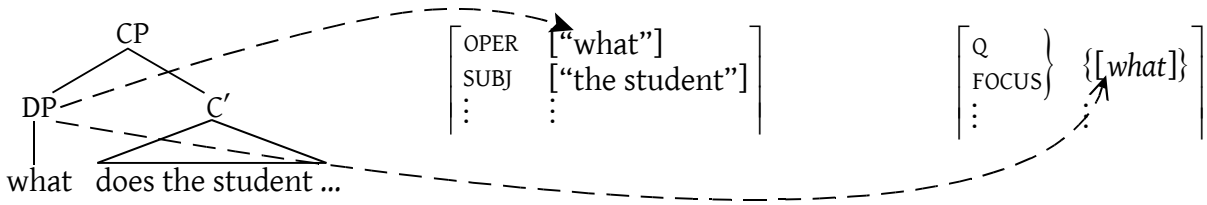
Anatomy of *Wh*-type Construc's, p. 1

<u>What</u> does the student think that the teacher said that the librarian put ___ on the shelf?

What, in addition to being OBJ of *put*, bears a grammatical function (operator) in the main clause. It also has a special pragmatic function (question word, and perhaps also focus). In LFG, grammatical functions are represented as functional structure (f-structure) and pragmatic functions as information structure (i-structure).



The full f-structure can be represented as:

$$\begin{bmatrix} \text{OPER} & f \\ \text{SUBJ} & [\text{“the student”}] \\ \text{TENSE} & \text{PRES} \\ \text{PRED} & \text{‘think}\ \langle \text{SUBJ, COMP} \rangle\text{’} \\ \text{COMP} & \begin{bmatrix} \text{SUBJ} & [\text{“the teacher”}] \\ \text{TENSE} & \text{PAST} \\ \text{PRED} & \text{‘say}\ \langle \text{SUBJ, COMP} \rangle\text{’} \\ \text{COMP} & \begin{bmatrix} \text{SUBJ} & [\text{“the librarian”}] \\ \text{TENSE} & \text{PAST} \\ \text{PRED} & \text{‘put}\ \langle \text{SUBJ, OBJ, OBL} \rangle\text{’} \\ \text{OBJ} & f \\ \text{OBL} & [\text{“on the shelf”}] \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

$f = [\text{“what”}]$

or, using standard LFG notation:

$$\begin{bmatrix} \text{OPER} & [\text{“what”}] \\ \text{SUBJ} & [\text{“the student”}] \\ \text{TENSE} & \text{PRES} \\ \text{PRED} & \text{‘think}\ \langle \text{SUBJ, COMP} \rangle\text{’} \\ \text{COMP} & \begin{bmatrix} \text{SUBJ} & [\text{“the teacher”}] \\ \text{TENSE} & \text{PAST} \\ \text{PRED} & \text{‘say}\ \langle \text{SUBJ, COMP} \rangle\text{’} \\ \text{COMP} & \begin{bmatrix} \text{SUBJ} & [\text{“the librarian”}] \\ \text{TENSE} & \text{PAST} \\ \text{PRED} & \text{‘put}\ \langle \text{SUBJ, OBJ, OBL} \rangle\text{’} \\ \text{OBJ} & \\ \text{OBL} & [\text{“on the shelf”}] \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

Anatomy of *Wh*-type Construc's, p. 2

Now consider:

Whose book does the student think that the teacher said that the librarian put ___ on the shelf.

Here the situation is more complicated. The operator, the item with the i-structure functions Q and FOCUS, is *whose*. However, the fronted element which functions as OBJ of *put* is *whose book*. From the syntactic perspective, each of these elements bears two grammatical functions. *Whose* is the OPER of the sentence and the POSS of *whose book*. *Whose book*, in addition to being the OBJ of *put*, bears a grammatical function in the main clause which is somehow related to the function OPER but is distinct from it. This function can be called FRONT.

$$\begin{bmatrix} \text{OPER} & f \\ \text{FRONT} & g \\ \text{SUBJ} & [\text{“the student”}] \\ \text{TENSE} & \text{PRES} \\ \text{PRED} & \text{‘think}\ \langle \text{SUBJ, COMP} \rangle\text{’} \\ \text{COMP} & \begin{bmatrix} \text{SUBJ} & [\text{“the teacher”}] \\ \text{TENSE} & \text{PAST} \\ \text{PRED} & \text{‘say}\ \langle \text{SUBJ, COMP} \rangle\text{’} \\ \text{COMP} & \begin{bmatrix} \text{SUBJ} & [\text{“the librarian”}] \\ \text{TENSE} & \text{PAST} \\ \text{PRED} & \text{‘put}\ \langle \text{SUBJ, OBJ, OBL} \rangle\text{’} \\ \text{OBJ} & g \\ \text{OBL} & [\text{“on the shelf”}] \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

$$f = [\text{“whose”}]$$

$$g = \begin{bmatrix} \text{POSS} & f \\ \text{PRED} & \text{‘book’} \end{bmatrix}$$

This kind of construction is called “pied-piping” in the transformational literature.

Standard LFG analyses differ somewhat from what is presented here. Instead, they use the grammatical functions FOCUS and TOPIC. However, there are two major problems with the standard approach. In the first place, the distinction between focus and topic is pragmatic, not syntactic. Second, in pied-piping constructions it is the FRONT element that is typically assigned the FOCUS or TOPIC function, not the OPER. Since it is the OPER which actually functions as FOCUS or TOPIC, the standard approach is doubly inappropriate.

Classification of overlay grammatical functions

	[–local]	[+local]
[+discourse]	OPER	LFOC
[–discourse]	FRONT	PIV