NP-movement: (passives, raising…)
(1) John seems [t_i to speak Mandarin].
(2) * John seems [t_i speaks Mandarin].

“Tensed S constraint”
NP-movement can’t escape a tensed IP.
(3) John is known [t_i to have beaten Bill].
(4) * John is known Bill to have beaten [t_i].

“Specified subject condition”
NP-movement can’t cross an overt subject.

Traces of wh-movement are r-expressions.
**Principle C** says R-expressions must be free.
(11) Who does John like [t_i]?
(12) * Who does he like [t_i]?

SCO (=who_i likes himself_i?)
(13) * Who did he_i tell Mary that John likes [t_i]?
    (=who_i told Mary that John likes him_i?)
(14) * Who did [his_i boss] see [t_i]?

WCO (=whose_i boss saw him_i?)

Crossover. A variable cannot be coindexed with a pronoun on its left.
(15) Everyone said that he saw Mary.
(16) * He saw everyone.
    (=e.o_i saw himself_i).
(17) * [His_i boss] saw everyone_i.
    (=e.o_i’s boss saw him_i).

(18) Parla italiano.   **Italian**
(19) Habla español.   **Spanish**
(20) * Speaks English.

EPP: SpecIP must be filled. With what?
(21) pro parla italiano.
(22) Gianni ha detto che pro_i parla italiano.
    John has said that — speaks Italian
    ‘John has said that he_i speaks Italian.’
(23) Che allenatore_i t_i pensa che i giocatori lo_i odiano?
    ‘Which manager_i thinks the players hate him_i?’
(24) *Che all._i pro_i pensa che i giocatori odiano t_i?
    ‘Which mgr._i does he_i think the players hate [t_i]?’

pro is a pronoun, just silent.
Some languages allow *pro* (null) subjects.
- Agreement (recoverability)
- V2 seems to prevent null subjects.

A separate category: Ellipsis of all kinds…

(Mandarin)

(25) Q: Zhangsan kanjian Lisi le ma?
   Zhangsan see Lisi ASP Q
   ‘Did Zhangsan see Lisi?’

A: Zhangsan shuo [ — kanjian — le]
   Zhangsan say see ASP
   ‘Zhangsan says (he) saw (him)’

Two parameters:

[±Recoverable deletion] (licenses ellipsis)

[±Strong agreement] (licenses *pro*)
   “*pro-drop*”

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Cyclicity condition:

(26) [CP [which car]i [C’ did [IP you think
    [CP t’ (that) [IP John would fix t_i]]]]?]

Wh-island constraint:

(27) [CP [which car]i [C’ do [IP you wonder
    [CP whenj [IP John will fix t_i t_j]]]]?

Wh-island constraint reduces to cyclicity.

Complex NP condition:

(28) [DP the man [CP who_i [IP t_i can fix the car]]]

(29) ?? [CP [which car]i [C’ have [IP you met
    [DP the man [CP who_i [IP t_i can fix t_j]]]]]

Ah, cyclicity…?
Subjacency:
Movement cannot cross more than one bounding node in a single step.

Bounding nodes: IP and DP.

Arguments and adjuncts.

?Whose car_1 were you wondering how to fix t_i?
(Ed’s car...I was wondering how to fix Ed’s car.)

*How_1 were you wondering whose car to fix t_i?
(With a wrench...I was wondering whose car to fix with a wrench.)

What makes these different?

Heads are divided into two kinds:
Lexical: N, V, A, P
Functional: C, I, D
**Proper Government** (first attempt)
Government by a lexical head.

**Empty Category Principle (ECP)**
Traces must be properly governed

(43) How\textsubscript{i} did you fix the car \textsubscript{t\textsubscript{i}}?

**Proper Government** (final version)
α properly governs β iff
(i) α governs β and α is a lexical head
or
(ii) α antecedent-governs β.

**Antecedent Government** (first attempt)
α, a moved category, antecedent-governs β iff
i) α binds β (c-commands & co-indexed)
ii) no more than one blocking category dominates β but not α.

‘…if moving from β to α would not violate Subjacency’

(Subjacency is very strong for adjuncts…?)

(44) ? Which song\textsubscript{i} were you wondering \[ whether the band will play \textsubscript{t\textsubscript{i}} \]?
(45) * Which band\textsubscript{i} were you wondering \[ whether \textsubscript{t\textsubscript{i}} will play that song \]?
(46) ? Which car\textsubscript{i} do you know how to fix \textsubscript{t\textsubscript{i}}?
(47) * Who\textsubscript{i} do you know how \textsubscript{t\textsubscript{i}} will fix the car?
(48) Which band\textsubscript{i} did you consider \[ \text{t\textsubscript{i} to be the best} \]?

Subjects are not usually lexically governed; and when not, they are subject to the ECP.

Adjuncts that violate the ECP (that is, that are not antecedent-governed) violate Subjacency too, right?

Do we really need both the ECP and Subjacency?

(49) Zhangsan yiwei Lisi mai-le shenme?
Z. thinks \textsubscript{L} bought what ‘What does Zhangsan think Lisi bought?’

(50) Zhangsan xiang-zhidao Lisi mai-le shenme.
Z. wonders \textsubscript{L} bought what ‘Zhangsan wonders what Lisi bought.’

Mandarin is a “wh-in-situ” language.

(51) \textbf{ni zui xihuan} [shei mai de shu]?
you most like \textit{who buy \textit{DE} book}
‘?x: you like the books x bought’
‘*Who\textsubscript{i} do you like \textit{[the books t\textsubscript{i} bought]}?’

(52) \textbf{ni xiang-zhidao}
you wonder
\textit{[wo weishenme mai shenme]}?
\textbf{I why bought what}
‘?x: you wonder why I bought x’
‘??What\textsubscript{i} do you wonder why I bought \textsubscript{t\textsubscript{i}}?’

(53) * Who\textsubscript{i} do you like \textit{[the books t\textsubscript{i} bought]}?
(54) ?? What\textsubscript{i} do you wonder \textit{[why I bought t\textsubscript{i}]}?
(55) Who\textsubscript{i} \textsubscript{t\textsubscript{i}} knows \textit{[where we bought what]}?
‘?x,y: x knows where we bought y’

(56) Who\textsubscript{i} \textsubscript{t\textsubscript{i}} likes \textit{[the books you gave to who]}?
(57) ??* Who\textsubscript{i} do you like \textit{the books you gave to \textsubscript{t\textsubscript{i}}}?

Subjacency constrains overt movement.
Mandarin \textit{wh}-words don’t move overtly.
English \textit{whs}-in-situ don’t move overtly.

Subjacency holds up until SS.
ni zui xihuan
I most like
[weishenme mai shu de ren]?
why     buy book DE person
(‘*Why do you like
[the man who bought the books t_j]’)

ni xiang-zhidao
you wonder
[wo weishenme mai shenme]?
I why bought what
‘?x: you wonder why I bought x’
not ‘?y: you wonder
what I bought for-y-reason’

ECP seems not to care about overt vs. covert.

The ECP holds at LF.

So, the ECP and Subjacency really are different things, and we need to keep both.

How_i did you say (that) he fixed your car t_i?

Italian
Chi hai detto che ha scritto questo libro?
who have-you said that has written this book
‘Who did you say wrote this book?’

Hanno telefonato molti studenti
have.3pl phoned many students
‘Many students have phoned.’

Vinceremo noi
will-win.1pl we
‘We will win.’

fixed your car

[CP Chi_i [IP pro hai detto [CP t_i che [IP pro ha
[VP scritto question libro] t_i ]]]]
(74) Mario E parla \textit{Florentine It.}
Mario SCL speaks
‘Mario speaks.’

(75) E parla
SCL speaks
‘He speaks’

(76) * Parla

(77) gl ‘ha telefonato della ragazze
SCL(M.SG) has phoned some girls(F.PL)
‘Some girls telephoned.’

(78) Quante ragazze tu credi che gli abbia parlato?
how many girls you think that M.SG spoken
‘How many girls do you think have spoken?’

(79) * Quante ragazze tu credi che le abbiano parlato?
how many girls you think that F.PL spoken
(‘How many girls do you think have spoken?’)

(80) How tall will John be?
[CP how tall [C’ willj [IP John t] [VP be ...]

(81) How tall is John?
[CP how tall [C’ isj [IP John t’j [VP tj ...]

(82) * How tall be John will?
[CP how tall [C’ bej [IP John will [VP t ...]

\textbf{Head-movement constraint (HMC)}
Movement of an X° category \( \alpha \) is restricted to the position of a head \( \beta \) that governs the maximal projection of \( \alpha \). (‘No skipping’)