(1) ECP (Empty Category Principle) 1st version:
A trace must be governed
(2) *John is illegal \([cp[ip \, t \, to \, park \, here]]\) (CP is a barrier to government; non-finite Infl isn't a governor)

(3) ECP 2nd version:
A trace must be properly governed (Proper government is government by a lexical head)
(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) Who do you think \([t' \, [t \, solved \, the \, problem]]\) \(t\) is not lexically governed
(7) \(\alpha\) properly governs \(\beta\) if
   i. \(\alpha\) governs \(\beta\) and \(\alpha\) is lexical ('lexical government')
   ii. \(\alpha\) binds \(\beta\) and \(\beta\) is (zero) subjacent to \(\alpha\) ('antecedent government')

(8) *Who do you think \([cp, t' \, [c \, that \, [ip, t \, solved \, the \, problem]]]\]
(9) Either that somehow blocks antecedent government or that somehow turns C' into a barrier for antecedent government

(10) ?*Which car did you leave [before Mary fixed \(t\)] Subjacency - an 'adjunct island'
(11) *How did you leave [before Mary fixed the car \(t\)] \((t\) is not properly governed, so the ex. violates both Subjacency and the ECP)
(12) Similarly for all islands: extreaction of an adjunct in violation of Subjacency always yields crashingly bad results.

(13) Lasnik and Saito technology: A trace that is properly governed is marked \(+\gamma\); one that is not is marked \(-\gamma\). The ECP says *[-\gamma]

(14) ✔How do you think \([t \, [(that) \, [Mary \, fixed \, the \, car \, t]]]\) (Why no "that"-trace effect with adjuncts?)
(15) Lasnik and Saito proposal: Adjunct traces are not gamma-marked in overt syntax (maybe because they aren't present yet). In LF (as in overt syntax) that can be deleted.
(16) Argument traces are gamma-marked in overt syntax (or we lose the that-trace effect for subjects).

(17) *How do you wonder [when, [John said \(t_1\) \([t_2', [Mary \, solved \, the \, problem \, t_2]]\)]

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(18) 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.)

(19) Further, gamma-marking must be specifically at levels. If $t_2'$ could properly govern $t_2$ and then delete, (17) would be a 'mere' Subjacency violation.

(20) Chomsky's version of this, from the mid-1980's: "Adjuncts must be fully represented". That is, all the traces in the chain of the moved adjunct must remain.

(21) *Who left why

(22) Suppose all WH-phrases move eventually, creating an adjunction structure.

(23) LF:  

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          CP
           
   who₁
   why₂  who₁
   t₁    left  t₂
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$t_2$ is not properly governed

(24) *Who $t_1$ said [[ John left why]]     Again, intermediate traces must be properly governed.

(25) ?*Which car did you leave [before Mary fixed $t$]

(26) Who left before Mary fixed which car     Subjacency doesn't constrain LF movement. (Huang)

(27) ?*What do you believe the claim that Lisi bought $t$     (Subjacency: 'Complex NP constraint'. There is actually a difficult puzzle here, since by the core Barriers theory, there will actually not be any barriers, assuming that a head N $\theta$-governs its clausal complement. We put this problem aside here.)

(28) ✓Ni    xiangxin Lisi mai-le    sheme de shuofa    Chinese
    you believe    Lisi buy-Asp what    claim

(29) *Why do you believe [the claim [that [ Lisi left $t$]]]

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

(31) And similarly for all islands. This is the most powerful argument I know for covert movement.

(32) Mali renwei [[Yuehan weisheme likai]]
    Mary thinks John why    leave
    "Why does Mary think [John left $t$]"

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