

Generative Grammar MGU/RGGU
Handout #9
Control and ECM

November 22, 2002

- Today we will cover an important topic that we have not yet touched on: "Control theory"

I. Control.

Questions:

- what is the subject of an infinitive? is there one?
- if not, is that a problem for syntactic theory?
- if so, how do we figure out what it is?

1) Lebed hopes [to sing in a night club].

- Think about the **theta-roles** assigned by the verb "to sing".

- what theta-role(s) does *sing* assign?
- who/what is assigned those roles in (1)?
- How many theta-roles is an NP allowed to have?
- How many does Lebed have in (1)? Is this a problem?
- Can you think of any way of solving this problem?

- Notice that (1) must mean that it is Lebed (and not anyone else) who is the singer.

- We cannot say that the NP Lebed is assigned the theta-role from *sing* because it already has one and because it is too far away. So something else must be the subject of *sing* in (1) although that something else "means" Lebed, unless we state a different subject. Let's try that:

*2) Lebed hopes [Yeltsin to sing in a nightclub]

- Why is (2) ungrammatical? How can we fix it?

3) Lebed hopes [for [Yeltsin to sing in a nightclub]]

- From (3) it should be clear that *sing* can have a subject so that means it *must*.

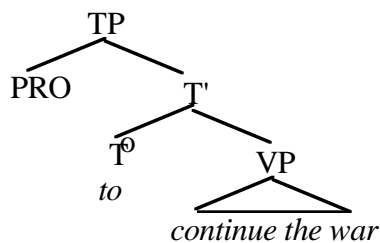
*4) Sings. (an attempt to allow *sing* to have no subject at all.)

5) a. Yeltsin isn't sure [whether [he should continue the war]]
b. Yeltsin isn't sure [whether [to continue the war]]

- In (5a), the subject of *continue* is *he*
- In (5b), there is an **empty subject !!**

Let us call this empty subject **PRO** "large PRO" (an "empty pronoun subject")

6) Structure of the embedded infinitival TP in (5b):



The **empty subject** analysis of (5a) has various advantages:

- i) It provides a host for the theta-role of the embedded verb (assigned to PRO)
- ii) It does not encounter a case problem, because the **case filter** only excludes NPs *with phonetic form* but no case
- iii) It explains the agreement facts in (6):

- 6) a. They are not sure [whether [Lebed should be a candidate]]
*b. They are not sure [whether [Lebed should be candidates]]
- 7) a. Lebed is not sure [whether [to be a candidate]]
*b. Lebed is not sure [whether [to be candidates]]

Remember that a **reflexive** must have an **antecedent** *in the same clause (TP)*:

- 8) a. Lebed_i voted for himself_i.
*b. Lebed_i voted for himself_j. (the indices mean *himself* refers to *Lebed*)
- 9) *a. Lebed_i knows that [Mrs. Yeltsin_j voted for himself_i].
b. Lebed_i knows that [Mrs. Yeltsin_j voted for herself_j].

So the antecedent cannot be outside of the TP of the reflexive (it also has to c-command the reflexive, but that is irrelevant here)

- 10) Lebed_i isn't sure [whether [to vote for himself_i or not]]

• (10) should be ungrammatical. But not under the PRO analysis:

- 11) Lebed isn't sure [whether [PRO_i to vote for himself_i or not]]

But how do we know that PRO refers to Lebed? This is where **control** comes in. We say that the main clause subject *Lebed* *controls* the reference of large PRO. **This is because Lebed c-commands PRO.** What happens if nothing c-commands PRO?

- 12) a. To live is to dance.
b. [PRO to live] is [PRO to dance]

Here, the reference of PRO is **arbitrary** because it refers to everyone, generally, or to noone in particular. We call this PRO_{arb}. This occurs only when there is no NP that c-commands PRO that can control its reference.

- 13) a. Lebed_i persuaded Yeltsin_j [PRO_j to leave]
*b. Lebed_i persuaded Yeltsin_j [PRO_i to leave]

In (13) **Yeltsin** c-commands PRO and is closer than Lebed, so **Yeltsin** controls PRO!

Probably, PRO is the subject of adjunct small clauses as well:

- 14) a. The students_i danced [PRO_i drunk]
b. I found John_i [PRO_i drunk]

What does this mean about the position of direct objects within VP?

They must be high enough to c-command the adjunct small clause. How is this possible?

II. Exceptional Case Marking

- 14) *a. I hope [Lebed to win the election]
*b. I pray [Lebed to win the election]
*c. I rooted [Lebed to win the election]
*d. I bet [Lebed to win the election]

(14) are all ungrammatical because, as we have seen, infinitives do **not** assign Nominative case, which is why (14) get corrected by insertion of a case assignor:

- 15) a. I hope [Lebed to win the election]
b. I pray [Lebed to win the election]
c. I rooted [Lebed to win the election]
d. I bet [Lebed to win the election]

But notice that some verbs **do** allow things like (14):

- 16) a. I believe [Lebed to be right]
b. I've never known [Lebed to lie]
c. Everyone wants [Lebed to be president some day]

What case is assigned to Lebed in (16)? How do we tell? Try pronouns!

- 17) a. I believe [**him** to be right]
b. I've never known [**him** to lie]
c. Everyone wants [**him** to be president some day]

- 18) *a. I believe [**he** to be right]
*b. I've never known [**he** to lie]
*c. Everyone wants [**he** to be president some day]

So we can tell that case here is assigned by the **verb** and not by the lower I (which is consistent with infinitives **not** assigning Nominative (or any other) case.

Therefore, we call these verbs **exceptional case marking verbs! (ECM)** These are exceptional in that most verbs don't do this, and it varies from language to language. This information must be specified in the lexicon!

Now we have 2 types of sentences that **seem** identical in structure, but aren't:

- 19) a. Lebed persuaded Yeltsin [PRO to resign]. (control)
b. Lebed wanted [Yeltsin to resign] (ECM)

How can we tell them apart? Various ways (Radford pp. 320-324)

• Dummies:

- 20) a. Lebed wanted it to rain (*it* gets no theta-role theta-role being a "dummy")
*b. Lebed persuaded it to rain. (*persuade* needs to assign 2 theta-roles)

• No embedded subject:

- 21) a. Lebed wanted [PRO to win]
*b. Lebed persuaded[PRO to win] (*persuade* needs to assign 2 theta-roles)

• Adverbs:

- 22) a. Lebed persuaded Yeltsin firmly [PRO to resign]
*b. Lebed wanted [Yeltsin firmly to resign.]

(the adverb *firmly* in (22b) not in the clause with the V it modifies)