Computationele grammatica

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Contents

1 Raising verbs

- Raising verbs: *seem*

  (1) They seem to be happy.

- Terminology derives from the original transformational analysis which related the two sentences. The embedded subject moves to the subject position of the main clause.

(2) It seems that Mary is sick

(3) Mary$_i$ seems e$_i$ to be sick

- Properties of raising verbs:

  (i) They allow subjects without referential indices.

  (4) There seems to be riots in L.A.

  (5) It seems to bother John that Mary lied.

  (ii) A nonreferential subject can occur only if the verb within the infinitival clause is one that selects it. The verb *seem* is in some sense transparent: it has the same subject as its complement.

  (6) *There seems to eat apples

  (7) *There seems to bother John that Mary lied.

  (8) *It seems to eat apples

  (9) *It seems to be riots in L.A.

  (iii) If the complement verb is passivized, the meaning of the sentence doesn't change (i.e., there are no conditions under which one of the sentence would be true and the other would be false).

  (10) Mary seems to love John

  (11) John seems to be loved by Mary

- This implies that *seem* only takes one argument, that is the situation of its infinitival complement.

2 Control verbs

- Control verbs: *try*

  (12) They try to leave.

- The term *control* is used to refer to a relation of referential dependency between an unexpressed subject (the *controlled* element) and an expressed or unexpressed constituent (the *controller*).

- Properties of control verbs:

  (i) It is not possible to have nonreferential subjects.

  (13) *There tried to be riots in L.A.

  (14) *It tried to bother John that Mary lied.

  (ii) If the complement verb is passivized, the meaning of the sentence changes.

  (15) Mary tries to love John

  (16) John tries to be loved by Mary

- This implies that *try* takes two different arguments: an individual and some situation that the trier is trying to bring about.

- This is why the meaning of the sentence changes in the case of passive: the two triers are not the same.

- Since control verbs have a subject which is assigned a role, it follows that it is not possible to use nonreferential subjects with these verbs.

3 More on raising and control

- Are the following raising or control verbs?

  (i) hope;

  (ii) continue;

(iii) tend;

(iv) manage;

(v) happen;

(vi) persuade;

(vii) appear;

(viii) expect;

(ix) promise

4 Semantic structure for subject raising and subject control verbs

- Control verbs assign one more semantic role than their raising counterparts

(17) They try to run.

$$\begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{try} \\ \text{TRYER } \boxed{1} \\ \text{SOA-ARG} \begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{run} \\ \text{RUNNER } \boxed{1}\textit{ref} \end{bmatrix} \end{bmatrix}$$

(18) They seem to run.

$$\begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{seem} \\ \text{SOA-ARG} \begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{run} \\ \text{RUNNER } \textit{ref} \end{bmatrix} \end{bmatrix}$$

5 Lexical entries for subject control and subject raising verbs

(19) Try

$$\begin{bmatrix} \text{CAT} \mid \text{VAL} \begin{bmatrix} \text{SUBJ} \left\langle \text{NP}\boxed{1} \right\rangle \\ \text{COMPS} \left\langle \begin{bmatrix} \text{CAT} \begin{bmatrix} \textit{category} \\ \text{HEAD} \begin{bmatrix} \textit{verb} \\ \text{VFORM } \textit{inf} \end{bmatrix} \\ \text{VAL} \begin{bmatrix} \text{SUBJ} \left\langle \text{NP}\boxed{1} \right\rangle \\ \text{COMPS} \left\langle \right\rangle \end{bmatrix} \end{bmatrix} \\ \text{CONT } \boxed{2} \end{bmatrix} \right\rangle \end{bmatrix} \\ \text{CONTENT} \begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{try} \\ \text{TRYER } \boxed{1} \\ \text{SOA-ARG } \boxed{2} \end{bmatrix} \end{bmatrix}$$

(20) Seem

$$\begin{bmatrix} \text{CAT} \mid \text{VAL} \begin{bmatrix} \text{SUBJ} \left\langle \boxed{1}\text{NP} \right\rangle \\ \text{COMPS} \left\langle \begin{bmatrix} \text{CAT} \begin{bmatrix} \textit{category} \\ \text{HEAD} \begin{bmatrix} \textit{verb} \\ \text{VFORM } \textit{inf} \end{bmatrix} \\ \text{VAL} \begin{bmatrix} \text{SUBJ} \left\langle \boxed{1}\text{NP} \right\rangle \\ \text{COMPS} \left\langle \right\rangle \end{bmatrix} \end{bmatrix} \\ \text{CONT } \boxed{2} \end{bmatrix} \right\rangle \end{bmatrix} \\ \text{CONTENT} \begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{seem} \\ \text{SOA-ARG } \boxed{2} \end{bmatrix} \end{bmatrix}$$

6 Semantic structure for object raising and object control verbs

- The controller can be sometimes the subject and sometimes the object.
- It is possible to infer which NP is the controller from the choice of possessive.

  (21) John decided finally to go on his/*one's own

  (22) John tried finally to go on his/*one's own

  (23) John ordered Mary to go on her/*his/*one's own

  (24) John persuaded Mary to go on her/*his/one's own

(25) They persuade him to leave.

$$\begin{bmatrix} psoa \\ \text{RELN } persuade \\ \text{PERSUADER } ref \\ \text{PERSUADEE } \boxed{1} ref \\ \text{SOA-ARG} \begin{bmatrix} psoa \\ \text{RELN } leave \\ \text{LEAVER } \boxed{1} \end{bmatrix} \end{bmatrix}$$

(26) They expect him to leave.

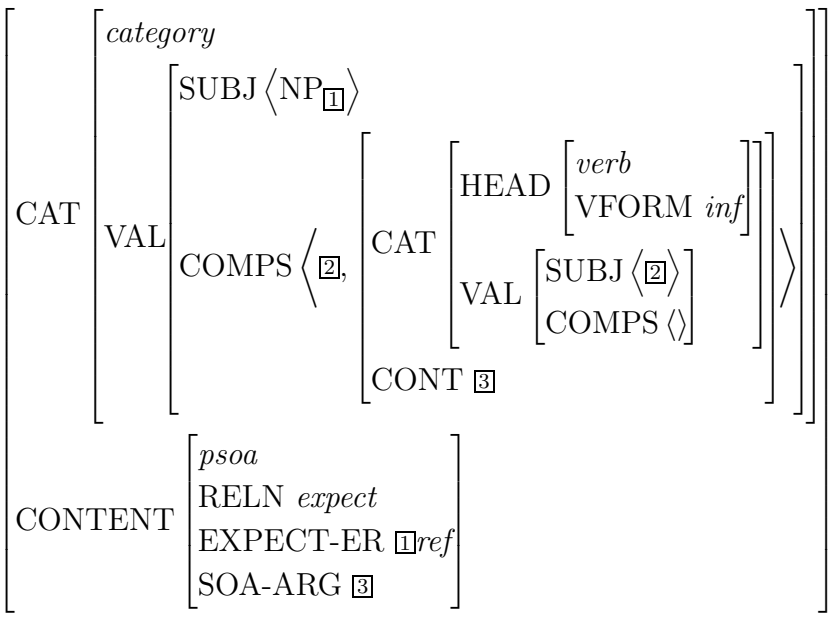
$$\begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{expect} \\ \text{EXPECT-ER } \textit{ref} \\ \text{SOA-ARG} \begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{leave} \\ \text{LEAVER } \textit{ref} \end{bmatrix} \end{bmatrix}$$

7 Lexical entries for object control and object raising

(27) Persuade

$$\begin{bmatrix} \text{CAT} \begin{bmatrix} \textit{category} \\ \text{VAL} \begin{bmatrix} \text{SUBJ} \left\langle \text{NP}_{\boxed{1}} \right\rangle \\ \text{COMPS} \left\langle \text{NP}_{\boxed{2}}, \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \textit{verb} \\ \text{VFORM } \textit{inf} \end{bmatrix} \\ \text{VAL} \begin{bmatrix} \text{SUBJ} \left\langle \text{NP}_{\boxed{2}} \right\rangle \\ \text{COMPS} \left\langle \right\rangle \end{bmatrix} \end{bmatrix} \\ \text{CONT } \boxed{3} \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix} \\ \text{CONTENT} \begin{bmatrix} \textit{psoa} \\ \text{RELN } \textit{persuade} \\ \text{PERSUADER } \boxed{1}\textit{ref} \\ \text{PERSUADEE } \boxed{2}\textit{ref} \\ \text{SOA-ARG } \boxed{3} \end{bmatrix} \end{bmatrix}$$

(28) Expect


CAT
category
VAL
SUBJ ⟨NP 1⟩
COMPS ⟨ 2 ,
CAT
HEAD
verb
VFORM inf
VAL
SUBJ ⟨ 2 ⟩
COMPS ⟨⟩
CONT 3
⟩
CONTENT
psoa
RELN expect
EXPECT-ER 1 ref
SOA-ARG 3

Consequences:

- The differing role assignment posited for control/raising verb accounts for the following contrast:

(29) a. Kim persuaded the doctor to examine Sandy.
b. Kim persuaded Sandy to be examined by the doctor.

(30) a. Kim believed the doctor to have examined Sandy.
b. Kim believed Sandy to have been examined by the doctor.

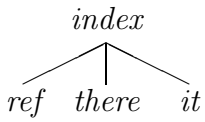
- Since control controllers are assigned semantic roles, the examples (1a,b) are associated with distinct CONTENT values. On the other hand, examples (2a,b) with raising verbs are assigned the same CONTENT. This is due to the fact that the index of the raising controller is assigned no semantic role.

Passive

(31) Passive Lexical Rule (PALR)

$$\begin{bmatrix} \textit{word} \\ \text{HEAD } \textit{verb} \\ \text{VAL} \begin{bmatrix} \text{SUBJ} \left\langle \text{NP}_{\boxed{1}} \right\rangle \\ \text{COMPS} \left\langle \text{NP}_{\boxed{2}}, \ldots \right\rangle \end{bmatrix} \end{bmatrix} \quad \mapsto \begin{bmatrix} \text{SUBJ} \left\langle \text{NP}_{\boxed{2}} \right\rangle \\ \text{COMPS} \left\langle \ldots, (\text{PP}\left[\textit{by}\right]_{\boxed{1}}) \right\rangle \end{bmatrix}$$

(32) Partition of *index*



- Only raising verbs allow expletive *it* or *there* as complements.

(33) a. There tends to be disorder after a revolution. (SR)
b. It tends to be warm in September. (SR)
c. Kim believed there to be some misunderstanding about these issues. (OR)
d. Lee believes it to bother Kim that Sandy snores. (OR)

(34) a. *There tries to be disorder after a revolution. (SE)
b. *It tries to be warm in September. (SE)
c. *Kim persuaded there to be some misunderstanding about these issues. (OE)
d. *Lee persuaded it to bother Kim that Sandy snores. (OE)

- Since equi controllers are assigned semantic roles, their indices must be referential and cannot be realized as expletives. On the other hand, raising controllers are not assigned a semantic role and so they are not constrained in this way.