

MSc Introduction to Syntax

Lecture 6: Nonfinite embedded clauses: Raising, Control, a.c.i.

NB: When reading SK chapter 9, ignore the bit on Case for the moment; we will discuss the relevant bit of Case theory in the next lecture. The ‘VP-shell’ analysis SK give of object control may be ignored entirely; just take good note of the difference between subject control and object control.

0. Introduction

Some transitive verbs can take entire clauses as their complement:

- (1) a. I know [that Mary lives in New York]
- b. She promised [that she will finish the job soon]
- c. David wonders [if there is life on Mars]

In the cases in (1) the complement clause is a complete clause, in the sense that it contains a finite verb and a subject. In this lecture we are going to look at the syntax of sentences containing complement clauses that do *not* contain a finite verb. We will see that such non-finite complement clauses come in different types.

1. Raising

First consider verbs like *seem*, *appear*, or *turn out*. These are verbs that do not assign a semantic role to a constituent in their subject position, but only to a constituent in their object position. This constituent is always realized as an embedded sentence. In (2), for example, the *it* in subject position is meaningless. The clause in complement position, which expresses the only semantic argument of *seems*, is a full finite clause in (2).

- (2) It seems [that Mary has fed the tigers]

Consider now what happens if the complement of a verb like *seem* is an infinitival clause, rather than a finite one:

- (3) a. *It seems [Mary to have fed the tigers]
- a'. Mary_i seems [t_i to have fed the tigers]
- b. *It appears [Bill to be aware of that fact]
- b'. Bill_i appears [t_i to be aware of that fact]

The examples in (3) show that in this case the subject of the embedded infinitival clause must move to the subject position of the main clause. (Recall that the *t* in these examples represents the *trace* of this movement, see lecture 4, and also below). This particular instance of movement is called *raising*; the verbs that trigger this process (*seem*, *appear* etc.) are called *raising verbs*.

Note that not all raising verbs can take a finite complement clause as an alternative to occurring in the raising configuration, like *seem* can (see (2)). SK mention *tend* in this regard:

- (4) a. His music_i tends [_{t_i} to be boring]
 a'. *It tends [that his music is boring]

According to the analysis in (3), the subject in a raising construction is the *grammatical* subject of the raising verb (it controls the person and number inflection on this verb), but it is not its *logical* subject, meaning that it is supposed not to have any semantic relation with this verb. It receives a semantic role from the embedded verb only, after which it moves into the subject position of the raising verb, a position that is not associated with any semantic role at all.

Evidence for the assumption that in raising constructions the subject is a semantic argument of the embedded predicate only, not of the verb in the main clause, comes from the following observation. A verb can impose so-called *selectional restrictions* on the elements that it assigns a semantic role (its arguments). A verb like *invite*, for example, combines felicitously only with objects that refer to a human, while a verb like *feed* only goes together with objects that refer to things that can take food. Similarly, a verb like *roll* does not want a subject that refers to something angular, and a verb like *gallop* wants its subject to belong to a very particular class of animals.

- (5) a. The baby carriage / #The envelope rolled down the hill
 b. The horse / #The bird galloped through the meadow

It turns out that, in a raising construction, the selectional restrictions imposed on the subject of the construction are completely identical to the selectional restrictions the embedded verb imposes on its subject arguments. The raising verb itself does not impose any particular selectional restrictions on this subject at all (there does not seem to be anything that can never appear in the subject position of a raising verb, compare for example (6a') and (6b') with (6a) and (6b)).

- (6) a. The baby carriage /#The envelope appeared to roll down the hill
 a'. The envelope appeared to be torn
 b. The horse /#The bird seemed to gallop through the meadow
 b'. The bird seemed to sing a song not even Olivier had heard before

We can account for this if we assume that the subject has moved out of the specifier position of the VP headed by the embedded verb, i.e. the position to which the embedded verb gives its Agent role, and that this movement leaves a trace that has all the same properties as the moved constituent (see also lecture 4). The trace can then function as the Agent argument of the embedded verb (*roll* in (6a), *gallop* in (6b)) and hence satisfy the selectional restrictions this verb imposes on its subject argument. Another indication that this position is actually filled (by the trace) comes from the observation that no other element, such as an expletive subject, can occupy it:

- (7) a. *The baby carriage appeared [there to roll down the hill]
 b. *The horse seemed [it to gallop through the meadow]

2. Control

In raising constructions the verb in the main clause does not assign a semantic role to the constituent in its subject position, as we have just seen. However, this is different

in the case of some other verbs that can have an infinitival clause in their complement position. Consider the following examples:

- (8) a. Mary tries [to feed the tigers]
b. Harry promised [to read those books]

Here, the verb in the main clause (*tries* in (8a) and *promised* in (8b)) *does* assign a semantic role to the subject. This is shown by the fact that verbs such as *try* and *promise*, in contrast to raising verbs such as *seem* and *appear*, can impose their own selectional restrictions on the subject:

- (9) a. The potatoes are boiling
b. The potatoes seem to boil
c. #The potatoes try to boil
- (10) a. The elephants went back to their stalls
b. The elephants appeared to go back to their stalls
c. #The elephants promised to go back to their stalls

With verbs like *try* and *promise*, then, the subject is not just the grammatical subject of the verb in the main clause, but also its logical subject. At the same time, it is *also* interpreted as the subject of the infinitival verb in the embedded clause. In (8a), for example, Mary is not only the one who tries something, but she must also be the one who does the feeding – the sentence cannot possibly mean that Mary tries to have the tigers fed by some other person. Indeed, the subject not only has to satisfy the selectional restrictions of the main verb, but those of the embedded verb as well:

- (11) a. #Mary tried [to gallop to the stall]
b. #The weatherman promised [to blossom]

To account for this, it is sometimes assumed that the infinitival clause embedded under verbs like *try* contains its own subject, in the form of a phonologically empty pronoun, called PRO. (See also the answer to Problem 3.1 of lecture 3 for evidence that there may be such a silent subject in these cases). In (8a) this pronoun then refers to the same person as *Mary* refers to, whereas in (8b) it refers to the same person as *Harry* refers to (this can be indicated by giving these constituents the same subscript, as in (12)):

- (12) a. Mary_i tries [PRO_i to feed the tigers]
b. Harry_i promised [PRO_i to read those books]

The relation between the PRO subject of the embedded infinitival clause and the constituent in the main clause that determines its reference is called *control*: a constituent in the main clause *controls* the empty PRO subject of the embedded clause.

The controller need not always be the subject of the main clause, as it is in (12). With some control verbs, it is their object that acts as controller of the PRO subject in the embedded infinitival clause:

- (13) Carl asked/forced/persuaded Susy_i [PRO_i to read that book]

Apart from the assignment of a semantic role, or not, to the main clause subject, there are other phenomena that show that we need to distinguish raising (involving movement of the subject of the embedded clause to the subject position of the main clause) from control (involving two coreferential but distinct subjects, one in the main clause and one in the embedded clause). For example, in various languages control verbs can take an embedded clause that is introduced by a complementizer, whereas raising verbs never do this. This is illustrated in (14)-(15) for Dutch.

- (14) a. Klaas_i probeerde/beloofde [om PRO_i de olifanten te voederen]
Klaas tried promised for the elephants to feed
 ‘Klaas tried/promised to feed the elephants’
 b. Carla verzocht/dwong/overtuigde Piet_i [om PRO_i dat boek te lezen]
Carla requested/forced/persuaded Piet for that book to read
 ‘Carla requested/forced/persuaded Piet to read that book’
- (15) *Piet_i schijnt/lijkt/blijkt [om e_i ook te komen]
Piet seems/appears/turns out for also to come
 ‘Piet seems/appears/turns out to come as well’

Apparently, raising across a complementizer position is impossible. This is also shown by the fact that raising from a finite clause is impossible:

- (16) a. It seems [that Bill has gone to France]
 b. *Bill_i seems [that t_i has gone to France]

Another difference between raising and control that indicates that movement is involved in the former case but not the latter is the following. ‘Partial control’ is possible. This means that the PRO subject of the embedded clause can refer to a group of entities of which the controller is only a part, as in (17), which has a meaning such that the chairman is only one of the people who will meet at 5. This phenomenon does not seem to have a counterpart in raising constructions, as illustrated by (18).

- (17) The chairman proposed [PRO to meet at 5]
 (18) *The chairman seemed [t to meet at 5]

Finally, sometimes two constituents in the main clause jointly act as controller of PRO, as in (19). In cases of raising we never see more than one constituent in the main clause jointly acting as the logical subject of the embedded clause, again indicating that movement of the subject of the embedded clause to the main clause is involved here:

- (19) Mary_i suggested to William_j [PRO_{i+j} to go to the party together]
 (20) *Mary seemed to William [t to go to the party together]

3. A.c.i.

Next to the type we see in raising and in control constructions, there is a third type of infinitival complement clause. This distinguishes itself from the other two in having an overt subject in the embedded clause itself (rather than having a trace there, as in

the complement clause to raising verbs, or a phonologically null pronoun PRO, as in the complement clause to a control verb). Consider the following examples:

- (21) a. Mary expected Bill to leave soon
b. We all saw the bomb explode

In (21a), *Bill* is the logical subject of *leave*, and in (21b), *the bomb* is the logical subject of *explode*. This can be deduced from the fact that these constituents must comply with the selectional restrictions imposed by the embedded verb on its subject argument (compare for example #*Mary expected the match result to leave soon* or #*We all saw lightwaves explode*). Moreover, these constituents do not at the same time function as object argument of the main verb. (21a), for example, does not imply that Mary expected Bill, nor does (21b) imply that we saw the bomb. This means that *Bill* and *the bomb* are the subjects of the embedded clauses in (21) and nothing else but that, as in (22). Indeed, the examples in (21) can be paraphrased by using full finite complement clauses with the same subjects, as in (23).

- (22) a. Mary expected [_{IP} Bill to leave soon]
b. We all saw [_{IP} the bomb explode]
- (23) a. Mary expected [_{CP} that Bill would leave soon]
b. We all saw [_{CP} that the bomb exploded]

The type of embedded infinitival clause in (22) is called, after its Latin equivalent, the *accusativus cum infinitivo*, or a.c.i. This name indicates that the morphological form of the subject in the infinitival clause is unexpected for a subject. In Latin, this subject has case morphology that is usually reserved for direct objects, so-called accusative case (rather than the case normally showing up on subjects, the nominative case). Although English has lost the morphological case system it had in older stages of the language, we can still see a remnant of this when the subject of an a.c.i. clause is a pronoun, as this pronoun shows up in object form rather than subject form; see (24). Note the difference with the subject of the finite embedded clauses in (25).

- (24) a. Mary expected [him/*he to leave soon]
b. We all heard [her/*she sing *Voi che sapete*]
- (25) a. Mary expected [that *him/he would leave soon]
b. We all heard [that *her/she sang *Voi che sapete*]

For this reason, a.c.i. constructions are also known under the name of *Exceptional case marking* (ECM) constructions. The verb in the main clause is said to exceptionally assign the accusative case it can give to its own direct object to the subject in the embedded clause instead (but more on case theory in the next lecture).

Exercises

SK exercise 9.1A, 9.1B, 9.1D, 9.3, 9.5