Lecture 5 **X-bar summary** Sept. 10, 2002

1 Where we are:

Our idea so far of what syntax is has evolved from being a simple list of PS-rules to a general schema for PS-rules, into which *any* categories, in principle, can be inserted.

Our schema for PS-rules is as follows (where 'n' stands for the number of bars in the bar-level):

$$X^n \rightarrow \left\{ \begin{array}{l} (YP)\ X^{n-1} \\ X^{n=1}\ (YP) \end{array} \right\}$$

$$X' \rightarrow X^0\ (ZP)$$

(Heads are sometimes called "X-zeros"; as the lowest element in the X-bar schema, they have no bars).

The reason for the disjunctive choice in the first rule is to accommodate right-branching modifiers like the ones I illustrated for *(the) big brown grumpy bear in the park that I saw*, or, more germane to your homework, right-branching modifiers of V':

I ran to the park quickly
Mary correctly answered the question in a clear manner.

(I'll draw these as an illustration of the drawing tools at this point).

2 The derivation

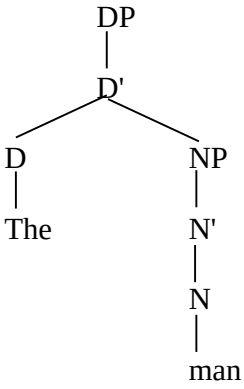
So our idea of what happens in syntax, so far, is that the words we're going to use to construct a sentence **project** X-bar schemata, labeled according to their individual categories, and then these schemata are fit together, rather like a jigsaw puzzle, by slotting appropriate phrases into the optional spots (complement and specifier) of other phrases.

Projection

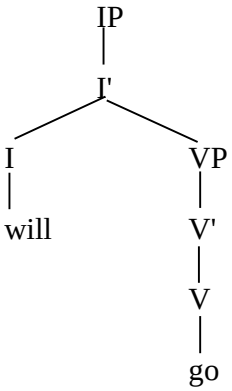
DP	NP	IP	VP
|	|	|	|
D'	N'	I'	V'
|	|	|	|
D	N	I	V
|	|	|	|
The	man	will	go

Then let's take our pieces and fit them together; first we'll fit the DP and NP together, then the VP and IP, then the DP and IP:

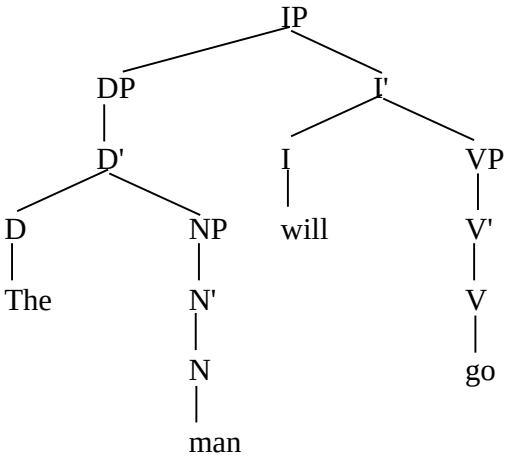
Fitting DP and NP together



IP and VP together



IP and DP together



Constraints on the fitting-together: theta-grids and features

How do we ensure that phrases of the correct category go in the correct spots? (For instance, what goes wrong if we fit NP into SpecDP?) We must assume that particular words impose particular syntactic and semantic requirements on their complement and specifier positions. That is, every word has syntactic requirements that it can impose on its specifier and complement, and every word has also got semantic requirements that it can impose on its specifier and complement. The semantic requirements are the word's *theta grid* (more on this soon); the syntactic requirements are *features* that the word must match up with appropriate features on other categories, in its specifier and complement. If there are any leftover unmatched features, the construction of the tree -- called the *derivation* -- will fail; we usually say that the derivation *crashes*.