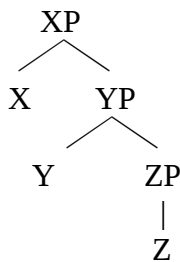


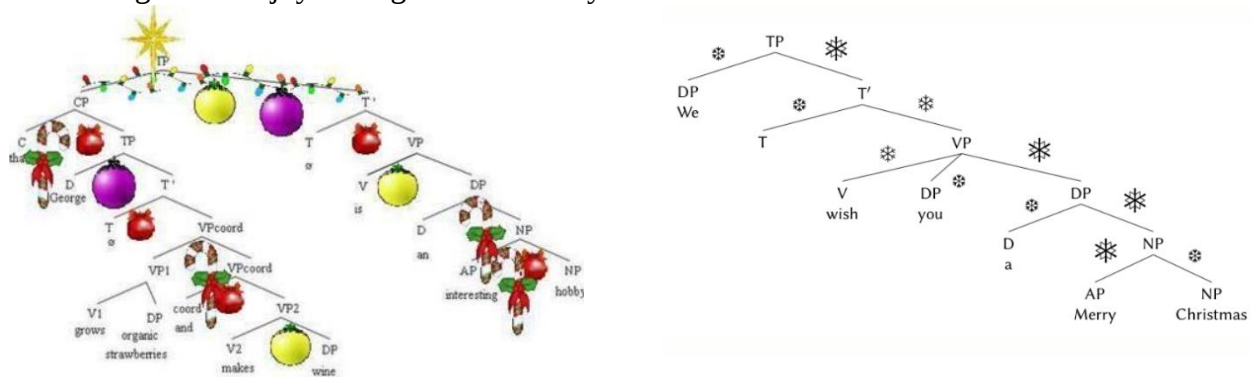
SYNTAX

What is syntax?

Syntax mediates between sound and meaning, combining words into larger units, i.e., phrases. We use an algorithm, **the structure**, while combining the words into the phrases. This **hierarchical structure** can be represented using **syntactic trees**¹.



Some linguistics enjoy having a Christmas syntax tree:



We should learn the following terms in order to get a better understanding of syntactic trees.

Terminal nodes: The nodes which have no branches below it, i.e., (X), (Y), and (Z)

Nonterminal nodes: The nodes which have branches below it, i.e., (XP), (YP), and (ZP).

Structural relations and hierarchy

The following terms are important to build a hierarchical structure.

Mother nodes: The nodes which immediately dominate another.

→ (XP) is the mother node of (X) and (YP), (YP) is the mother node of (Y) and (ZP), (ZP) is the mother of (Z).

Sister nodes: Two nodes that share the same mother.

→ (X) and (YP) are sisters and their mother is (XP), (Y) and (ZP) are sisters and their mother is (YP), (Z) has no sisters.

¹ You can draw trees in Word by using the ArborWin font (<http://www.cascadilla.com/arboreal.html>).

Head directionality and Head-directionality Parameter

Not all languages have the same word order.

Head-initial languages: The head precedes its complement (i.e., English – $VP \rightarrow V NP$)

Head-final languages: The head follows its complement (i.e., Turkish – $VP \rightarrow NP V$)

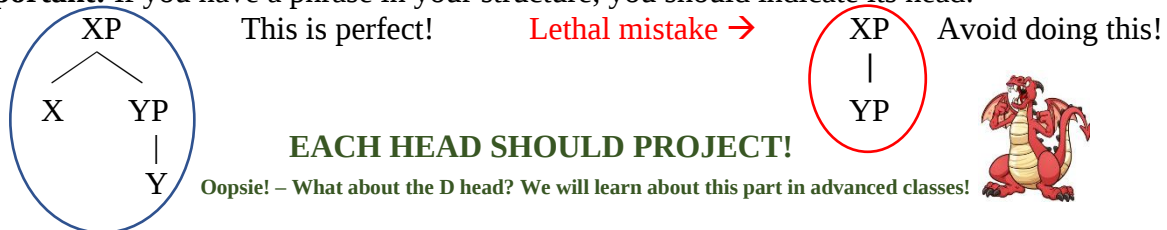
We call this difference the **head-directionality parameter**.

This parameter focuses only on the order between the heads and the complements (necessary elements). The position of the adjuncts (optional elements) is not significant for detecting the head-directionality of a language.

What about the other syntactic categories and Phrase Structure Rules?

We know that each phrase should have a head that provides the label for its maximal projection (its phrase level). This is **headedness** or **endocentricity**.

Important! If you have a phrase in your structure, you should indicate its head:



These are syntactic categories. ‘Part of speech’ is another term we use frequently. What are these syntactic categories?

→ Nouns, verbs, adjectives, adverbs, prepositions

We know that these heads project a maximal projection:

→ NP, VP, AdjP, Adv, PP

What is the internal structure of these phrases? **Phrase Structure Rules (PSR)** provide us with general information about the internal structure of these phrases. Moreover, PSR gives a general picture of the languages and possible structures. In other words, we formulate general rules about all languages.

$VP \rightarrow (AdvP+) V (NP) (NP) (AdvP+) (PP+) (AdvP+)$

This is the PSR for a general VP. It indicates that a VP should have a V head.

Moreover, this V head can be the only member of this phrase. If so, what should we understand?

→ The verb at issue is one-place predicate, intransitive, i.e., jump

We have AdvP, PP, and NP/DP in parentheses. It implies that verbs

- can be **intransitive** (i.e., die, arrive), $VP \rightarrow V$, or

- can have two arguments and be **transitive** (i.e., love, follow), $VP \rightarrow V NP$, or

- can have three arguments and be **ditransitive** (i.e., give, put), $VP \rightarrow V NP NP$, or

- can be modified by an AdvP (i.e., *quietly* sit)

Exercise Time**1. From our book (but with some adaptations)**

Let's try to analyze the pairs as we are supposed to do for our assignment.

- | | |
|-----------------------|------------------------|
| a. Aisha | professor |
| b. Aisha | each professor |
| c. loud bar | bar down the street |
| d. quickly | quite |
| e. student | bright college student |
| f. walked | rode the bus |
| g. seemed | appeared |
| h. extremely loud bar | the bar |
| g. seemed | appeared happy |

2. Let's analyze one English sentence together.

The cute toddler with a lovely hat hugged her mother and her father in the bedroom yesterday.

Brainstorming: What happens when we have a sentence as follows:

The students do not like the assignments.

3. Ambiguities in English

What are the possible meanings of the following phrase?

Purple People Eater

Can you draw the trees relevant to each meaning?

You do not need to put any labels.



4. More on English

What are the possible meanings of the following phrase?

I ~~shot~~ kissed the elephant in my pajamas

Can you draw the trees relevant to each meaning?



5. Again English but we need to understand the basics first!

Let's analyze a similar sentence that we have in the assignment and draw the tree together.

The cute cats should chase their friends in their garden everyday.



6. Hixkaryana

Take a look at the following phrases and sentences in the Carib language Hixkaryana (Brazil).

- | | | | | | | | |
|-----|--------------------------|------------|-------------|-----|-------------------------|--------------|-----------|
| (a) | newehyatxe | [woriskomo | komo] | (b) | [kuraha | yonyhoryeno] | biryekomo |
| | bath | woman | the(plural) | | made | bow | child |
| | `The women are bathing.' |            |             |     | `The child made a bow.' | | |

i) Describe the properties of this language. What is the word order? What are the PSRs? Can you say anything on the verb types in these examples?

ii) Draw a tree structure for the phrases in brackets.

iii) Let's give it a shot and draw the trees for the whole sentences in (a) and (b).