# Syntax

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LING 101 SSII

# Overview

- Complementizer Phrases

- Embedded clauses

- Movement

- Questions
  - WH-Questions
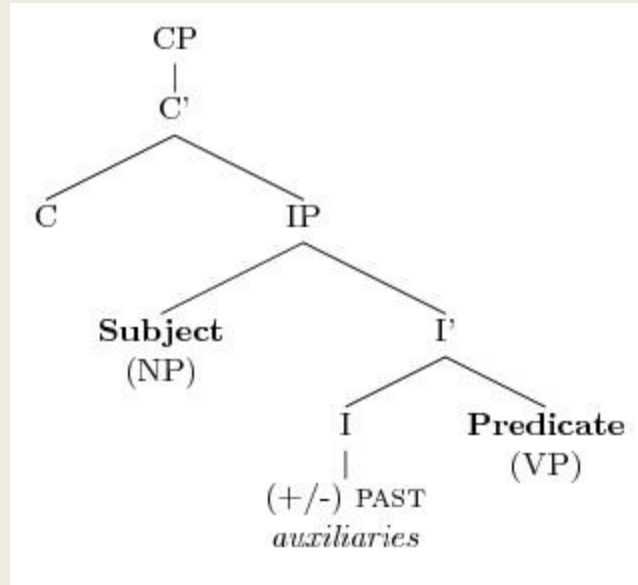  - Yes-No Questions

# Review

- Complements
- Inflectional Phrases
  - What is a required element of an IP?
  - What can optionally occur in the head of I?
  - How does the Subject of a sentence attach to the IP?
  - How does the Predicate of a sentence attach to the IP?
- Modifiers

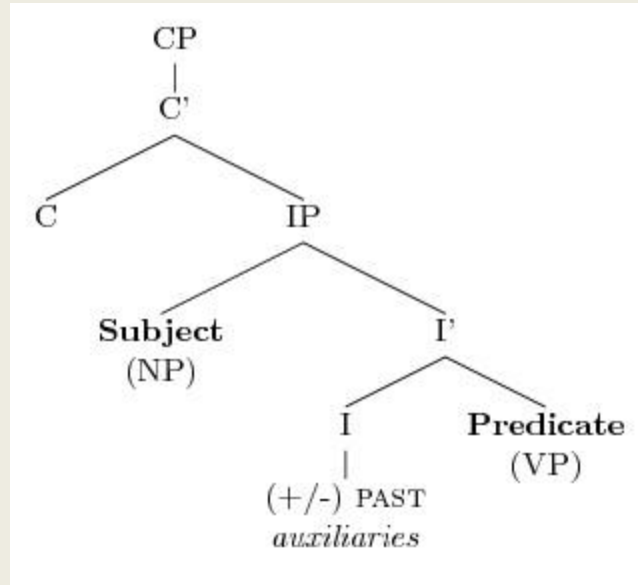# Tree-drawing Practice (from last time)

- The happy camper went to the campgrounds.
- The happy camper went to the campgrounds in July.

# Complementizer Phrases



- Yesterday we mentioned that every sentence can be said to be headed by an IP.
- We also believe that every clause is headed by a **complementizer phrase** (CP)
  - This is proposed based on embedded clauses, relative clauses, and questions.

# Complementizer Phrases



- You are only going to be required to produce the CP structure if you are showing an embedded clause, a relative clause, or a question.

# Embedded Clauses

- Yesterday we dealt with sentences like the following:
  - Data is an android
  - Data never laughs
- How should we deal with sentences like the following, which contain more than one clause?
  - Picard knows that Data is an android.
  - Gandalf believes that Bilbo will join the expedition.
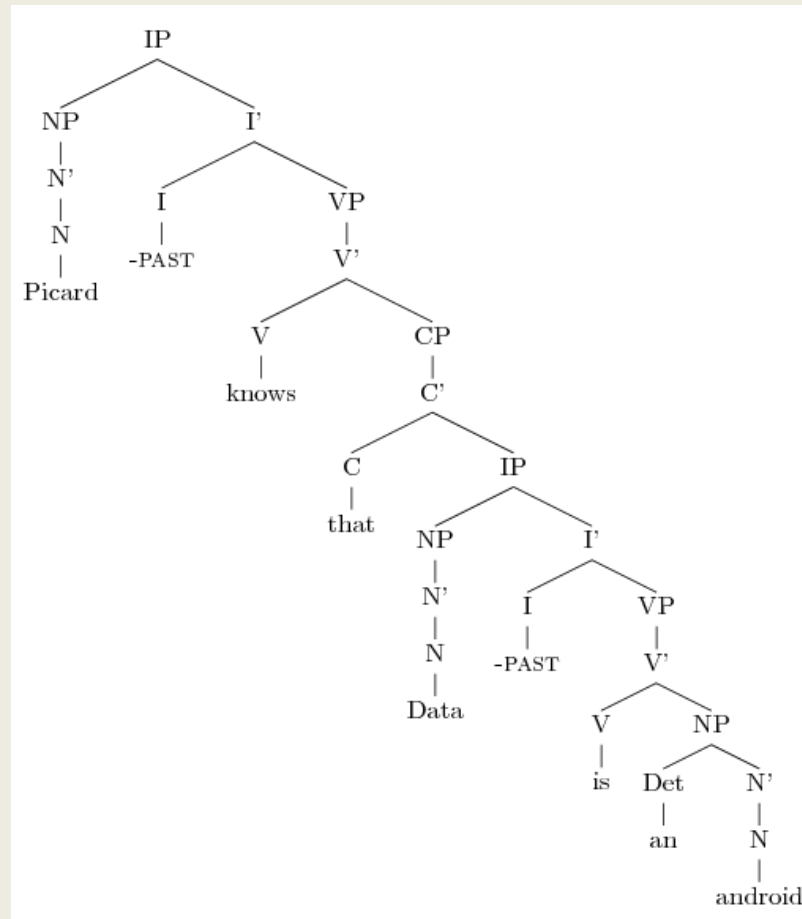  - Luke learned that Darth Vader is his father.

# Embedded Clauses

- Picard knows that **Data is an android**.
- Gandalf believes that **Bilbo will join the expedition**.
- Luke learned that **Darth Vader is his father**.

- These sentences include embedded clauses or "mini-sentences", <u>which must have their own IP</u>.

- These embedded clauses are then contained within CPs, which in turn always attach as **complements** to the VP of the larger sentence.

  - Note how the verbs used **<u>require</u>** an embedded clause.

- In fact we consider 'that' to act as the head the embedded CP.
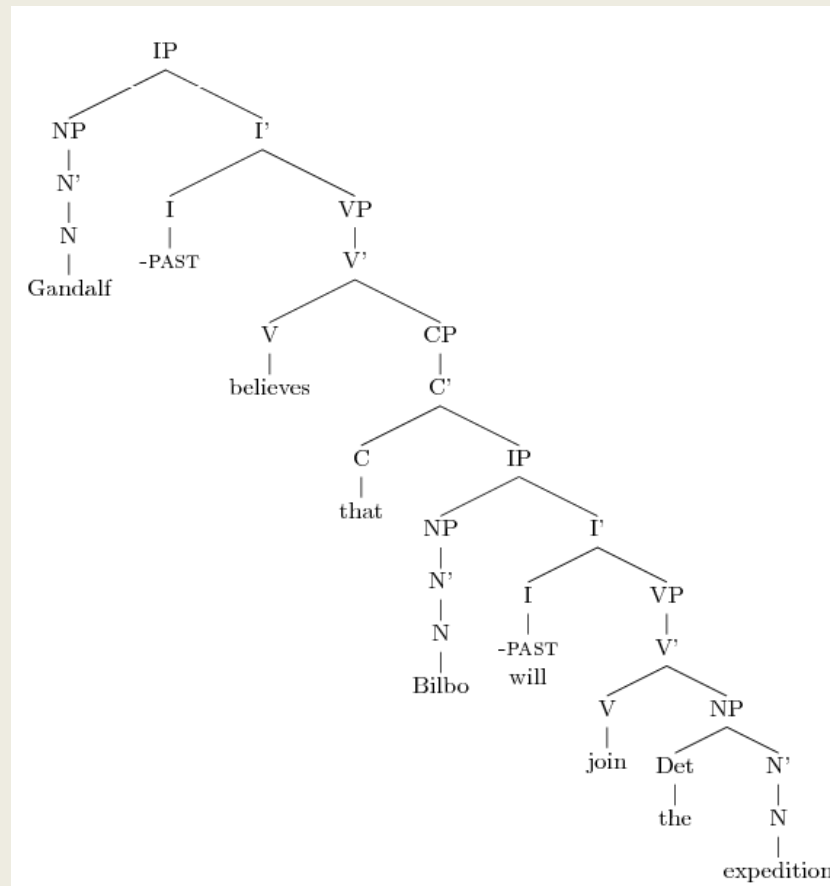
# Embedded Clauses

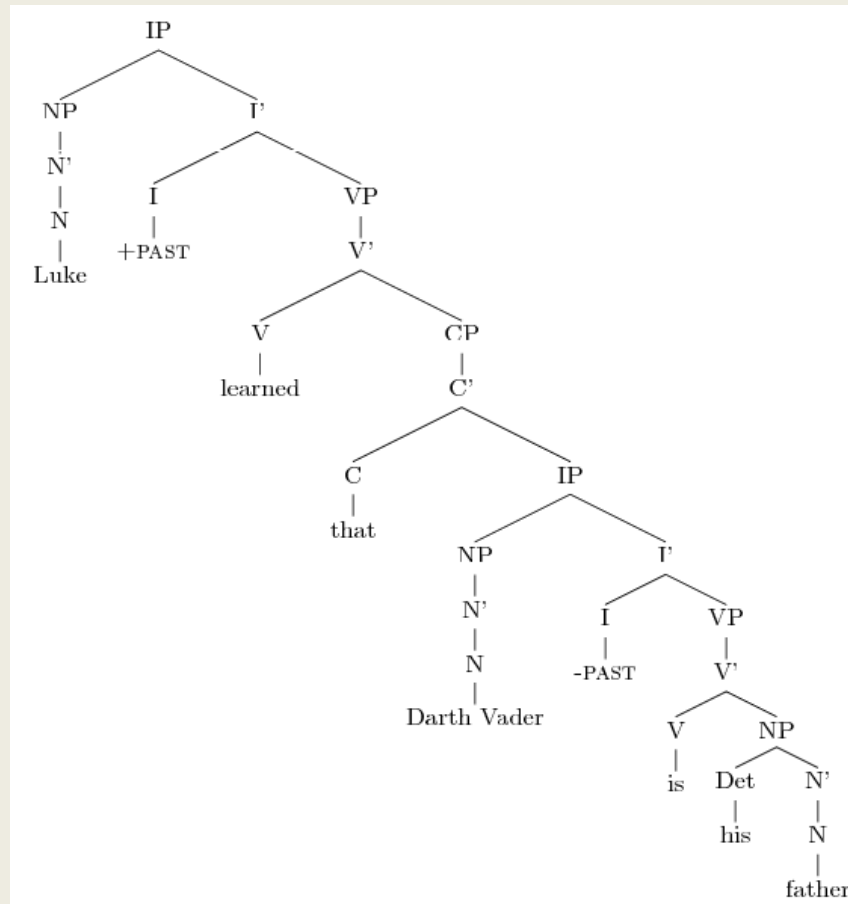- Picard knows that **Data is an android**.

# Embedded Clauses

- Gandalf believes that **Bilbo will join the expedition**.

# Embedded Clauses

- Luke learned that **Darth Vader is his father**.

# Movement

- So far, we have been looking at sentence structures where we assume that the sentences we see correspond directly to the deep structure (i.e. mental structure) of the sentence.
- Phonology and Morphology
  - Two options: Surface form corresponds to an identical mental form or corresponds to a different mental form that has had some features changed about it
- Same applies to Syntax!
  - We believe that some surface structures actually correspond to a different deep structure that has some features that caused its units to undergo a syntactic **transformation** called **Move**

# Movement

- Some data in support of this:
  - Data saw the cat
    - What did Data see?
  - Mario ran after Luigi
    - Who did Mario run after?
  - Frodo went to Mordor
    - Where did Frodo go?
  - Loki asked whether Thor loved Jane Foster
    - What did Loki ask?
- What happens to the complements that we think these verbs and prepositions require? Are the questions grammatical?
- How does *did* appear to the left of the Spec position of IP?

# Movement

- In particular, we see evidence for movement within **Questions**
- There are two different types of questions that our model should be able to handle:
  - WH-questions
  - Yes-No Questions
- In both of these, we assume that movement is motivated by a feature within the head of the CP called +Q
  - This feature tells us whether we are dealing with a sentence or a question. It also **requires movement** to be satisfied.
  - This feature does not show up in the C position when dealing with a non-question

# Movement

- Some evidence to support the idea that question words begin in one location and then move is the use of the repetitive/emphatic question in English:
  - I saw Kaylee Frye at the supermarket
    - You saw *who* at the supermarket?
      - Who did you see at the supermarket?
    - You saw Kaylee Frye *where?*
      - Where did you see Kaylee Frye?

# Yes-No Questions

- Consider the following sentences.
  - You would go to Gallifrey if the Doctor took you there.
  - The young wizard might be fine.
  - The surly Irish bookshop owner could never appreciate his customers.
- What do they look like when made into yes-no questions?

# Yes-No Questions

- When made into Yes-No Questions, they have the following form:
  - **Would** you ___ go to Gallifrey if the Doctor took you there?
  - **Might** the young wizard ____ be fine?
  - **Could** the surly Irish bookshop owner ____ ever appreciate his customers?
- The modal auxiliary moves to the front of the sentence.
  - What position might it move to?

# Yes-No Questions

- These sentences are examples of the **tranformation** that we call **Inversion**.
  - **When a +Q feature is in the head of the CP, the auxiliary in I must move to C**
- About movement rules
  - A movement operation does not change any other part of the structure of the sentence
  - A moved element leaves a **trace** (*t*) in its original position.
  - A moved element retains its original category label (under the one it moves into)

# Yes-No Questions

- What happens to sentences where there is no auxiliary in the I position?


- Make a yes-know question from the following sentence:
    - You like books.

# Yes-No Questions

- ***Do* Insertion rule** for English (certain other languages have something similar):
  - **Insert *do* into an empty I position**.

    (Mandatory in a sentence if there's a +Q feature, except for a case of subject-WH [*CL,* p. 182])
  - **Applies to both WH and Yes-No Questions**

- To think about:
  - Can *Do* Insertion apply in a sentence that is <u>not</u> +Q? (the reading doesn't consider this)
  - What happens to the tense morphology when *Do* Insertion takes place?

# Yes-No Questions Practice

- Write out the Deep Structure and Surface Structure of the following yes-no questions:
  - Can one simply walk into Mordor?
  - Will the Jedi return?
  - Do you know the muffin man?

# WH-Questions

- **WH**-**questions** are questions containing a WH element such as *what, who, where, when, which, how*
  - They are sometimes also called **information questions**

- Returning to the problem raised earlier in the lecture:
  - What did Data see?
  - Who did Mario run after?
  - Where did Frodo go?
  - What did Loki ask?
- How can we use the idea of **movement** to explain why these sentences are grammatical?

# WH-Questions

- The basic structure (deep structure of the sentences are:
  - Data saw *what*
  - Mario ran after *who*
  - Frodo went *where*
  - Loki asked *what*
- *Do*-Insertion and Inversion have applied; what else?
- **WH Movement rule** for English (applies to certain other languages also):
  - **Move a WH phrase to the specifier position under CP**
  - Note that it moves a <u>phrase</u> to the Spec of CP

# WH-Questions

- Now we can draw a tree for our sentence
  - Remember: Move does not change the structure of the rest of the sentence (except now the Spec of the CP is filled)
  - Remember: a moved element leaves a trace
- How do these Move transformations work when there is an embedded sentence?
  - *The coach can predict whether the team will win* ($\rightarrow$ Yes-no question)
  - *The chef knows that the assistant made which cake* ($\rightarrow$ WH question)

# Approaching Questions

- Step 1: Imagine a direct response to the question or imagine an emphatic question.
- Step 2: Go ahead and draw out the Deep Structure form.
  - **Be sure to include the +Q feature that is motivating movement**
- Step 3: Apply Transformations
  - *Do*-insertion
    - Inserts at I <u>if there is not a modal auxiliary present</u>
  - Inversion
    - Moves the <u>head</u> of I to the <u>head</u> of C
  - WH-movement
    - Moves <u>an entire phrase </u>to the Spec of CP
  - **Be sure to leave a trace where they originate and either use subscripts or arrow to indicate which goes to which.**

# WH-Questions Practice

- Use the following sentences as prompts for a number of WH-Questions:
  - Shawn smirked
    - Ask about the Subject
  - Gus likes pineapple
    - Ask about the Subject; Ask about the Direct Object
  - Juliet ran to the crime scene quickly
    - Ask about the Subject; Ask about the Direct Obect; Ask about the AdvP
  - Lassiter gave Juliet a lead.
    - Ask about the 'giver'; Ask about the 'recipient'; Ask about the object given
  - The Chief wondered if Shawn and Gus were irresponsible
    - Ask about the main Subject

# Homeworks

- Writing Assignment 5
- Homeworks:
  - p. 199, Ex. 3, (a) – (e)
  - p. 200, Ex. 6
  - p. 200, Ex. 7
  - p. 199, Ex. 4, (a), (c), (e)
  - p.200, Ex. 5, (b), (d), (f)
  - p. 201, Ex. 9, (a) and (c)
  - p. 201, Ex. 10, (e) and (f)
  - p. 201, Ex. 11, (a), (b), and (d)

# Have a good day!