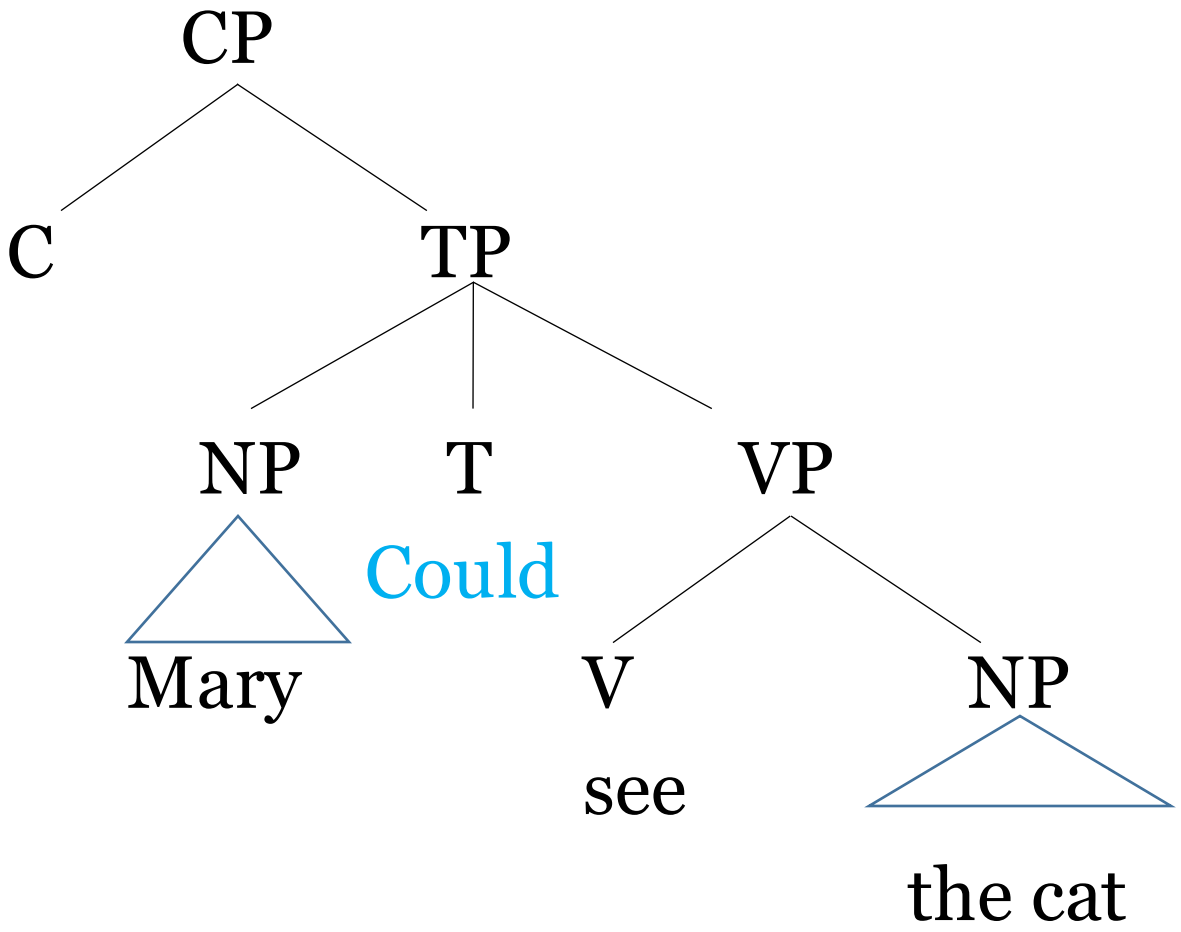
- Hypothesis:
  - Yes-no questions are derived from a declarative.
- Declarative sentences are TPs
- ‘Yes-no question’ sentences are CPs
- To make yes-no questions :
  - Move T to C, leaving a trace

The basic tree structure for (1)



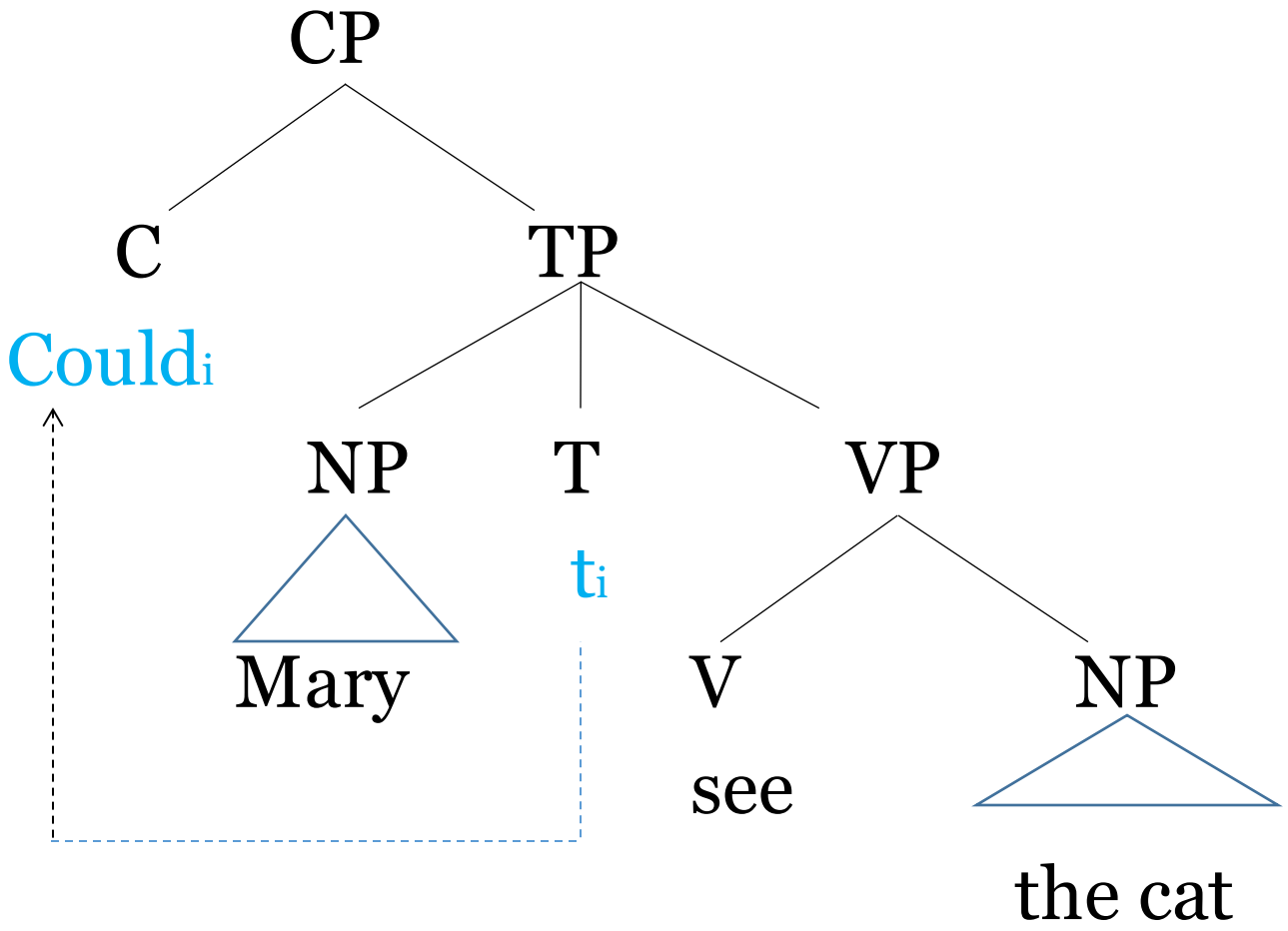
Step-1

- Create a CP note above TP



Step-2

- Move T element to C, leaving a trace (t)



More Data: A note on “Do-support”

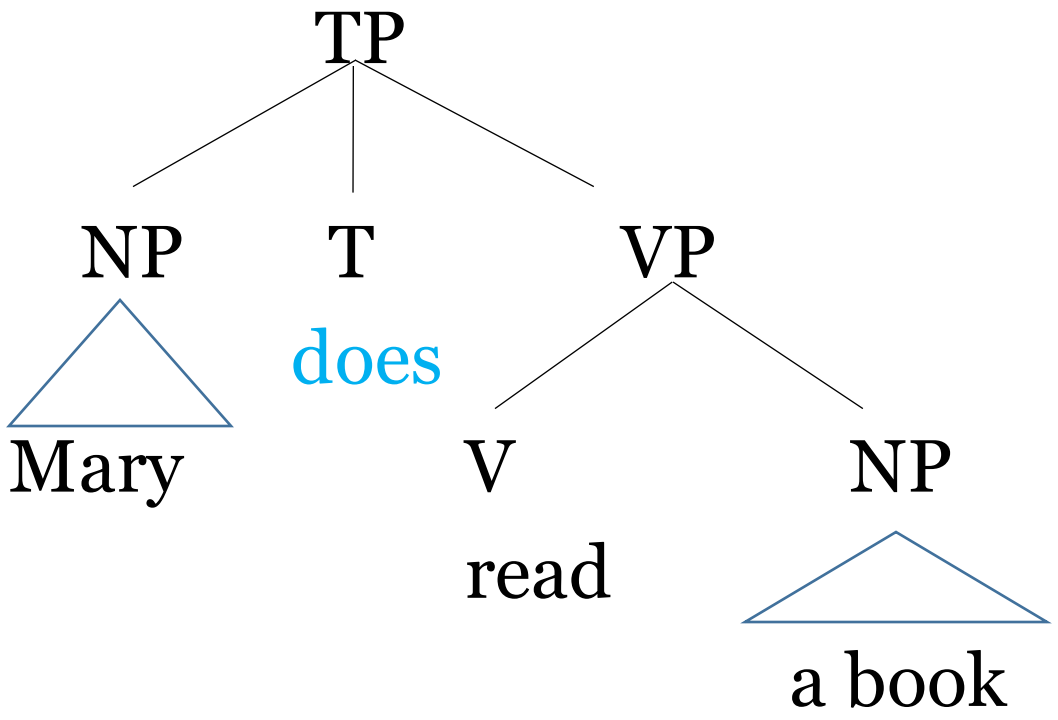
Declaratives/Statements	Yes-no questions
1. Mary reads a book.	Does Mary ___ read a book?
2. I ate a banana.	Did I ___ eat a banana ?

- Generalization:

  If there is no overt tense element, English uses “do-support”.

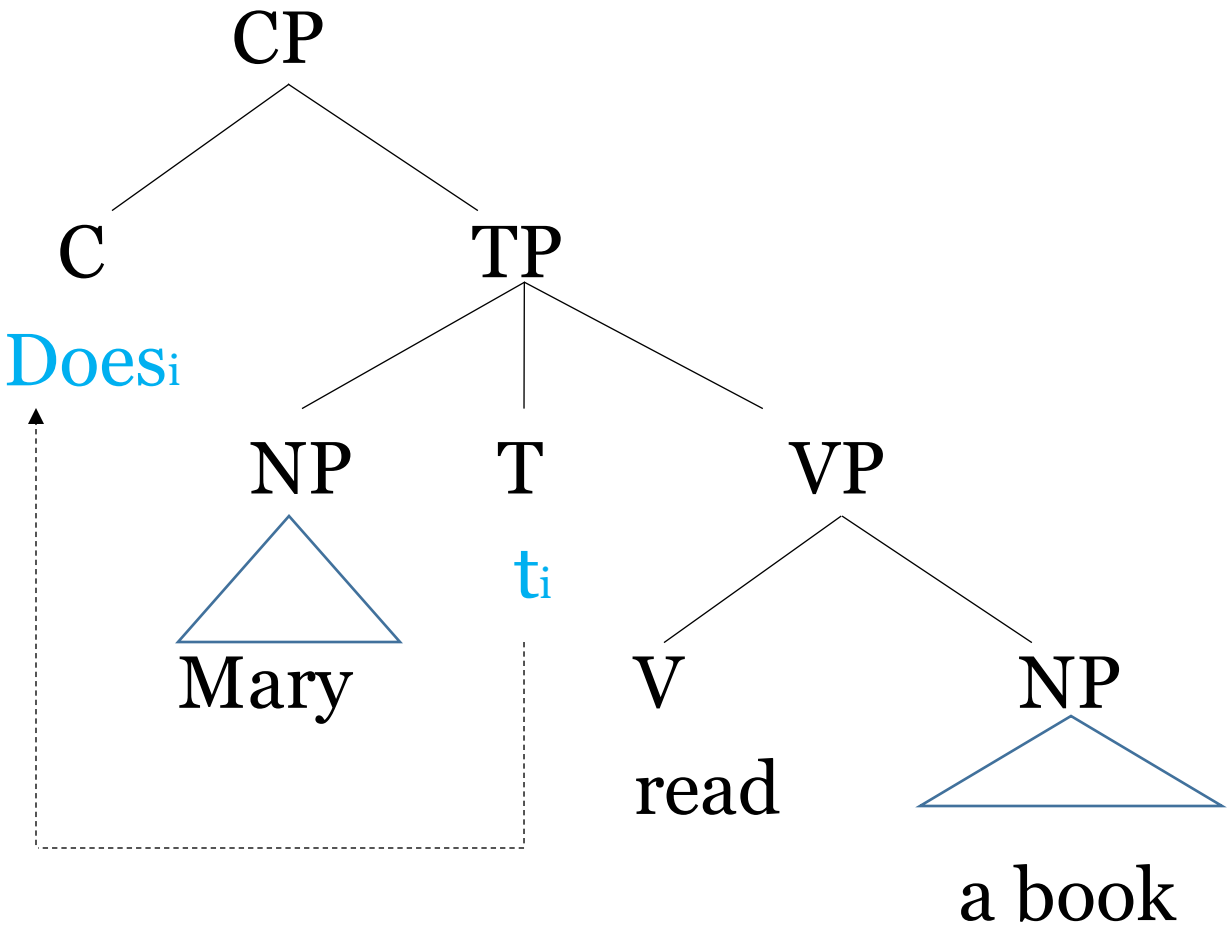
The basic tree structure

- T hosts the auxiliary ‘do’ in such cases.



The final tree

- T moving to C



Wh-question

Wh-question: Data

Declarative/Statement	Wh-question (of the object)
1. Mary can bake a bread.	What can Mary ___ bake ___ ?
2. Mary will read the book.	What will Mary ___ read ___ ?
3. Mary reads a book.	What does Mary ___ read ___ ?

Generalization:

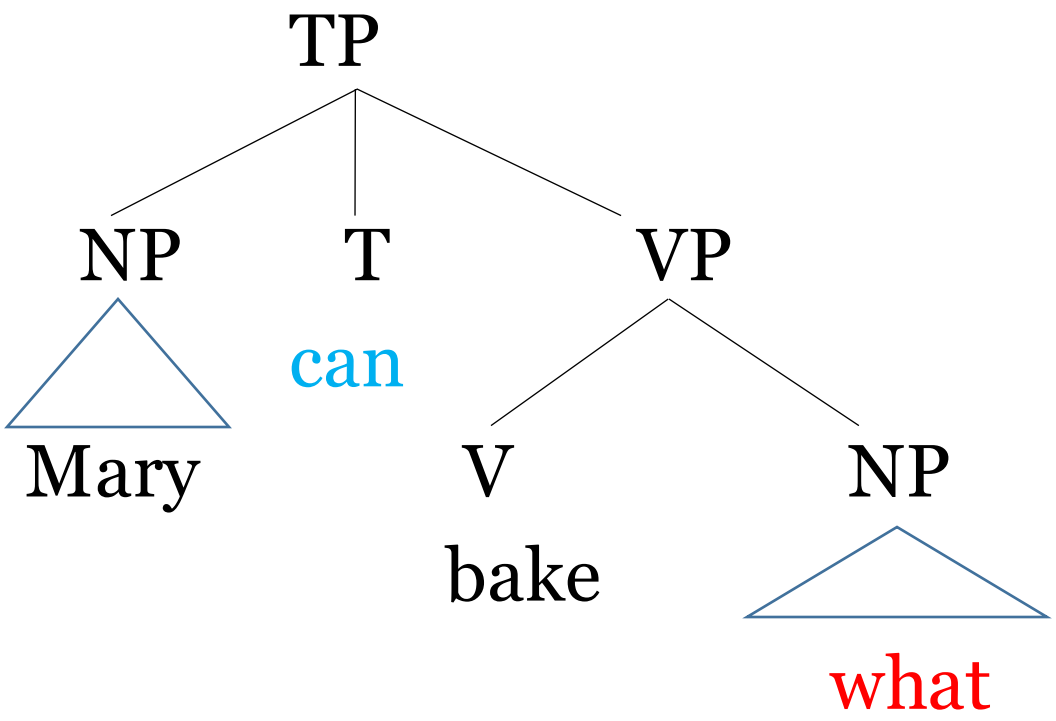
- ‘Aux/tense’ moves before the subject
- Wh-word moves before the aux/tense

- But where?

The rule for wh-questions

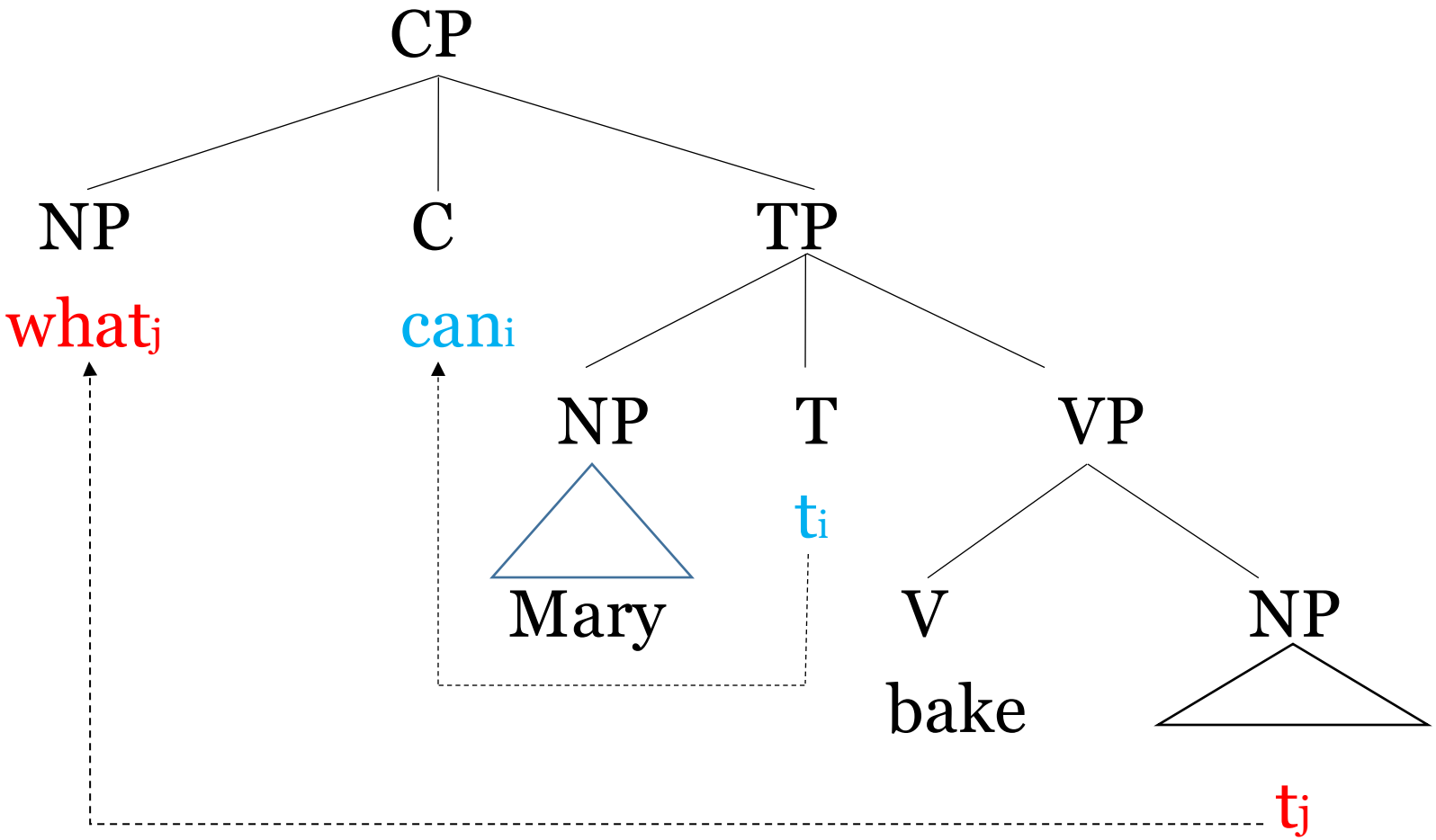
- Declarative sentences are TPs .
- ‘wh-questions’ are CPs
- The wh-question rule
  - Draw a CP node above the TP.
  - Move T to the C, leaving a trace.
  - Move the wh-word to the left of the moved T, leaving a trace.

The basic structure



The Final structure

- Move the T element to C and the wh-word to CP



Topicalization

Topicalization : Data

1. I like donuts. (I don't like bagels,)
2. Donuts, I like. (Bagels, I don't.)

- Similarity between (1) and (2):
  - They have the same meaning (in (2), the NP "donuts" becomes the topic)

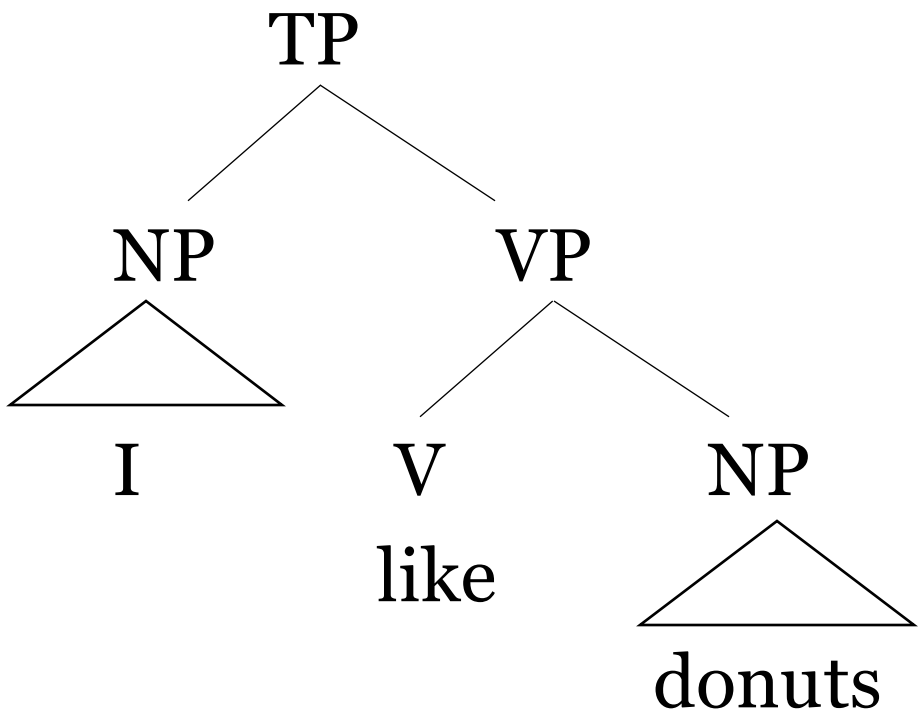
- Difference between them:
- Object is fronted to the beginning of the sentence

- (2) is derived from (1).

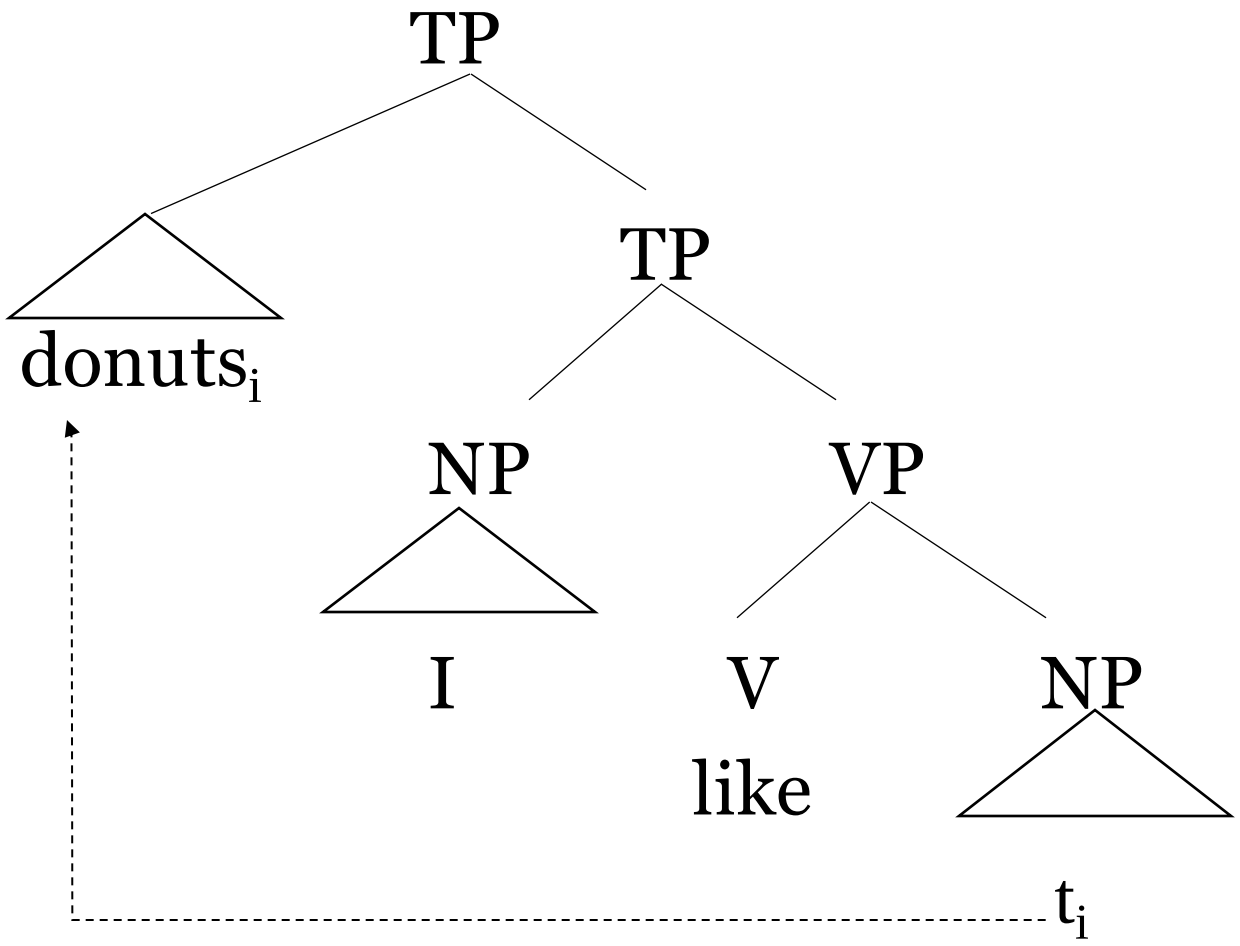
Steps for topicalization

- Draw a new TP node on top
- Move the object being topicalized above the subject, leaving a trace.

The basic tree



The rule for topicalization



Constituency

Constituents, intuitively

- A group of words that functions together as a unit in the Syntax
  - John told Mary that he was watching a nice movie.
- In the above example, we have an intuition that certain words and groups of words are tied together more closely than others.

Constituents, intuitively

- John told Mary that he was watching a nice movie.

➢ that he was watching a nice movie	but not *that he was*
➢ he was watching a nice movie	but not *that he*
➢ watching a nice movie	but not watching a
➢ a nice movie	but not *a nice*
➢ Nice	

- These natural groupings of the parts of a sentence are **constituents**. Phrases are constituents.

Tests for constituency

- There's something natural about constituency-
  - The constituents in a sentence "hang together" in a way the non-constituents do not.
- Let's see some properties that constituents share, which you can use as **constituency tests**.

The fragment test: Stand alone

- If a group of words can stand alone as an answer to a question, they form a constituent.

1. What did John buy?
   a red hat/*a red

2. Where are you?
   at the beach/*at the

Q: What phrases are these constituents?
NP in (1), PP in (2)

Substitution/replacement test

- If a group of words can be replaced by a single word (of the same category), they form a constituent.

1. John bought **three red hats**.
2. John bought **them**.

3. **The Republican candidate for president** only eats fast food.
4. **He** only eats fast food.

Q: What phrases are these constituents?

NP

- Keep in Mind: **Pronouns are NPs**

Substitution/replacement test

- If a group of words can be replaced by a single word (of the same category), they form a constituent.

    1. If Mary went to the park, then John went to the park
    2. If Mary went to the park, then John did.

Q: What phrases are these constituents?

VP

Movement test

- If a group of words can be moved together, they form a constituent.

- Passivization:
  The news surprised every student in the class.
  Every student in the class was surprised ___ by the news.
- Clefting:
  I watched the parade from my window.
  It was from my window that I watched the parade ___.
- Topicalization:
  I like nice people. I don't like mean people
  Nice people, I like ___. Mean people, I don't ___.

Summary: constituency tests

- The fragment test
- Substitution/replacement test
- Movement tests

How to test: Our earlier example

1. John told Mary that he was watching a nice movie.

Q: Is **'a nice movie'** a constituent in (1)?

Fragment test:

- What did John tell Mary that he was watching?
  Ans: A nice movie (passed the test)

The replacement test:

1. John told Mary that he was watching a nice movie.
2. John told Mary that he was watching **it**. (passed the test)

Movement test:

- **A nice movie,** John told Mary that he was watching ____.
  (passed the test)

Constituency test

1. John told Mary that he was watching a nice movie
   - What about '**a nice**' ? Is '*a nice*' a constituent in

Fragment test:

- What did John tell Mary that he was watching?

  *a nice (failed the test)

The replacement test:

- *John told Mary that he was watching **it** movie. (failed the test)

Movement test:

- **A nice,** John told Mary that he was watching ____ movie.

  (failed the test)

Constituency arguments

- Constituents will pass at least one constituency test.
  - To prove that something's a constituent, construct an example that shows it passes a constituency test.

- Non-constituents will fail every constituency test.
  - To argue that something's not a constituent, check that it fails all the tests.

Next Class

- The PS rules and the tree structure (i.e., flat tree structure) that we developed so far could not represent ‘constituents’ correctly.

- We will develop X-bar structure