

24.951, Fall 2003, Fr 12 Sep  
Due date: Fr 19 Sep

## Parametrized Merge and Antisymmetry

- A. For the sentences in (1), draw fully-fledged tree structures that are compatible with  $X'$ -Theory:
- (1) a. *This picture of Mary will please John*  
b. *Mary should leave after she obtains her city's mayor's approval of the budget*
- B. For the same two sentences in (1), draw fully-fledged tree structures that are compatible with Fukui & Saito's "Parametrized Merge" framework. Highlight any (potential) problems that these sentences may raise for Fukui & Saito's structural constraints on "Merge" and "Adjunction" as defined in Fukui 2001.
- C. Ditto regarding Kayne's LCA—draw tree structures and highlight (potential) problems ...

Then compute the  $A$  set for the phrase-marker underlying (1a).

[Recall from Kayne 1994 that  $A$  is the maximal set of ordered pairs  $\langle X_i, Y_i \rangle$ , such that for each  $i$ ,  $X_i$  asymmetrically c-commands  $Y_j$ .]

NB: LCA requirements often require a fair amount of ingenuity, so do not hesitate to be creative where you need to be, but don't go overboard (yet). The overriding point here is to make sure that your phrase-marker fits the LCA; do not worry so much (for now) about other issues.

- D. Explain whether/how Fukui & Saito's "Parametrized Merge" framework accounts for the ungrammaticality of the examples in (2) (cf. Fukui's (2001:400–402) claim regarding similar examples). Be as explicit as you can in testing Fukui's claims.

- (2) a. *?\* Who<sub>i</sub> will [a picture of t<sub>i</sub>] please John?*  
b. *?\* What<sub>i</sub> did Mary left [after she obtain t<sub>i</sub>]?*

- E. Kayne (1994:11–12) argues that the LCA rules out "sentences such as these with a coordinate interpretation [for the string of DPs]":

- (3) a. *\* I saw [<sub>XP</sub> [<sub>DP</sub> the boy] [<sub>DP</sub> the girl]]*  
b. *\* [<sub>XP</sub> [<sub>DP</sub> The boy] [<sub>DP</sub> the girl]] will study linguistics*

This is because that the structure in (4) violates the LCA.

- (4) *\* [<sub>XP</sub> [<sub>DP</sub> the boy] [<sub>DP</sub> the girl]]*

Thus, "the required presence of a word like *and* is now understandable: coordinating conjunctions are heads that serve to bring coordinate structures in line with the antisymmetry requirement imposed by the LCA. Consequently, the constituent structure of [(5a)] must be [(5b)]":

- (5) a. *the boy and the girl*

b. [<sub>XP</sub> [<sub>DP</sub> *the boy*] [<sub>XP</sub> [<sub>X<sup>0</sup></sub> *and*] [<sub>DP</sub> *the girl*]]]

Compute  $d(A)$  for (4) and (5b) and explicitly demonstrate how they violate and obey the LCA, respectively.

[Do fledge out the internal structure of the DPs in (4) and (5b) with *the* as  $D^0$  and *boy* and *girl* as  $N^0$ .]

- F. Regarding (5a) and (5b), one fact not discussed by Kayne is that there exists a VERY MINIMAL modification of the XP in (4) that makes the two-DP sequence [<sub>DP</sub> *the boy*] [<sub>DP</sub> *the girl*] LCA-friendly, WITHOUT having to insert *and* (nor any null counterpart thereof) between the two DPs. What is the structure of this LCA-compatible *and*-less coordination?

[Hint: This modification is truly minimal: (i) it leaves the structure of the two DPs virtually intact; (ii) it introduces no new head; (iii) it introduces no new LABEL beyond DP and XP; (iv) it only adds minimal extra structure to (4).]

Label this modified structure (4'). Present the fully-fledged structure for (4'). Compute  $d(A)$  for (4') and show that (4') indeed obeys the LCA.