I. Disjoint reference and WH-trace:

A. Crossover cases:

1. SSC: 
   (a) Who did he say $\{S$ that Mary liked e $\}$$
   (b) Who $\{S e$ said $\{S$ that Mary liked him $\}$$
   (c) $\{S$ Who $\{S$ did he $\{S$ say $\{S$ that $\{S$ Mary$(2,\{1\})$ liked e $(3,\{1,2\})$ $\}$$
   (d) He $\{S$ said $\{S$ that $\{S$ Mary$(2,\{1\})$ liked Bill $(3,\{1,2\})$ $\}$
   (e) $\{S$ Who $\{S e$ said $\{S$ that $\{S$ Mary$(2,\{1\})$ liked him $(3,\{1,2\})$ $\}$$

2. PIC: 
   (a) Who did he say $\{S e$ had won $\}$
   (b) Who $\{S e$ said $\{S$ that he had won $\}$$
   (c) $\{S$ Who $\{S$ did he $\{S$ say $\{S$ that $\{S$ e $(2,\{1\})$ had won $\}$$
   (d) He $\{S$ said $\{S$ that $\{S$ John$(2,\{1\})$ had won $\}$$
   (e) $\{S$ Who $\{S e$ said $\{S$ that $\{S$ he $(2,\{1\})$ had won $\}$$

B. COMP-to-NP movement violations:

1. SSC: 
   (a) *Who decided (that) Mary liked?
   (b) $\{S$ Who $\{S e$ decided $\{S$ e $(that)$ $\{S$ Mary $(1,\{2\})$ liked e $(2,\{2,1\})$ $\}$$
   (c) $\{S$ Who $\{S e$ decided $\{S$ e $(that)$ $\{S$ Mary $(1,\{2\})$ liked e $(2,\{2,1\})$ $\}$$

2. PIC: 
   (a) *Who decided had left?
   (b) $\{S$ Who $\{S e$ decided $\{S$ e $(that)$ $\{S$ e $(had left)$ $\}$$
   (c) $\{S$ Who $\{S e$ decided $\{S$ e $(had left)$ $\}$$
II. Indexing:

1. a WH-trace is treated like a non-anaphoric (lexical) NP—i.e., it can be assigned an Anaphoric index.

2. a WH-trace is treated like a non-pronominal NP—i.e., its Anaphoric index is not subject to the SSC or the PIC.

3. a WH-phrase or its trace in COMP does not assign an Anaphoric index.
   a. Who left?    b. \( \overline{S} \) who \( e(1,\{1\}) \) left \]

4. Anaphoric indices are assigned after WH-Interpretation.
   a. Whose books did Bill read?
   b. (which person x) \( \overline{S} \) Bill \( e(S, \{1\}) \) read \[ NP x's(3,\{1\}) \] books \]
   c. \( e_1 \) read \[ NP Bill's(3,\{1\}) \] books \]

III. Opacity (SSC + PIC):

1. the domain of Opacity is \( S \), not \( \overline{S} \).
   a. *the men \( \overline{S} \) who \( e(S, \{1\}) \) each other \( e_1 \) like \( e_1 \) \]
   b. \( S \rightarrow NP \) Tense VP
   c. Opacity condition: an anaphor cannot be free in the domain of
      i. Tense (PIC)
      or ii. Subject (SSC).
   d. *Himself left. / *John thought that himself had won.
   e. *It frightened herself. / *Mary expects Bill to like herself.

2. The COMP escape hatch:
   a. *\( \ldots \) \( \overline{S} \) [COMP \( e_i \)] \( S_\alpha \) \( \ldots e_1 \) \( \ldots \) \( \ldots \)
      where \( S_\alpha \) is tensed or \( e_i \) is not the subject of \( S_\alpha \).
   b. *\( \ldots \) \( \overline{S} \) [COMP \( e_i \)] \( \ldots \) \( \overline{S} \) [COMP \( e_i \)] \( S_\alpha e_1 \) to VP \]

IV. The NIC, Subjacency, and the Strict Cycle:

1. NIC: a nominative anaphor may not be free in \( \overline{S} \).
2. (a) \( *[S \text{ Who}_1 [S \text{ did John know } [S \text{ what}_2 [S \text{ e}_1 \text{ saw } e_2 ]]] ] \) \( (*\text{NIC}) \)

(b) \( *[S \text{ what}_2 [S \text{ did John know } [S \text{ who}_1 [S \text{ e}_1 \text{ saw } e_2 ]]] ] \) \( (*\text{SSC}) \)

(c) \( *[S \text{ what}_2 [S \text{ did John wonder } [S \text{ who}_1 [S \text{ Bill gave } e_1 e_2 ]]] ] \)

(d) \( *[S \text{ who}_1 [S \text{ did John wonder } [S \text{ what}_2 [S \text{ Bill gave } e_1 e_2 ]]] ] \)

3. **Subjacency is a condition on representations, not movement.**

(a) \( *[S \text{ who}_1 [S \text{ did John know } [S \text{ what}_2 [S \text{ e}_1 \text{ saw } e_2 ]]] ] \)

(b) \( *[S \text{ who}_1 [S \text{ did John know } [S \text{ what}_2 [S \text{ e}_1 \text{ saw } e_2 ]]] ] \)

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V. **Case Analysis:**

1. **Traces must be marked for case:**

   a. **NP:** \( *[S \text{ e}_1 \text{ is intelligent } [S \text{ is }]] ] \( (*\text{NIC}) \)

   b. **WH:**

      i. \( *[S \text{ who}_1 [S \text{ does it seem } [S \text{ e}_1 [S \text{ e}_1 \text{ to be here } ]]] ] \)

        ii. \( *[S \text{ who}_1 [S \text{ does it seem } [S \text{ e}_1 [S \text{ e is here } ]]] ] \)

        iii. \( *[S \text{ who}_1 [S \text{ does it seem } [S \text{ e}_1 [S \text{ e to be here } ]]] ] \)

   c. **N filter:** \( *N, \text{ where } N = \text{lexical } N \text{ or } \text{WH-trace} \text{ and } N \text{ is not marked for case.} \)

2. **N filter applies after Deletion:**

   a. my desire to leave
   b. my desire \( *[S \text{ for } [S \text{ self to leave } ] ] \)
   c. my desire \( *[S \text{ John to leave } ][S \text{ for } [S \text{ self to leave } ] ] \) vs. my desire for John to leave
   d. my desire \( *[S \text{ for } [S \text{ e to take part } ] ] \)

3. The complementizer for: case assignment and deletion

   a. \( *[S \text{ who } [S \text{ is it illegal } [S \text{ e to take part } ]]] ] \)
b. John wants very much $[S_{\forall} \{\text{for}\} [S_{\forall} \text{Mary to win }]]$

c. John wants $[S_{\forall} \emptyset [S_{\forall} \text{Mary to win }]]$

d. Who do you want very much $[S_{\forall} e \emptyset [S_{\forall} e \text{to win }]]$

Who do you believe sincerely $[S_{\forall} e [S_{\forall} \text{to be the best man }]]$

(cf. *I believe sincerely John to be the best man.)

4. Case assignment and the organization of the grammar:

a. Case assignment precedes deletion:

i. requires a proviso that if \textit{for} assigns case, it cannot delete.

ii. case can be assigned across a complementizer.

b. Case assignment follows deletion: (i-ii) follow as consequences.

It follows from (b) that the NIC cannot be the correct 'tensed-S' condition.

VI. Markedness:

1. What is marked:

a. under V.4.a: *John wants very much Mary to win.

*We believe sincerely John to be the best man.

b. under V.4.b: Who do you want very much to win?

Who do you believe sincerely to be the best man?

2. *complex* NP:

a. The men$_1$ expect $[S_{\forall} \text{that } [S_{\forall} \text{pictures of } [NP_{\forall} \{\text{themselves}\} \text{ will be on sale by Friday }]]$]

b. The men$_1$ expect $[S_{\forall} \text{that } [S_{\forall} \text{pictures of them$_3$ will arrive soon.}]]$


John sent a picture of him to Mary.

d. $[\alpha BA]$ where the antecedent NP c-commands the 'anaphoric expression'.

$[\alpha DR]$

e. *Pictures of $[\{\text{themselves}\}]$ will be on sale tomorrow.