Ling 610

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(1) ECP (Empty Category Principle) 1st version: [ECP was introduced by Chomsky (1981)]
A trace must be governed
(2) *John is illegal \[_{CP_{IP}} t \text{ to park here}\] (CP is a barrier to government; non-finite Infl isn't a governor; null C isn't a governor)

<<(3) ECP 2nd version (extending ECP to ‘that’-trace’ effects. Not hugely successful, as we will see. And (10) below didn’t give the right result for movement of adjuncts, which doesn’t show ‘that’-trace’ effects):
A trace must be properly governed (Proper government is government by a lexical head, V, N, A, P)
(4) *Who do you think [that [t solved the problem]] (t is not properly governed)
(5) Which problem do you think [that [John solved t]] (t is properly governed by solve)
(6) Which book do you think [that [Mary talked about t]] (t is properly governed by about)
(7) Who do you think [t’ [t solved the problem]] (t is not lexically governed)
(8) \(\alpha\) properly governs \(\beta\) if
i. \(\alpha\) governs \(\beta\) and \(\alpha\) is lexical ('lexical government')
OR
ii. \(\alpha\) binds \(\beta\) and \(\beta\) is subjacent to \(\alpha\) ('antecedent government')
(9) *Who do you think \([_{CP} t' [_{C} \text{ that } [_{IP} t \text{ solved the problem}]]]\)
(10) Either that somehow blocks antecedent government or
that somehow turns C' into a barrier for antecedent government (or turns C' into a bounding node, but only for ECP).
(11) Adjunct problem with (10): ✔How do you think [that [Mary solved the problem t]]
(12) So we will put aside ‘that’-trace’ effects and (10), but keep (8), which turns out to work very well for an argument/adjunct asymmetry Jim Huang investigated and which is outlined below.>>
(13) ?*Which car did you leave [before Mary fixed t] Subjacency - an ‘adjunct island’; not being the complement of a lexical head, an adjunct is a barrier.
(14) *How did you leave [before Mary fixed the car t] (t is not properly governed, so the ex. violates both Subjacency and the ECP; and/or maybe ECP causes extreme badness. In a language with overt WH-movement, it’s hard to tease apart these two possibilities.)
(15) Similarly for all islands: extraction of an adjunct in violation of Subjacency always yields crashingly bad results.
(16) Chomsky (1986) modification of Lasnik and Saito (1984): A trace that is not properly governed is marked *.
(17)a *How\(_2\) do [\(_{IP}\) you wonder \([_{CP} \text{ when}_1 [_{IP} \text{ John said } t_1 [_{CP} t_2' [_{IP} \text{ Mary solved the problem } t_2]]]]\)
vs.
b ??What problem\(_2\) do [\(_{IP}\) you wonder \([_{CP} \text{ when}_1 [_{IP} \text{ John said } t_1 [_{CP} t_2' [_{IP} \text{ Mary solved } t_2]]]]\)
(18) Crucially, **even intermediate traces must be properly governed**. \( t_2 \) is antecedent governed by \( t_2' \); so it must be the latter the is not properly governed in violation of the ECP. <It must be the case that \( t_2 \) is properly governed or we could never even get “How did Mary solve the problem”.

(19) Chomsky's proposal, from lectures in the mid-1980's: "Adjuncts must be fully represented". That is, following Lasnik and Saito, intermediate traces can be deleted. BUT (Chomsky’s innovation) all the traces in the chain of a moved adjunct must remain. So the *-marked trace in (15)b can be deleted, but not the one in (15)a. [I summarize in the ECP Part2 HO Chomsky’s (1991) attempt to deduce this stipulated difference.] So (15b) is a ‘mere’ Subjacency violation, but (15a) also violates the ECP (regarded as an LF filter).

(20) *Why do you believe [the claim [ \( t_2' \) that [ Lisi left \( t_1 \)]]]

(21) *Ni xiangxin [[[Lisi weisheme likai] de shuofa ]] Chinese you believe Lisi why leave claim

(22) *Weisheme doesn’t look or sound like it has moved. It is “in situ”. But Jim Huang (1981/82; 1982) argued that it actually HAS moved, but in a way invisible to PF. The traces left by this “covert” movement are subject to the ECP, just like those in (18)

(23) This is possible in the GB organization of the grammar:

(24) \[
\begin{align*}
&\text{DS} \\
&\quad | \text{Transformations (including WH-movement)} \\
&\quad \quad | \text{Transformations (including WH-movement)} \\
&\quad \quad \quad | \text{PF} \quad \quad \quad \text{LF}
\end{align*}
\]

(25) Huang also argued that the WHs-in -situ in multiple questions in languages like English also undergo covert movement:

(26) a. *Who left why vs. b. ✔Who bought what

(27) Suppose, following Huang, that all WH-phrases move eventually, creating an adjunction structure in this instance, since CP, Spec is already occupied.

(28) a. LF: CP \\
\quad \quad \quad who_1 \\
\quad \quad \quad why_2 \\
\quad \quad \quad \quad IP \\
\quad \quad \quad left \quad \quad \quad \quad t_1 \leftarrow \quad \quad \quad \quad \quad \quad t_2 \\
\quad \quad \quad \quad ✔ \quad \quad \quad \quad \quad \quad \quad \quad \quad t_3 \leftarrow \quad \quad \quad \quad \quad \quad ✔

b. LF: CP \\
\quad \quad \quad who_3 \\
\quad \quad \quad what_4 \\
\quad \quad \quad \quad IP \\
\quad \quad \quad bought \quad \quad \quad \quad \quad \quad \quad \quad \quad t_3 \leftarrow \quad \quad \quad \quad \quad \quad ✔

(29) In (26b) \( t_3 \) is antecedent governed by the \( \text{who}_3 \) complex and \( t_4 \) is lexically governed by \( \text{bought} \).

(30) In (26a) \( t_1 \) is again antecedent governed by the \( \text{who}_1 \) complex. But \( t_2 \) is not properly governed at all (since \( \text{why}_2 \) does not c-command it).

(31) *Who_1 \( t_1 \) said [ [ John left why]]
(32) Either ‘why’ covertly moves in one fell swoop, resulting in an initial trace that is *-marked. OR it moves first to the lower Spec of CP (which is fine) and then to the higher one, adjoining to ‘who’, leaving a *-marked intermediate trace.

(33) Again, even intermediate traces must be properly governed.

(34) *Why₂ do [you wonder [what₁ [Lisi bought t₁ t₂]]]

(35) t₂ is not properly governed. Though it is bound by Why₂, it is not subjacent to it.

(36) ni xiang-xhidao [Lisi weisheme mai-le sheme] Huang you wonder Lisi why bought what

(37) * LF (36) cannot have the indicated interpretation. The trace of weisheme, t₂, is not properly governed in the LF that would yield this interpretation.

(38) And similarly for all islands. This is by far the most powerful argument I know for covert movement. If there were no movement, there would be no traces and the ECP wouldn’t be relevant.

(39) ✓Mali renwei [[Yuehan weisheme likai]]
Mary thinks John why leave
"Why does Mary think [ t’ [John left t]]"

(40) Long distance interpretation (hence covert movement) of adjuncts is fine when there is no island.

(41) While, as I said, the ECP locality effect we have seen on WH adjuncts in situ is a very powerful argument for covert movement, we don’t, according to Huang and many (but not all) others, find ‘pure’ Subjacency effects. Arguments in situ inside islands do not have the same totally unacceptable status (and some report them as fine, in multiple questions in English, and in even simple WH-questions in Chinese):

(42) ?*Which car did you leave [before Mary fixed t]
(43) Who left [before Mary fixed which car]

(44) Given facts like these, Huang claims (stipulates really) that Subjacency doesn't constrain LF movement.

(45) ?*What do you believe the claim that Lisi bought t (Subjacency: 'Complex NP constraint' effect).

(46) ✓ Ni xiangxin Lisi mai-le sheme de shuofa Chinese (a “WH-in situ” language)
you believe Lisi buy-Asp what claim

(47) ?*What₁ do [you wonder [why₂ [Lisi bought t₁ t₂]]] (Subjacency: 'WH-island constraint' effect)

(48) [s[Lisi t₁ mai-le t₁]] [s[Lisi t₂ mai-le t₁]]
\[what \text{ is the thing } x \text{ such that you wonder why Lisi bought } x\]
(49) OK LF (46) can have the indicated interpretation.

(50) This leaves one big question: Why doesn’t covert movement obey Subjacency (for speakers who find argument WHs in situ inside islands fine)? One possibility is that Subjacency violations cause some sort of PF damage to a structure. Given the “inverted Y” model in (22), covert movement can’t have any effect on PF, so, in particular, can’t cause PF damage.

(51) A discovery by Ross (1969) makes this PF approach rather plausible. Ross showed that deletion, which is most likely a PF process, ameliorates Subjacency violations. Several of his examples were presented in the Brief Historical Overview of Subjacency/Islands handout. Here is one of Ross’s examples (with anachronistic traces and CP/IP categories):

(52) a. *She kissed a man who bit one of my friends, but Tom doesn't realize [CP [which one of my friends]1 [IP she kissed [NP a man [CP who2 [IP t2 bit t1 ]]]]]

b. She kissed a man who bit one of my friends, but Tom doesn't realize [CP [which one of my friends]1 [IP she kissed [NP a man [CP who2 [IP t2 bit t1 ]]]]]

(53) Uriagereka (1999) and Fox and Pesetsky (2003) give approaches to many Subjacency effects that specifically implicate PF problems (in particular, problems with the linearization which, according to Chomsky, turns a ‘mobile’ into a structured string).

References