1. The Linear Correspondence Axiom (LCA)

Ref.: Kayne (1994)

Linear ordering of terminal symbols (L):

1. transitive: \( \forall x,y,z: \langle x,y,z \rangle \in L \rightarrow \langle x,z \rangle \in L \)
2. total: \( \forall x,y,z: \langle x,y,z \rangle \in L \)
3. antisymmetric: \( \forall x,y: \langle x,y,z \rangle \in L \rightarrow \langle y,x,z \rangle \in L \)

2. Domains of terminal symbols of a phrase structure tree \( P \)

a. \( A = \{ \langle X,Y \rangle \} \), such that for each \( j \): \( X \), \( Y \) c-commands \( Z \) asymmetrically
b. \( T = \{ \langle X,Y \rangle \} \), such that for each \( i \): \( X \), \( Y \) c-commands \( Z \) symmetrically

c. \( d(X) = \) set of terminal symbols that are dominated by a non-terminal \( X \)

Consequences:

a. A head precedes its complement (\( \beta \)).

Assumption about adjuncts and c-command:

a. A category can consist of several segments: adjuction.

b. \( X \) c-commands \( Y \) iff \( X \) and \( Y \) are categories and \( X \) excludes \( Y \) and every category that dominates \( X \) dominates \( Y \).

The shape of phrases under Kayne’s LCA:

\[
\begin{array}{c}
\text{XP} \\
\alpha \quad \beta
\end{array}
\]

Difference between Kayne (1994) and Chomsky (1995):

- Kayne’s original LCA restricts possible phrase markers.

2. Barss’ Generalization

Ref.: Barss (1986)

Barss’ Generalization:

Reconstruction of \( \alpha \) to its trace \( \beta \) is blocked if \( \alpha \) does not c-command \( \beta \) at S-structure.

\[ [\text{DP} \text{, Some young lady seems } t_1 \text{ to be likely } t_1 \text{ to dance with } \text{[DP, every senator] }] \]

a. \( \exists > \forall \): possible
b. \( \forall > \exists \): possible

\[ [\text{AP} \text{, How likely } t_1 \text{ to dance with } \text{[DP, every senator] }] \text{ does } [\text{DP, some young lady] } \text{ seem to be } t_2 ? \]

a. \( \exists > \forall \): possible
b. \( \forall > \exists \): impossible

Analysis in Heck & Assmann (2012):

(i) Scope requires c-command at LF.
(ii) Scope reversal requires reconstruction at LF; traces do not suffice for interpretation (but show possible reconstruction sites).
(iii) The Strict Cycle Condition (Chomsky (1973)) constrains LF operations: Within the current cyclic domain \( \alpha \), no operation may exclusively affect positions within another cyclic domain \( \beta \); this is dominated by \( \alpha \).

3. Weak Crossover

Strong Crossover:

*a.* Who \( t_1 \) does he \( t_1 \) like \( t_1 \)?

Weak Crossover:

a. *(\text{DP})* Which boy \( t_1 \) does \( \text{[DP, his] } \text{ mother] } \) like \( t_1 \)?

b. \( [\text{DP, John}, [\text{DP, his, mother}] \) likes \( t_1 \)

Standard assumption:

Accounting for Strong Crossover is easy (e.g., by invoking Principle C); accounting for Weak Crossover (where the incriminating coindexed pronoun does not c-command the trace of the moved item) is not.
Observation:
The Weak Crossover Constraint only shows up with pronouns that must be interpreted as bound variables.

(14) **Condition on Bound Variable Pronouns** (Heim (1989), Reinhart (1983), Mahajan (1990)): A bound variable pronoun must be co-indexed with a c-commanding A-position at S-structure.

(15) **Raising feeds CBVP satisfaction:**

\[ \text{[DP}_1 \text{ Every boy]} \text{ seems to } [\text{DP}_2 \text{ his}_1 \text{ mother } ] \text{ t}_1 \text{ to be intelligent }] \]

Bibliography


