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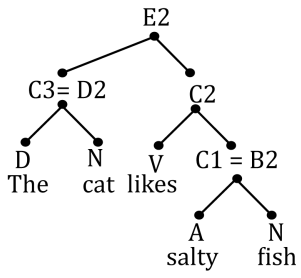
Introduction to Syntax

X-bar

Terminal nodes categories

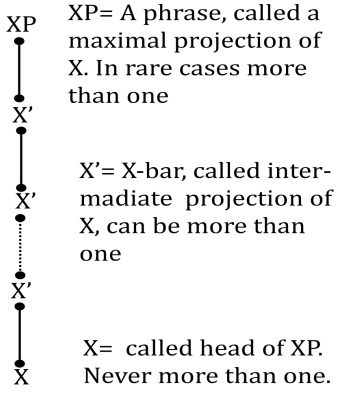
- 2. a. The - determiner (D) = A3
- b. cat - Noun (N) = B3
- c. likes - Verb (V) = A2
- d. salty - Adjective (A) = A1
- e. fish - Noun (N) =B1



X-bar

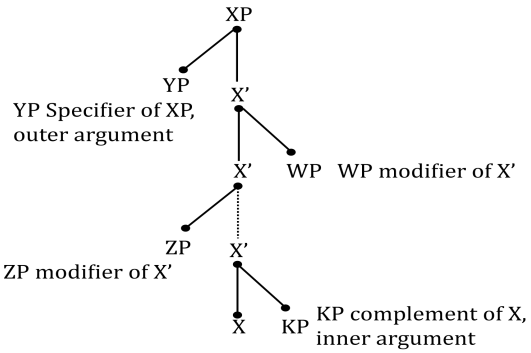
- An algorithm to establish the relations in a graph
- X-bar applies to every category because we treat X as a variable. In other words, X stands for: N, V, A, Ad, P, D, T, C, Deg., Conj
- X bar constrains the number of structural relationships that are allowed in human languages.

X- bar



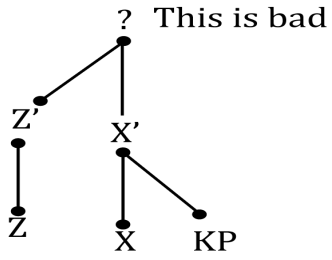
Principles of X-bar

- A. Each X projects an XP of the category that X has.
- B. For any X projecting an XP, you can attach a full phrase YP once (binary branching) to any X' or XP node.



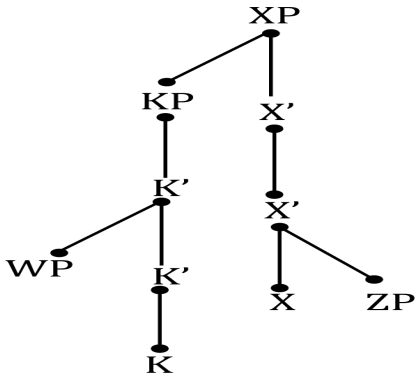
One head

- Otherwise we cannot compute the labels of the phrase
- Endocentricity



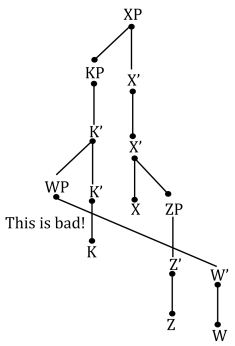
Recursion

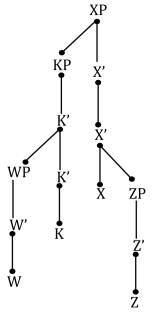
- We only attach maximal projection, but they can contain other maximal projections



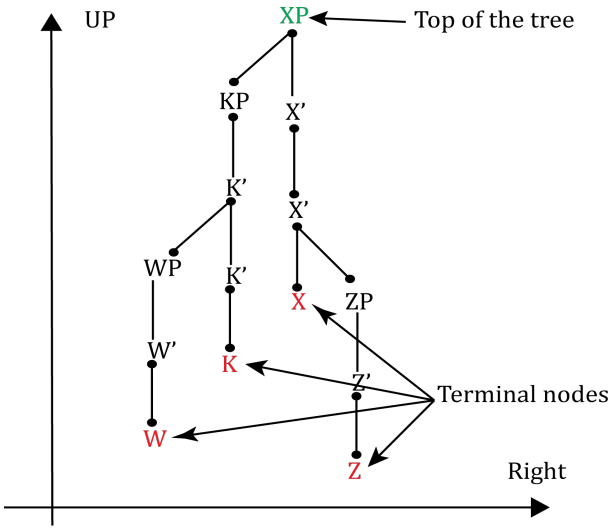
No crossing of branches

- Same structural relations different orders





Directions in a tree



Structural realtions

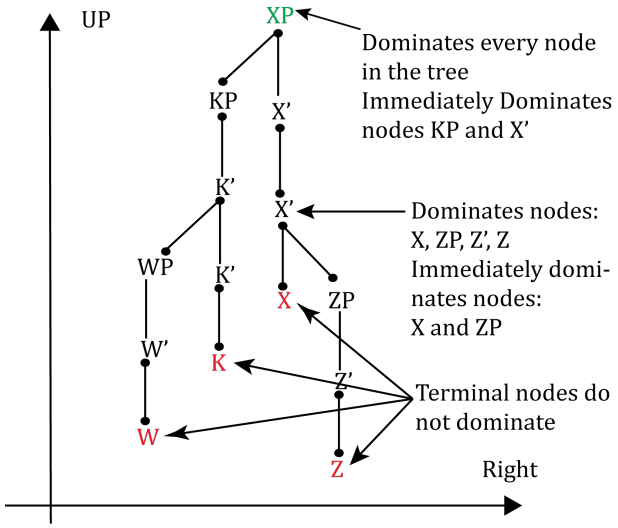
- Dominance

A node [A] dominates a node [B] if and only if [A] is higher up in the tree and you can trace a line from [A] to [B] without going upwards.

- Immediate Dominance

A node [A] immediately dominates node [B] if and only if [A] dominates [B] and there is no other node [C] that dominates [B] and is also dominated by [A]

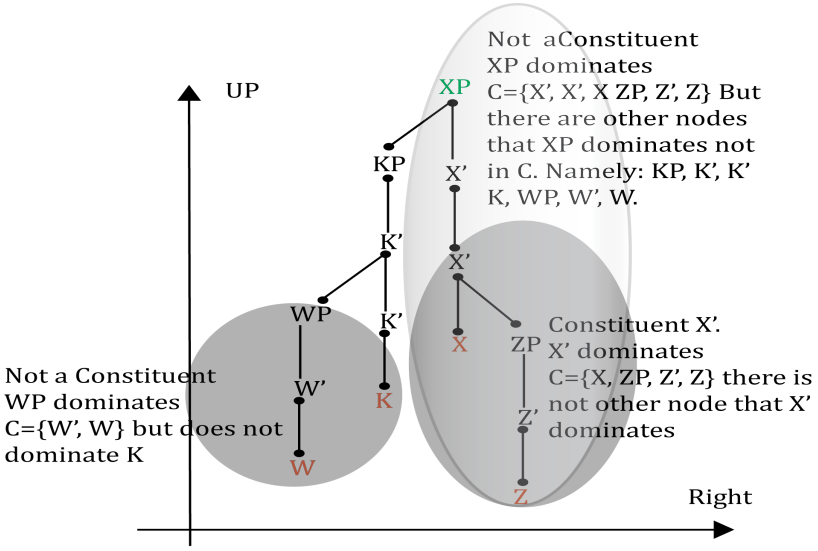
Dominance



Constituent

- Constituent
- Take a set C consisting of a string of nodes C={B,C,D,E} if and only if there is a Node A that dominates every member of C and there is no node F that is dominated by A but does not belong to C, then C is a constituent with an assigned value of A.

Constituents



Sisterhood

- Node A and B are sisters if they have one node (mother) immediately dominating them.