



Syntax

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Syntax

- **Syntax** is the study of sentence structure – how words pattern together to form sentences, which form larger units of meaning.
- The mental grammar must include a mechanism for **generating** and **analyzing** previously unknown sentences
 - Why?

Syntax

- **Descriptive linguistics:** We want to know how a native speaker would do the following:
 - Classify possible sentences (arrangements of words and phrases) as **grammatical** versus **ungrammatical**
 - Group the words and phrases in a sentence into syntactic **constituents**
- **Mental Grammar:** We want to **develop a model** that will behave like a native speaker in:
 - Classifying sentences as (un)grammatical
 - Forming syntactic constituents

Grammaticality

- A sentence is **grammatical** with respect to a particular language variety/ a particular mental grammar if:
 - Native speakers produce the sentence (and it's not a speech error)
 - When native speakers hear the sentence, their mental grammar classifies it as part of the language/structurally acceptable
- The ungrammaticality reaction is almost a “gut reaction” – try to learn to recognize it (when you encounter data from your native language)

Grammaticality

- Examples

- Grammatical:

- *The puppy found the bone*
 - *Oscar wants Grover to be a grouch*

- Ungrammatical (marked with a star, '*'):

- **The puppy found quickly.*
 - **Oscar tries Grover to be a grouch.*

Grammaticality

- Being **grammatical** is NOT the same thing as “being true” or “making sense”
 1. *Every basketball player at UNC is named Ernie.*
 - Is this sentence **true**?
 - Does this sentence **make sense**?
 - Is this sentence **grammatical**?

Grammaticality

- Being **grammatical** is NOT the same thing as “being true” or “making sense”
2. *I walked over to the table and put the book.*
- Does this sentence **make sense**? (If someone said it, would you understand what they meant?)
 - Is this sentence **grammatical** in your variety of English?

Grammaticality

- Being **grammatical** is NOT the same thing as “being true” or “making sense”

3. *Colorless green ideas sleep furiously.*

- Does this sentence **make sense**?
- Is this sentence **grammatical**?

– Poem: [Coiled Alizarine](#), by John Hollander (1971)

Sentence Structure

- “Sentences are not formed by simply stringing words together like beads on a necklace” (*CL*, p. 160)
 - Words are grouped into phrases
 - Therefore, the internal structure of a sentence is not flat, but **hierarchical**
 - We have already modeled hierarchical structure inside words with **word trees**
 - Now we will apply a similar tree technique in analyzing **phrase** and **sentence structure**.

Sentence Structure

- A group of words (or phrases) within a sentence is known as a **constituent**
- To be successful, a model of syntax needs to form constituents inside sentences in the same way that a native speaker does.
- So, we often need to know what groups of words function as constituents for native speakers in order to assess our model.

Sentence Structure

- There are tests that we can use (if we have access to native-speaker judgments) to see whether some sequence is a constituent
 - *Warning #1*: Not all tests work for all types of constituents. Try several tests and see what the most consistent analysis would be.
 - *Warning #2*: When you perform constituency tests, you have to make sure you aren't *deforming the meaning* of the original sentence (*changing the constituency*).

Sentence Structure

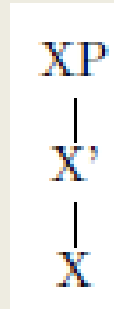
- Some useful constituency tests (*CL*, ch. 5, sec. 1.4)
 - Substitution test
 - Can the group of words be **substituted by a single word** (such as a pronoun, a location adverb like *there*, or the expression *do* or *do so*)?
 - Movement test
 - Can the group of words be **moved** as a unit (moved to the front of the sentence as in a passive or a topicalization)?
 - Coordination test
 - Can the group of words be linked by a conjunction to another group of words already known to be a constituent?

Sentence Structure

- Lexical
 - **N** → NP
 - **V** → VP
 - **A** → AP
 - **P** → PP
 - **Adv** → AdvP
- Functional categories
 - Det
 - I → IP
 - Con
 - Deg
 - C → CP (don't have to worry about this for now)

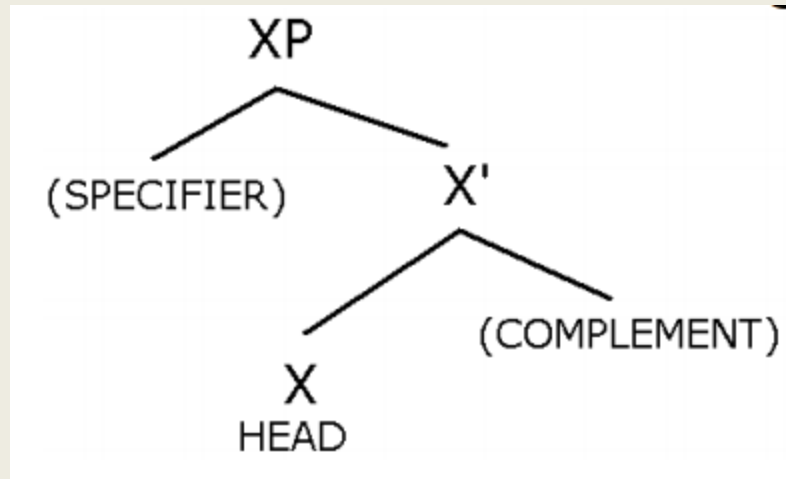
X-bar Structure

- The **X' schema** is a blueprint for sentence structure in our model of mental grammar.
- It assumes that every phrase has three levels: a phrase level (XP) , a bar level (X') , and a head level (X), which correspond to different connections of phrases to form constituents.



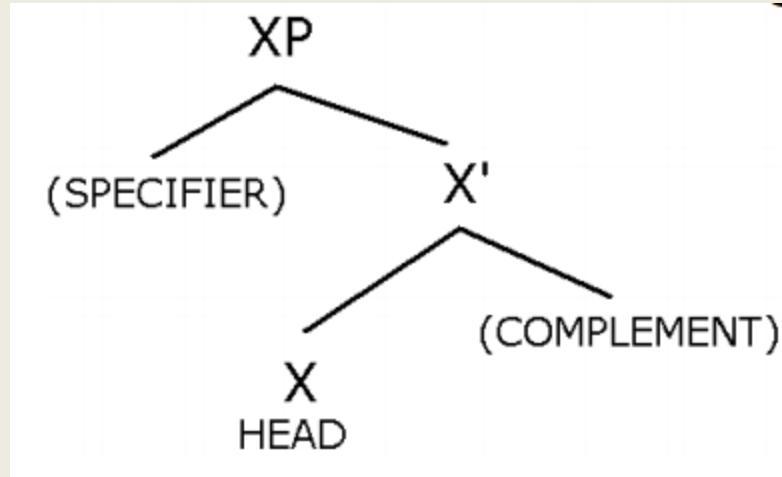
- We refer to relations in the X-bar structure in familial terms:
 - A higher node is a mother node, which has daughter nodes. If two nodes share the same mother node, they are sister nodes.

X-bar Structure



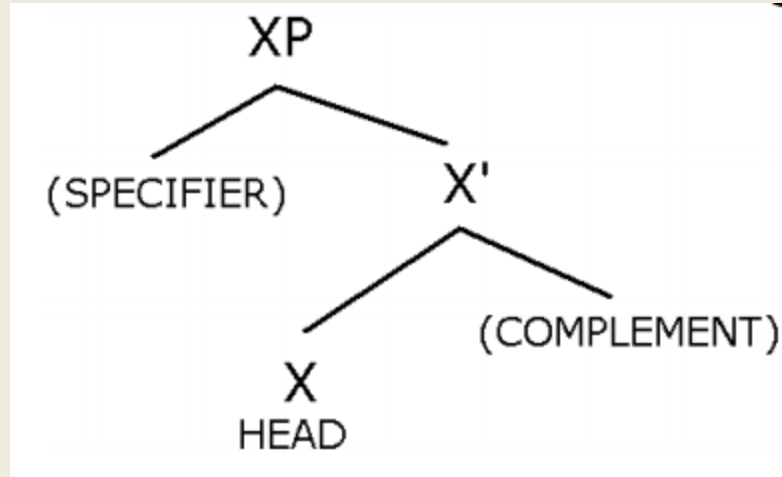
- We classify various positions based on what sister node they correspond to:
 - A **specifier** is a sister node to X' and a daughter node of XP
 - A **complement** is a sister node to X and a daughter node to X'

X-bar Structure



- **Head**
 - A **word** –level category (N, V, A, P, or I)
 - Determines the category of the whole phrase
 - These category types **always** project an XP

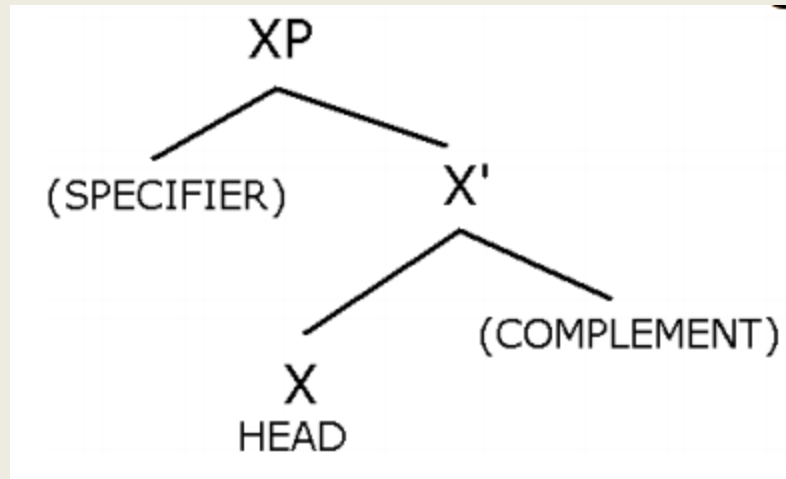
X-bar Structure



- **Complement**

- A **phrase**-level category that has a close meaning relationship with the head phrase
 - Some V heads *require* complements

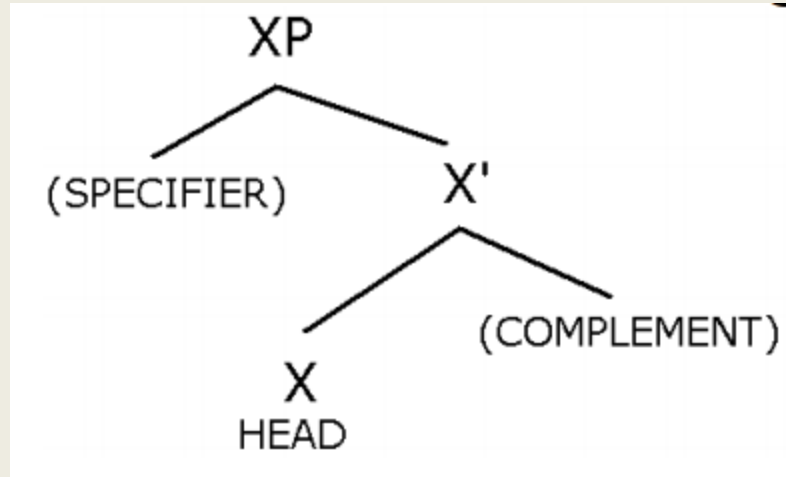
X-bar Structure



- **Specifier**

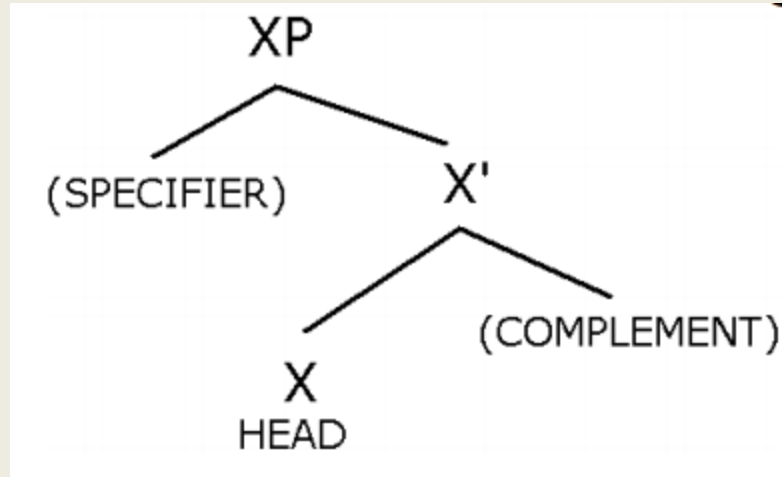
- For **NP, VP, AP, PP** – a **word**-level category (Det, Adv, Deg); “helps make the meaning of the head more precise” (*CL*, p. 162)
- For IP, this is a special case; see below

X-bar Structure Practice



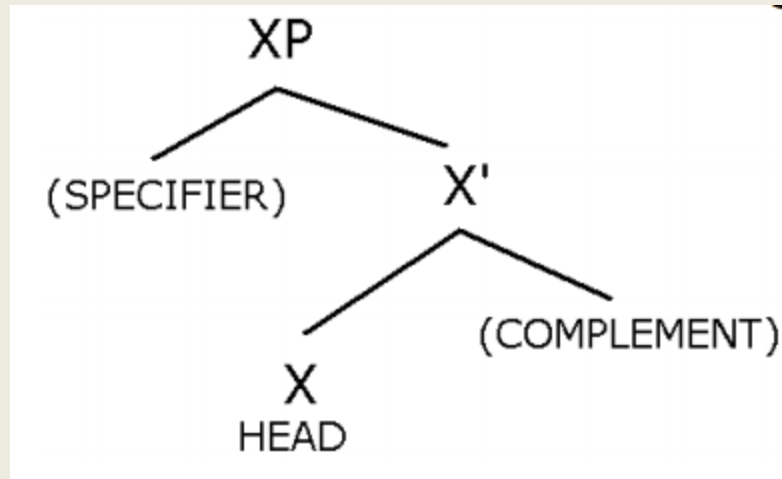
- We will frequently encounter a **Det** as a specifier for NPs – how do we diagnose a Det?
 - Only one Det can occur per NP (unlike adjectives/Aps)
 - Det must come first in the NP
- Is a possessive pronoun (*my, their, ...*) a Det?

X-bar Structure



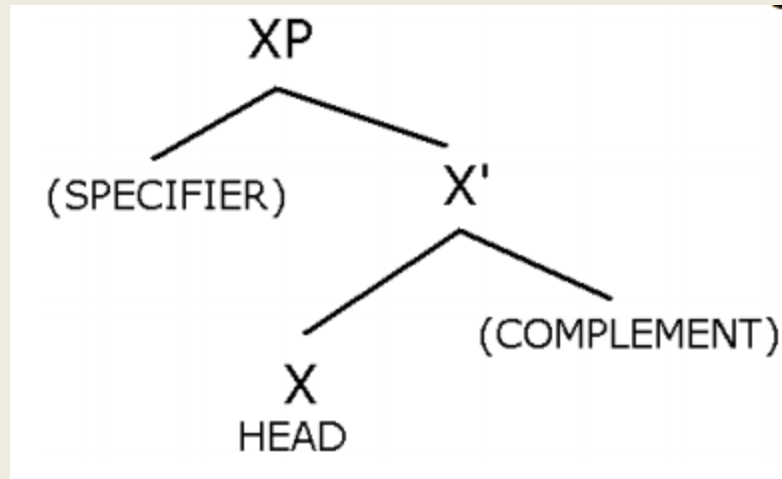
- Try to draw the trees for the following NPs
 - The droids
 - The cat in the hat
 - Cats in hats

X-bar Structure



- For PPs, a **Deg** word tends to be what occurs in the Spec position.
- Draw the PPs for the following:
 - *(Oscar went) out*
 - *(Susan put the basketball) right in*
 - *(a book) about rabbits*
 - *(a liking) for wines from Australia*

X-bar Structure



- For APs, a **Deg** word tends to be what occurs in the Spec position.
- Draw the APs for the following:
 - *happy*
 - *very angry*
 - *Pleased with the results*
 - *fond of her dog*

Homeworks

- Writing Assignment 5
- Homeworks:
 - p. 199, Ex. 3, (a) – (e)
 - p. 200, Ex. 6
 - p. 200, Ex. 7

Have a good day!