Reanalysis

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Structure Removal and Verb Projection Raising in Zurich German

1. Haegeman and van Riemsdijk on Reanalysis: Definitions

Ref:
Haegeman & Riemsdijk (1986)

(1) Reanalysis:
If the representation of a sentence contains the line X V\text{\textsubscript{i}} Y, where 0 \leq i \leq 2 and V\text{\textsubscript{i}} is a VR verb, then add the line X V\text{\textsubscript{2}} Y to that representation.

(2) Reanalysis: Parameters

If X V\text{\textsubscript{i}} Y, where V\text{\textsubscript{i}} is a VR verb, then add X V\text{\textsubscript{2}} Y:

a. Standard Dutch, Standard German: i = 0
b. West Flemish, Zurich German: i = unrestricted (i.e. 0 \leq i \leq 2)

(3) Inversion (PF operation): Main Parameters

a. The nonhead must be (non)branching or need not be branching
b. The head of V must be V\text{\textsubscript{A}} or V\text{\textsubscript{M}} or is unrestricted.
c. Inversion is optional or obligatory.
d. V\text{\textsubscript{A}} is maximal or unrestricted.

(4) Inversion in Standard Dutch:

\[ [V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\beta] \Rightarrow [V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\gamma] \]

a. Optional: V\text{\textsubscript{2}} = V\text{\textsubscript{M}} and V\gamma is not branching and V\text{\textsubscript{A}} is not part of a bigger verb cluster
b. Obligatory: elsewhere

(5) Inversion in Standard German:

\[ [V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\text{\textsubscript{M}]} \Rightarrow [V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\text{\textsubscript{M}]} \]

a. \[ V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\text{\textsubscript{M}]} \Rightarrow [V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\text{\textsubscript{M}]} \]
(b) Obligatory: top level, otherwise optional

(6) Inversion in West Flemish, Zurich German:

\[ [V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\text{\textsubscript{M}]} \Rightarrow [V\text{\textsubscript{A}}, V\text{\textsubscript{2}}, V\text{\textsubscript{M}]} \]

(7) das er en arie singe chône\textsubscript{M} wele\textsubscript{M} hat\textsubscript{A}
that he an aria sing can want has

a. das er en arie hât wele chône singe
b. das er hât en arie wele chône singe
c. das er hût wele en arie chône singe
d. das er hât wele chône en arie singe

(8) das er sini chînd mediziûn studiere laa\textsubscript{MCaus} wil\textsubscript{M}
that he his children medicine study let wants

a. das er sini chînd mediziûn wil laa studiere
b. das er sini chînd wil mediziûn laa studiere
c. das er sini chînd wil mediziûn laa studiere
d. das er wil sini chînd laa mediziûn studiere
e. das er wil sini chînd mediziûn laa studiere
f. das er wil laa sini chînd mediziûn studiere
g. *das er wil laa sini chînd mediziûn studiere

(9) Evers’ rule of verb raising:

... V\textsubscript{1} [S V\textsubscript{2} ...

a. ... e\textsubscript{1} [V\textsubscript{1}, V\textsubscript{2} ...

b. ... e\textsubscript{1} [V\textsubscript{2}, V\textsubscript{1} ...

(10) das er em Karajan en arie vorsinge chêne will
that he the\textsubscript{dat} Karajan an acc aria sing for can wants

a. (i) [*] dass er em Karajan en arie chône [ vorsinge ] wil
(ii) [*] das er em Karajan chône en arie vorsinge wil
(iii) [*] das er chône em Karajan en arie vorsinge wil
b. (i) das er em Karajan en arie wil chône vorsinge
(ii) das er wil em Karajan en arie chône vorsinge
(iii) das er em Karajan wil chône en arie vorsinge
(iv) das er wil em Karajan chône en arie vorsinge
(v) das er wil chône em Karajan en arie vorsinge

(11) das er em Karajan wil en arie chône vorsinge

2. Reanalysis by Removal: A New Approach

2.1. Background: Cut Operations

Assumption (Epstein & Sedy (2002), Müller (2011)):
In a strictly local derivational approach with cyclic LF and PF spellout, there are neither syntactic reasons for postulating traces/copies/occurrences (they would not be accessible by syntactic constraints anyway), nor semantic reasons for postulating traces/copies/occurrences (semantic interpretation also applies cyclically).
Consequence:
Movement leaves nothing in the original position, and tree pruning applies (see Ross (1967)). From this perspective, it becomes necessary to postulate an operation Cut that takes an item out of the structure before it reemerges it at the root. (Cf. the first step of sideward movement in Nunes (2004), Hornstein (2009).)

(12) A typology of structure-manipulating operations:
    a. Merge
    b. Cut
    c. Move = Cut + Merge

Prediction:
There should be instances of bare structure-removing Cut; this operation is the mirror image of bare structure-building Merge (Chomsky (2001; 2008)).

Question:
Would removing existing structure not violate many fundamental constraints?

Answer:
The only relevant constraint that it must violate is the Projection Principle (see Chomsky (1981)). However:
(a) There is no room for the Projection Principle in current minimalist analyses anymore.
(b) The Projection Principle has always been a conceptually unattractive constraint since it qualifies as *global* in Lakoff’s (1971) sense. (A global constraint applies to a whole derivation; it correlates non-adjacent steps in the derivation.)

(13) Projection Principle:
    a. If A selects B as a lexical property, then A selects B in C at level L0.
    b. If A selects B in C at level Li, then A selects B in C at level Lj.

(14) A consequence of the Projection Principle:
    a. What1 did John [VP see what1 it]?
    b. *What1 did John [VP see ]?

Note:
To find out whether the Projection Principle is violated, it does not suffice to simply look at a level of representation, or at a step in the derivation — to show that [14-b] is an impossible S-structure representation, we have to know that there is an object DP within VP at an earlier derivational stage.

Observation:
There are also massive problems with the Projection Principle in Haegeman & Rieussdijk’s (1986) analysis in terms of multidimensional representations/coanalysis, despite the authors’ claims to the contrary (see Stechow & Sternefeld (1988)).

Background assumptions (see Heck & Müller (2007), Müller (2011), Georgi (2014, among others):

(i) All syntactic operations are feature-driven

(15) Four types of features that drive operations:
    a. Pure structure-building: Merge
    b. Pure structure-removal: Cut
    c. Structure-removal plus structure-building: Move
    d. Probe features: Agree:

(ii) Features on textual items are ordered

(16) Structure-building features of v:
    [*

(iii) Last Resort:
    a. Every syntactic operation must discharge (and delete, or render inaccessible) either [oPo] (where o ranges over •, −, and •) or [+F•].
    b. Only features at the top of a feature list are accessible.

Note:
If Cut is the mirror operation of Merge, one would expect that it ideally obeys exactly the same constraints, e.g., the Strict Cycle Condition or the Phrased Impenetrability Condition (there should be no Cut operations targeting more deeply embedded categories).

Hypothesis: This is indeed the case (see Müller (2014) on the absence of passive with unaccusative verbs).

(18) A preliminary taxonomy of Cut operations:
    a. phrases:
        (i) specifiers: [+D–]
            Müller (2014), Murphy (2014) on standard and stacked passives, respectively
        (ii) complements: [−V−], [−T−]
            possibly an option that might be pursued for VP ellipsis and sluicing (TP deletion).
    b. heads: [−D–]
        see the previous handout on Circassian DP shell removal (the lower part of the complement remains intact)
    c. features: [−f–]
        possibly a way to make sense of impoverishment in the syntax, as in Keine (2010), Doñana (2013)
2.2 The Problem with a Movement-Based Account of Verb Projection Raising in Zurich German

Standard assumption (Evers [1975]):
Verb raising and verb projection raising are derived by rightward movement ("adjunction") of a verbal category. In Standard German and Dutch, this can only be a minimal, $V^0$ category. In Zurich German (and West Flemish), it can be any verbal projection.

(19) Evers' rule:
$[... V^1_i V^0_j] \Rightarrow [ ... t_k ] [ V^1_i V^0_j ]$
(where $i$ can be any projection level)

Generalization for Zurich German:
All orders are ok where (a) the verbs are inverted and (b) the DPs maintain their basic order (dative $\Rightarrow$ accusative).

(20) Base structure:

![Diagram]

Note:
Verb (projection) raising applies cyclically from bottom to top. Two steps need to be distinguished: First, $V^1_3$ moves to $V^2_2$; and then $V^1_2$ moves to $V^0_1$.

Notational convention:
$\square$ signals that X has moved; $\Box$ signals that X can move on the next cycle.

(21) Intermediate stage, version I: $V^1_3$ movement

![Diagram]

(22) Continuations of intermediate stage, version I:

a. $[ V^1_2 ]$ moves:
  \hspace{1cm} \text{dem Karajan eine Arie will können vorsingen}

b. $[ VP^1 ]$ moves:
  \hspace{1cm} \text{will dem Karajan eine Arie können vorsingen}

Note:
The string "DP$_a$-können$_2$-vorsingen$_3$" is not a constituent (let alone one of type $V^1_2$). Therefore, (23) cannot be generated.

(23) The problematic example:
\hspace{1cm} \text{dem Karajan will eine Arie können vorsingen}

(24) Intermediate stage, version II: $V^1_3$ movement

![Diagram]

(25) Continuations of intermediate stage, version II:

a. $[ V^2_2 ]$ moves:
  \hspace{1cm} \text{dem Karajan will können eine Arie vorsingen}

b. $[ VP^0 ]$ moves:
will dem Karajan können eine Arie vorsingen

Note:
In (24), there is a substring “können2–eine Arie”, and since only a V\textsubscript{3} category can be 
moved in the final step, there is no way to change the order of these two items and produce the 
problematic example.

(26) The problematic example again: 
dem Karajan will eine Arie können vorsingen

(27) Intermediate stage. version III: [VP\textsubscript{1}] movement

\[
\begin{array}{c}
\text{VP\textsubscript{1}} \\
\text{t\textsubscript{3}} \\
\text{können\textsubscript{2}} \\
\text{DP} \\
\text{dem Karajan} \\
\text{VP\textsubscript{3}} \\
\text{V\textsubscript{3}} \\
\text{vorsingen\textsubscript{3}} \\
\end{array}
\]

(28) Continuations of intermediate stage. version III
a. [V\textsubscript{2}] moves:
will können dem Karajan eine Arie vorsingen
b. [VP\textsubscript{2}] moves:
will t\textsubscript{3} können dem Karajan eine Arie vorsingen

Note:
Again, the problematic example cannot be derived for systematic reasons.

(29) The problematic example once more:
dem Karajan will eine Arie können vorsingen

2.3. Solution

Observation:
The problematic example can be derived if V\textsubscript{2} carries out an optional Cut operation in 
the intermediate structure in I that removes V\textsubscript{3}, and hence also V\textsubscript{1} and VP\textsubscript{1}, but leaves 
the embedded structure intact.

Two technical issues:

- The Cut feature on V\textsubscript{2} would seem to have to be [−V\textsubscript{1}], and it must be ordered on 
V\textsubscript{2} after [−V\textsubscript{1}], which triggers V\textsubscript{3} raising. Thus, when Cut is carried out, there is no 
V\textsubscript{3} left anymore (which is a good thing, because V\textsubscript{3} is clearly pronounced). However, 
if movement does not leave a trace, then what exactly does Cut cut? Suggestion: No V\textsubscript{3} counts as the minimal item sought for by [−V\textsubscript{1}].

- What is new here (as opposed to, say, the Cut approach to Cappellari’s D(P) deletion) 
is that after the Cut operation has been carried out, there are two items (rather 
than one) that need to be attached. Since there is no additional special operation 
involved here, they will have to reassemble in the pre-Cut order.

(30) Intermediate stage. version Ia: V\textsubscript{3} movement plus V\textsubscript{3} removal

\[
\begin{array}{c}
\text{VP\textsubscript{1}} \\
\text{[VP\textsubscript{2}]} \\
\text{will\textsubscript{1}} \\
\text{V\textsubscript{3}} \\
\text{können\textsubscript{2}} \\
\text{DP\textsubscript{a}} \\
\text{V\textsubscript{3}} \\
\text{vorsingen\textsubscript{3}} \\
\text{dem Karajan} \\
\text{DP\textsubscript{b}} \\
\text{eine Arie} \\
\end{array}
\]

(31) Continuation of stage Ia: V\textsubscript{3} removal by Cut

\[
\begin{array}{c}
\text{VP\textsubscript{1}} \\
\text{[VP\textsubscript{2}]} \\
\text{will\textsubscript{1}} \\
\text{DP\textsubscript{a}} \\
\text{V\textsubscript{3}} \\
\text{können\textsubscript{2}} \\
\text{DP\textsubscript{b}} \\
\text{V\textsubscript{3}} \\
\text{[V\textsubscript{2}]} \\
\text{eine Arie} \\
\text{vorsingen\textsubscript{3}} \\
\text{dem Karajan} \\
\text{DP\textsubscript{b}} \\
\end{array}
\]

Note:
Now subsequent movement of [V\textsubscript{2}] yields the problematic example.
The problematic example finally derived:
dem Karajan will eine Arie können vorsingen

Note:
Given Haegeman and van Riemsdijk’s assumptions. Cut operations will also be active in
verb [projection] raising constructions so as to effect clause union (CP, TP deletion).

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