Types of Movement

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1. Webelhuth's Universal Theory of Scrambling

Ref.:

Webelhuth (1988)

- (1) Positions
 - a. GF-position: [NP,IP]; [NP,V'], ...
 - b. O-position: [XP,CP]
 - c. A-position: $\neg GF$ -position & $\neg GF$ -position & $[XP,Y^{i>0}]$ for all $Z_{Z\in Cat}$, Z does not exclude XP iff Z does not exclude Y & XP lies in the government direction of Y.

Binding

For Y \in {O, GF, A}, α Y-binds β iff α is in a Y-position and α is not excluded by a barrier for β .

- (2) Licensing of the Head
 - a. α is O-licensed if α is [+WH], [+REL] or [+F] in an O-position.
 - b. α is GF-licensed if α is [+C], PRO in a GF-position.
 - c. α is F-licensed if α is [+F] in an A-position.
 - d. α is S-licensed if α is [+specific] in an A-position.
- (3) Chains:

For $X \in \{GF, O, F, S\}$ and $Y \in \{GF, O, A\}$, $C = \langle \alpha_1, \alpha_2, ... \alpha_n \rangle$ is an X-chain iff

- a. α_1 is X-licensed.
- b. $\alpha_{i,i\rightarrow=1}$ is a non-pronominal empty category.
- c. If α_1 X-binds α_2 , then $\alpha_{i,i\rightarrow =n}$ satisfies the Predication Condition.
- d. C is maximal.
- (4) Predication Condition:

Scrambling chains have to meet a Predication Condition which I do not spell out here. ... Subjects precede their predicates. ... The Predication Condition on scrambling chains ensures that they can only be formed by movement to the left.

(5) Definition of Variable:

 α is a variable iff α is locally GF-bar-bound.

(6) Definition of Anaphor:

 α is an anaphor iff α is locally O-bar-bound.

- (7) Traces:
 - a. NP-movement: anaphor
 - b. WH-movement: variable
 - c. Scrambling: anaphor and variable

d. Heavy NP Shift: anaphor and variable

"What is crucial is that scrambling traces count as both anaphors and variables with respect to the binding theory."

(8) Binding Theory:

An anaphor is O-bar-bound in its minimal complete functional complex.

"Overall, [(1)–(8)] is the first comprehensive attempt at a universal characterization of the scrambling phenomenon. The theory seems to be descriptively successful within Germanic although not a single language-particular statement has been made."

2. Problems with Mahajan's Reanalysis

Ref.:

Lee & Santorini (1994)

Claim:

Sentences like those in (49) on the last handout are actually well formed.

- (9) a. ?dass Maria jeden₁ seinem₁ Nachbarn [CP ohne e₁ anzuschauen] that Maria everyone_{acc} his neighbour_{dat} without to look at vorgestellt hat introduced has
 - b. ?dass Maria jeden $_1$ seinem $_1$ Nachbarn [$_{CP}$ ohne zu zögern] that Maria everyone $_{acc}$ his neighbour $_{dat}$ without to hesitate introduced vorgestellt hat has
 - c. $?dass\ Maria\ jeden_1$ ihrer Mutter [CP ohne e_1 anzuschauen] vorgestellt hat that Maria everyone acc her mother dat without to look at introduced has

Claim:

Mahajan's system predicts that there can be no A-position to the left of an A-bar position. This is falsified by evidence from Korean. (10) instantiates a violation of the Condition on Bound Variable Pronouns.

(10) $*[e_j]$ pro $_i$ sangsangha-nun] salam-mata $_j$ caki-eykey $_j$ mwues-ul $_i$ pwuletuli-ni ? pro-ACC imagine-REL everyone-UQ self-DAT what-ACC bring in-Q "What does everyone who imagines it bring upon himself?"

In (11), the wh-phrase moves to the front. (This example is not mentioned in the paper, but should be ok under Mahahan's approach: the wh-phrase can A-bind the pronoun.)

(11) mwues-ul_i [e_j pro_i sangsangha-nun] salam-mata_j caki-eykey_j pwuletuli-ni? what-ACC pro-ACC imagine-REL everyone-UQ self-DAT bring in-Q "What does everyone who imagines it bring upon himself?"

In (12), the other object also undergoes scrambling to the left, to a position following the wh-

phrase, resulting in wellformedness.

(12) mwues-ul_i caki-eykey_j [e_j pro_i sangsangha-nun] salam-mata_j pwuletuli-ni ? what-ACC self-DAT pro-ACC imagine-REL everyone-UQ bring in-Q "What does everyone who imagines it bring upon himself?"

Problem:

By assumption, reconstruction for Principle A is possible only with A-bar movement in Hindi. To satisfy Principle A, caki- $eykey_j$ must be in an A-bar position in (12). However, mwues- ul_i is outside of caki- $eykey_j$, so the wh-phrase cannot possibly occupy an A-position, as required for the Condition on Bound Variable Pronouns.

(13) Argument domain:

The argument domain for an expression A is the minimal maximal projection in which all θ -roles associated with A's θ -marker are syntactically realized.

(14) Binding domain:

Let C be the chain headed by A, A a quantified expression, $C = \langle a_n, ... a_1 \rangle$.

Then the binding domain of A is

- a. the minimal maximal projection c-commanded by (a head containing) AGR that dominates a link a_i in C, or
- b. the root clause.
- (15) Condition on Bound Pronoun Interpretation:

Let L_1 be the binding domain for A, A a quantified expression, and let C_1 be the chain headed by A,

$$C_1 = \langle a_n, ... a_1 \rangle$$
.

Let i, i \leq n, be the highest index such that a_i is contained in L_1 .

Let L_2 be the argument domain for B, and let C_2 be the chain headed by B, $C_2 = \langle b_n, ... b_1 \rangle$.

Let P be a pronoun, P = B or B contains P.

Let i, $i \le n$, be the highest index such that b_i is contained in L_2 , and let j be an index such that n > j > i.

Then P can be co-indexed with A if there is a b_i such that a_1 precedes and commands b_i .

(16) Command:

A commands B iff

- a. A does not dominate B, and
- b. if C, C a major node, dominates A, then C dominates B.
- (17) Major node:

A major node is DP or the maximal projection of a head bearing agreement features (CP in German, IP in English, not defined in Korean).

[For (12):] "We assume that of the two constituents that have undergone scrambling across the subject, the wh-phrase does not undergo reconstruction, but the bound pronoun *caki* does. Then the condition in [(15)] is satisfied because after reconstruction, the wh-phrase precedes and commands

the bound pronoun contained in the relative clause, and the subject precedes and commands caki."

References

Lee, Young-Suk & Beatrice Santorini (1994): Towards Resolving Webelhuth's Paradox: Evidence from German and Korean. In: N. Corver & H. van Riemsdijk, eds., *Studies on Scrambling*. Mouton de Gruyter, Berlin, pp. 257–300.

Webelhuth, Gert (1988): A Universal Theory of Scrambling. In: *Papers from the 10th Scandinavian Conference on Linguistics*. Vol. ii, Dept. of Linguistics and Phonetics, University of Bergen, pp. 284–298.