

Automodular Grammar

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Lecture 3

The Insufficiency of RHO

There is ample evidence that the treatment of control that makes RHO a sort of semantic reflexive is inadequate. In many languages what corresponds to infinitives in our control structures are finite clause complements. Here's some data from Greek (Alexiadou and Agnostopoulou 2002):

- (1) O Petros kseri na koliba-i [sic]
the Janis knows SUBJ come-3sg
"Janis knows how to swim." lit., "Peter knows that he might swim."

Here there is necessary coreference between the main clause subject and the inflectionally indicated subject of the finite subordinate clause. Therefore inflection of the of the subordinate clause verb or an NP subject in the subordinate clause result in ungrammaticality:

- (2) a. *O Petros kseri na kolimbao
the Peter knows SUBJ swim.1sg
b. *O Petros kseri na kolimbai i Maria.
the Peter.NOM knows SUBJ swim.3sg the.NOM Maria

RHO will not be found in the subordinate proposition in F/A structure in either case.

A similar problem arises in connection with some instances of "Copy Raising", or "Richard" as Andy Rogers (1974) originally called it.

- (3) Mary looks as if she's drunk.

Here also there is necessary coreference between the main clause subject and the subject of the complement clause, a pronoun.

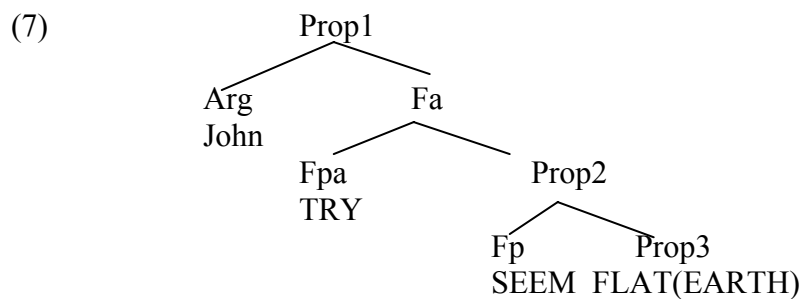
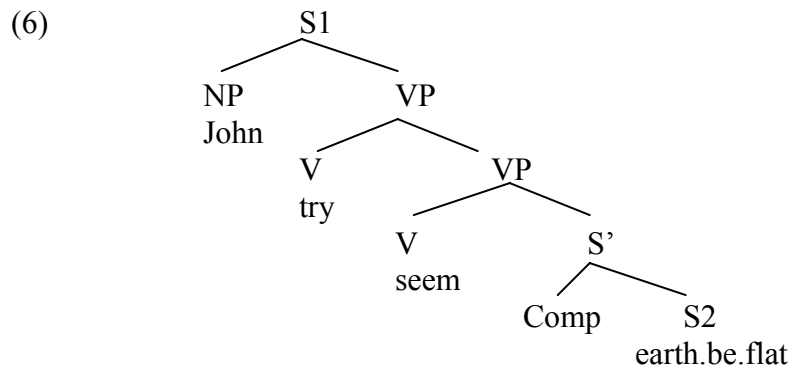
- (4) *You look like as if I'm drunk."

Another problem for RHO concerns the ungrammaticality of the following:

- (5) *John tried to seem that the earth is flat.

The syntactic and semantic structures for the sentence above would come out as

(6) and (7), both of which are well formed within its own module and the interface correspondences defaults are all met.



Here also there is a requirement that demands coreference between the subject of *try* and the subject of a subordinate clause. But RHO does not even figure in the F/A structure of (70).

RHO of arbitrary reference

Where RHO has no antecedent in F/A structure, it would have to have a situational or indefinite understanding (so-called PRO_{arb} in the GB family of theories):

(8) To retreat would be a mistake.

Finally, there are verbs that allow infinitive complements, and hence have possible antecedents for RHO but fail to require coreference, as in (9).

(9) Every alderman voted to fund the new stadium.

If RHO always had as its referent an available c-commanding antecedent, then (9) would mean that each alderman would fund the stadium, which it clearly doesn't.

In all of these cases it should be obvious, as it was to Paul Postal way back in 1970 and to most researchers since, that control is not random but has something to do with meaning. But actual meaning, that is, the connection between expressions of language and perceptions of states of the world, plays no role in F/A structure. As is obvious to logicians, "semantics" must connect language and states of affairs. I therefore adopt an additional module in which meaning in this sense is present, a level in which

such notions as synonymy, contradiction, and entailment can be talked about. I call it role structure (RS). It resembles in many respects the cognitively oriented descriptions that go back to Gruber, Fillmore, Jackendoff, etc., dating from the middle sixties.

While the details are still puzzling, it is clear what distinguishes *try*, *make an effort*, and so on, from *vote*, *give an order*, and so on is that the former class has to do with attempts on the part of the subject's referent to carry out some action whereas the latter class has to do with attempts to get someone else to carry out an action.

Role Structure

This level deals with the *encoded* meanings of linguistic expressions and what those meanings entail. The scene conjured up by a sentence like *I went to a restaurant* includes tables, chairs, wait staff, napkins, etc., but none of these things is literally entailed. Compare this with passive sentences like *I was arrested*. Here the existence of an arresting agent is literally entailed. I cannot have been arrested without someone doing arresting me.

Various systems for representing encoded meaning can and have been suggested, but I will assume a very spare representational model that may, in fact, be sufficient for linguistic purposes. It seems to me that no simple predicates encode more than three or four participants, though many more may be conversationally implicated by virtue of speakers' knowledge of stereotypical situations. More or less following Fillmore's example, I will assume that a predicate encodes an event type and one to three participants and possibly a dependent event. (Cf. Faarlund 1995.)

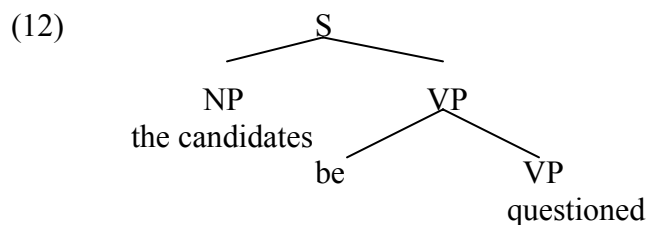
(10) EVENT \rightarrow TYPE, ROLE, (ROLE) (ROLE) (EVENT)

There are different roles, of course, but it is conceivable that there are very few linguistically relevant distinctions. Thus a writer is not exactly the same thing as a reader, and one could call their roles scriptor and lector, but grammatically, they may both instantiate a single relevant role called (usually) agent. Agency is a cluster notion, as Dowty and others have recognized; A sufficient number of prototypical properties of agency, differing, perhaps from language to language, will make a role an agent. Similarly for patients and the remaining, "neither AG nor PAT" role.

Passive

First of all, we have to ask what the syntax and F/A structure are. The syntax is easy:

(11) The candidates were questioned (by the media).



F/A structure is harder. The classical analysis amounts to saying (in this framework) that the F/A structure of the active and the passive are the same, presumably like the active rather than the passive. But I think there is plenty of evidence that that cannot be the case. For example, if the rule for the antecedence of reflexives is even close to correct, the active and passive cannot have the same F/A structure. If they did, then (13) and (14) should have the same interpretations:

- (13) Tracy believes herself to have been referred to by Kim.
- (14) Tracy believes Kim to have referred to by herself.

Confirmation of this conclusion comes from observing that in the agentless passive there is no possibility of scope ambiguity between the subject of the passive and the unexpressed, but presumably existentially quantified agent. (15) is ambiguous; (16) isn't.

- (15) Someone is loves every child.
- (16) Every child is loved.

So if the active and passive do not share the same F/A structure, where is the vaunted identity to be displayed? In RS, of course.

A transitive verb of the ordinary kind will, as we've seen in the previous lectures, have a lexical entry like (17), which we can expand as in (18) to include role structure (and morphology):

- (17) *take*:
 syntax: V in [_{VP} __ NP]
 F/A: F_{aa}
- (18) *take*:
 syntax: V in [_{VP} __ NP]
 F/A: F_{aa}
 RS: TAKE, AGENT, PATIENT
 Morphology: V[Stem]

The lexical representation of the corresponding passive participle will be as follows:

- (19) *taken*:
 syntax: V in [_{VP} __ NP]
 F/A: F_{aa}
 RS: TAKE, (AGENT,) PATIENT
 Morphology: V[PPCL]

It won't do to simply list every transitive verb and its corresponding passive participle in the lexicon since the relation is productive. What is called for is a rule of the morphology which says that if a lexeme of with properties(s, F , R, M), then there is a

related lexeme with properties (s' , F' , R' , M'). Such rules are functions from the various fields of one lexical item to the fields of a related one. For the agentless passive it is:

(20) Agentless Passive Lexical Rule

Active	→	Passive
syntax: V in [__ NP, ψ]	→	syntax: V[PSV-P] in [__ ψ]
F/A: $F_{\phi aa}$	→	F/A: $F_{\phi a}$
RS: “v”, AG, PAT, χ	→	RS: “v”, ((AG)), PAT, χ
Morphology: V[Stem]	→	Morphology: V[PPCL]

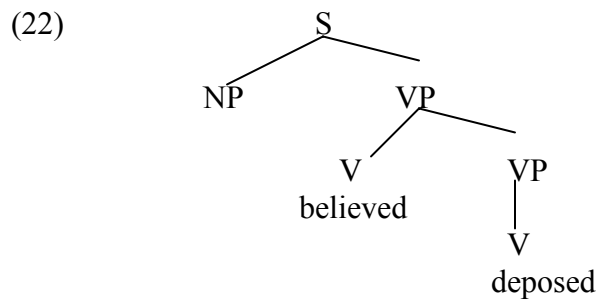
The argument for the cycle:

Consider:

(21) The king is believed to have been deposited.

The classical idea (Postal? Perlmutter?) was that the order of application of rules in (21) is 1) Passive in the subordinate clause, Subject to Object Raising between clauses, and Passive again in the main clause. Therefore there must be a cycle. But there is no movement whatsoever on the automodular view, so how is this result achieved?

The syntax of (21) is clearly (22) (with important details suppressed for the sake of brevity):



The *depose* is a simple transitive verb, so *deposed* is a simple intransitive, except it still has an AGENT in role structure: At that level it is

(23) *DEPOSED*, ((AG)), PAT

The agent cannot be associated with an NP (or Argument), so the single NP in *The king was deposited* must be the patient.

The verb *believe* has the following syntax and F/A structure (cf. handout 1) to which I have added the role structure:

(24) *believe/expect/find ...*:
 syntax: V in [__ NP, VP[to]]

F/A: F_{pa}
RS: *BELIEVE, AG, EVENT*

As I explained, this will yield the subject to object “raising” facts. The corresponding syntax and F/A properties for the derived passive participle will be

(25) *believed/expected/found ...*:
syntax: V in [__ VP[to]]
F/A: F_p
RS: *BELIEVE, ((AG)), EVENT*

This is the combination of properties that produce the subject to subject “raising” facts, and that’s what we find: *Believed* is a lot like *seem* combinatorically, and even as regards content. The role structure of (21) is thus (26).

(26) *BELIEVE, ((AG)), [DEPOSE, ((AG)), PAT]*

Only the patient can be associated with the syntactic subject. QED.

Coercion

The coreference property of *try*-type predicates can be stated in RS as (27), where there is necessary coreference between the the superordinate and subordinate agents.

(27) *EVENT, AG_i [EVENT, AG_i, χ]*

Now consider:

(28) Dick tried to seem to be a friendly person.

For those who accept this example, *seem* would have to be ambiguous between its ordinary sense and an active sense meaning roughly “do something so as to make it seem”. But even for such speakers that meaning is unavailable in simpler examples like

(29) Dick seemed to be a friendly person.

Rather than assume an otherwise unattested meaning I suggest that the communicated proposition is “coerced” (Pustejovsky 1996) explaining why the apparent meaning is found only in complex examples. Support for this comes from the fact in examples where the coerced meaning is nonsensical, the examples are quite unacceptable. A shadow intermediate proposition with an agent is thus interpolated in the understanding of (28):

(30) *TRY, AG_i [MAKE.IT.THE.CASE, AG_i, [SEEM, [EVENT]]]*

The Problematic Verb *Promise*

There is a small class of predicates in English that also occur with a following NP and VP[to] and that select RHO but are understood with the subject of the verb coreferent with the subject of the subordinate proposition. The coreference shows up clearly in the distribution of reflexive pronouns for those speakers who allow this construal:

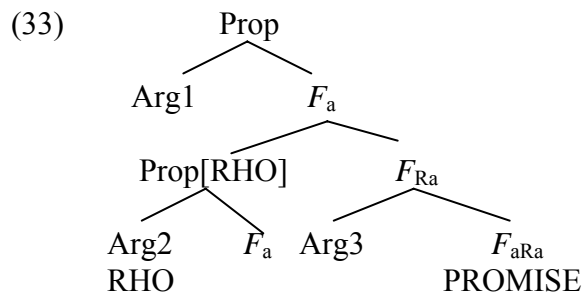
- (31) a. I persuaded my brother to take better care of *myself/himself.
 b. I promised my brother to take better care of myself/*himself.

We could handle this in F/A structure by making *promise* a member of a new F/A category, namely F_{aPa} so that it combines first with the argument representing the promise and only then with the proposition representing what is p

(32) *promise*

Syntax: V in [__ NP VP[to]]

F/A: F_{aRa}



But besides inventing a new, otherwise unattested functional category, such a treatment is ad hoc and neglects the obvious fact that *promise*, *make a vow to NP to*, *swear to NP to*, and the like all share a meaning property. Now that we have RS, the coreference here can also be formalized.

Take Home Exam

Some speakers accept examples like (35) with *object* control rather than the subject control we expect of *promise*. The object control is brought out clearly by the reflexive in (36). Provide a treatment for this. Your treatment will have to include a lexical entry for *allow*, the derived lexical entry for the passive participle *allowed*, and the idea of coercion.

- (35) Fred promised Nancy to be allowed to attend.
 (36) Fred promised Nancy to be allowed to give herself a raise.