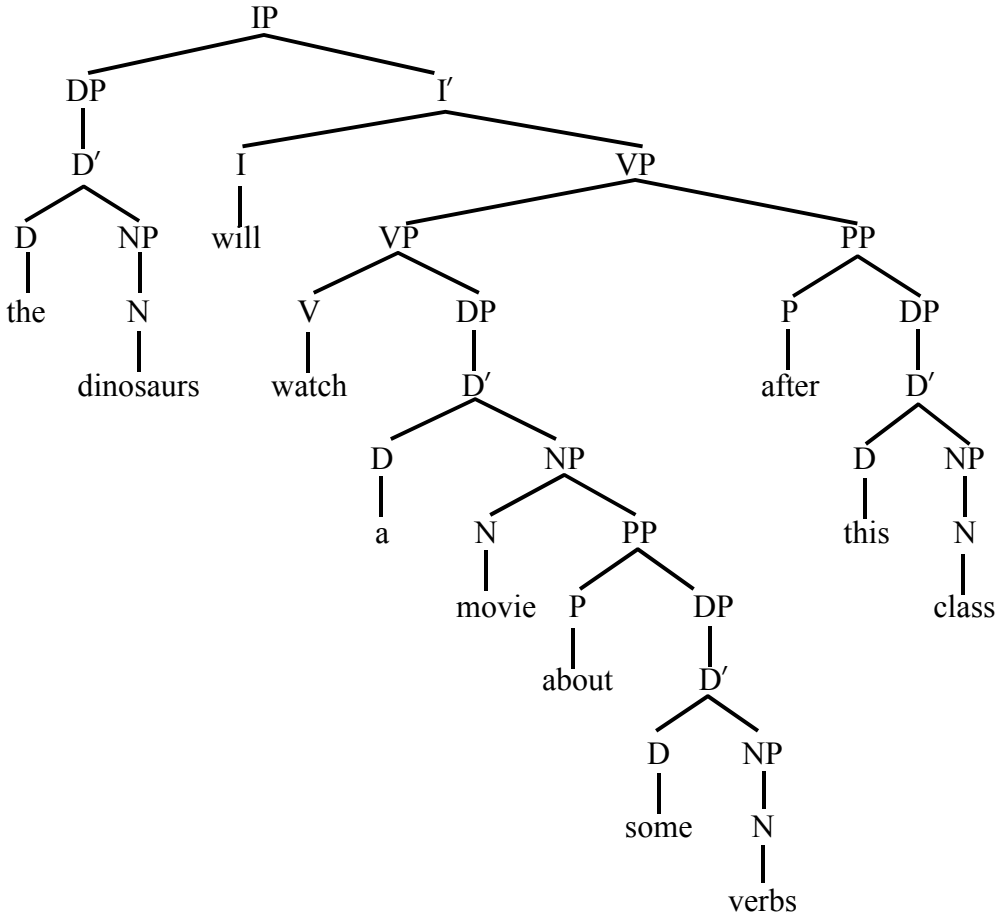
LFG Basics, p. 1

(1) a. The dinosaurs will watch a movie about some verbs after this class.

b.



c.

$$\begin{bmatrix} \text{SUBJ} & \begin{bmatrix} \text{DEF} & + \\ \text{PRED} & \text{`dinosaur'} \\ \text{NUM} & \text{SG} \end{bmatrix} \\ \text{TENSE} & \text{FUTURE} \\ \text{PRED} & \text{`watch} \left\langle (\uparrow \text{SUBJ})(\uparrow \text{OBJ}) \right\rangle\text{'} \\ \text{OBJ} & \begin{bmatrix} \text{DEF} & - \\ \text{PRED} & \text{`movie} \left\langle (\uparrow \text{OBL}_{\text{about}}\ \text{OBJ}) \right\rangle\text{'} \\ \text{NUM} & \text{SG} \\ \text{OBL}_{\text{about}} & \begin{bmatrix} \text{CASE} & \text{OBL}_{\text{about}} \\ \text{OBJ} & \begin{bmatrix} \text{DEF} & - \\ \text{PRED} & \text{`verb'} \\ \text{NUM} & \text{PL} \end{bmatrix} \end{bmatrix} \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{`about} \left\langle (\uparrow \text{OBJ}) \right\rangle\text{'} \\ \text{OBJ} & \begin{bmatrix} \text{DEF} & \text{THIS} \\ \text{PRED} & \text{`class'} \\ \text{NUM} & \text{SG} \end{bmatrix} \end{bmatrix} \right\} \end{bmatrix}$$

LFG Basics, p. 2

Elements of the c-structure and elements of the f-structure are in a relationship of correspondence. The c-structure–f-structure relation is many-to-one. Mathematically, this means that the c-structure–f-structure relation is a function, while the f-structure–c-structure correspondence is not. For this reason, the LFG formalism is stated in terms of the c-structure–f-structure mapping, the function ϕ.

In English, different positions in constituent structure are associated with different grammatical functions. (The question of whether this is true universally is one we will be addressing in this course—the answer will be no.) The syntax of English must therefore specify what structural positions exist and what grammatical function each one is associated with.

Based mostly on the generalizations apparent in sentence (1), the syntax of English must therefore include constraints that express the following:

(2) a. An IP node may dominate a DP, which functions as the value of the attribute SUBJ in the f-structure of the IP, and/or a head I′.

b. An I′ node may dominate a head I node and/or a VP node which functions as head (i.e. which corresponds to the same f-structure element as the I′).

c. A VP node may dominate a head VP node and a PP which functions as one of the elements in the value of the attribute ADJ in the f-structure of the VP.

d. A VP node may dominate any or all of: a head V, a DP which functions as the value of the attribute OBJ in the f-structure of the VP, a PP which functions as the value of the attribute OBL in the f-structure of the VP, a CP which functions as the value of the attribute COMP in the f-structure of the VP, etc.

e. A DP node may dominate a DP which functions as the value of the attribute POSS in the f-structure of the (higher) DP, and/or a head D′.

f. A D′ node may dominate a head D and/or a VP which functions as head (i.e. which corresponds to the same f-structure element as the D′).

g. An NP node may dominate a head N and/or a PP which functions as the value of the attribute OBL in the f-structure of the NP.

h. A PP node may dominate a head P and/or a DP which functions as the value of the attribute OBJ in the f-structure of the PP.

The formal notation for this is based on a traditional formal tool: phrase structure rules. The phrase structure rules are enriched with **annotations** expressing the functional information. In these annotations, the symbol ↑ is used to mean “the mother node” and ↓ to mean “the daughter node”. (All daughter nodes are assumed to be optional.)

LFG Basics, p. 3

(3) a. IP → DP I′
(↑ SUBJ) =↓ ↑=↓

b. I′ → I VP
↑=↓ ↑=↓

c. VP → VP PP
↑=↓ ↓∈ (↑ ADJ)

d. VP → V DP PP CP …
↑=↓ (↑ OBJ) =↓ (↑ OBL) =↓ (↑ COMP) =↓

e. DP → DP D′
(↑ POSS) =↓ ↑=↓

f. D′ → D NP
↑=↓ ↑=↓

g. NP → N PP
↑=↓ (↑ OBL) =↓

h. PP → P DP
↑=↓ (↑ OBJ) =↓

As discussed in the reading, lexical entries also have functional annotations, expressing the functional content of lexical items.

The PRED feature is a representation of the meaningfulness of syntactic elements, which is one aspect of their functionality. For most lexical items, the value of this feature is an atomic expression, conventionally represented as the word in single quotes. Pronouns have a special value for the PRED feature, 'PRO'. In the case of argument-taking predicates, the value of the PRED feature includes a specification of the arguments selected (as in the PRED value of 'watch' in (1c)).

Well Formedness Constraints on f-structure: Completeness, Coherence, Extended Coherence, Consistency/Uniqueness

For more, see:

Joan Bresnan (2001) *Lexical-Functional Syntax*. Oxford: Blackwell.
Mary Dalrymple (2001) *Lexical-Functional Grammar* (Syntax and Semantics, Vol. 34). New York: Academic Press.
Yehuda N. Falk (2001) *Lexical-Functional Grammar: An Introduction to Parallel Constraint-Based Syntax*. Stanford, Calif: CSLI Publications.