SPR4106 Syntax and Semantics in Formal Terms

Syntax assignment

Due date: Monday, March 2, 2015, 23:59

Review the definitions of specifiers, heads and complements. In the following we assume that specifiers are optional. When a specifier is present, it is always to the left. Complements can occur both to the left and the right of the head, depending on the type of phrase.

Exercise 1 Draw a tree according to the following specifications:

- Start with a CP.
- CP has an IP complement to the right.
- IP has an NP specifier.
- IP has a VP complement to the left.
- VP has a DP complement to the left.
- DP has an NP complement to the right.

This could be the tree corresponding to the German subordinate clause in (1).

(1) . . . dass Karl die Kneipen besucht hat.
that Karl the bars visited has.
'. . . that Karl has visited the bars.'

Exercise 2 Add the terminal nodes from (1) to your tree.

Exercise 3 Write phrase structure rules that will generate your tree. Identify the grammatical roles of *Karl* and *die Kneipen* and be sure to include functional annotations that will assign grammatical functions correctly.

When you added the terminal nodes to the tree, you assigned categories to the words. The other lexical specifications of the words in (1) are as follows.

(2)

dass	(↑ TENSE)
	(↑ MOOD) = DECL
Karl	(↑ PRED) = 'Karl'
	(↑ PERSON) = 3
	(↑ NUMBER) = SG
die	(↑ DEF) = +
Kneipen	(↑ PRED) = 'bar'
	(↑ PERSON) = 3
	(↑ NUMBER) = PL
besucht	(↑ PRED) = 'visit <SUBJ, OBJ>'
hat	(↑ TENSE) = PRES
	(↑ ASPECT) = PERF
	(↑ SUBJ PERSON) = 3
	(↑ SUBJ NUMBER) = SG

Exercise 4 Draw the f-structure for (1).

Now let us assume that CP can have a specifier, although there was none in this tree. Let us also assume (for now) that the specifier of CP is the subject.

Exercise 5 Update your phrase structure rules to reflect this.

Let us assume that finite verbs (*hat* in this example) can optionally be of category C (in addition to the category you gave it in exercise 2). Also, although Falk assumes a version of LFG where all nodes are optional, we assume for the purposes of this exercise that the C head is obligatory in German.

Exercise 6 Construct the c-structure for a variant of (1) using all the same words except *dass*. All words should have the same grammatical functions as in (1). Draw the corresponding f-structure and make sure it is well-formed.

In reality, the element in the specifier of CP is not necessarily the subject, but can have many different grammatical roles. We will look into this in more detail in lecture 5. For now we simply assume that the specifier of CP can be either the subject or the object.

Exercise 7 Now there is a new possible tree structure which corresponds to the same well-formed f-structure as in exercise 6. Draw this tree.

Exercise 8 Consider the two sentences described by the trees from exercise 7 and 8. The phrase structure rules allow the specifier of CP to be either a subject or an object. Are the sentences ambiguous? Why (not)? In the surface word order, the two nominals switch position. Do they also switch position in the tree? Why (not)?

A sentence like (1) can be embedded under e.g. the verb *glauben* 'believe' as in e.g. (3).

(3) Ich glaube, dass Karl die Kneipen besucht hat.
I believe, that Karl the bars visited has.
'I believe that Karl has visited the bars.'

However, (4) is also possible.

(4) Ich glaube, Karl hat die Kneipen besucht.
I believe, Karl has the bars visited
'I believe that Karl has visited the bars.'

Exercise 9 We simply assumed that German verbs can be of category C. Try to justify this assumption in light of the data you have seen in this exercise. Can you think of other ways of capturing the data? Compare them to the solution we have explored in this problem set.