Head movement

MIT, 24.951, Fr 31 Oct 2003

Recapitulation

How to reduce language- and construction-specific particulars in our theories of grammar (and of language acquisition)

(1) a. Focus so far: Distribution and interpretation of pronounced and un-pronounced DPs in A-positions \( \theta \)-roles, linking, Projection Principle, EPP, Case Filter, Grammatical-Function changing, Binding Theory, \( pro \), PRO, etc.

b. Locality conditions on interpretation (e.g., (2)) and on displacement (e.g., (3) (4)).

(2) *John \(_i\) wants [IP Mary \(_j\) to love himself]

(3) a. It seems that it is likely that John \(_i\) will win

b. It seems that John \(_i\) is likely \( t_i \) to win

c. John \(_i\) seems \( t_i \) to be likely to win

d. * John \(_i\) seems that it is likely \( t_i \) to win

(4) a. I wonder [CP who \(_i\) [IP \( t_i \) could solve the problem in this fashion]]

b. * How \(_j\) do you wonder [CP who \(_i\) [IP \( t_i \) could solve this problem \( t_j \)]]

(5) Recall Kayne’s (1994) LCA-based derivation of head-related properties, including “antisymmetries” vis-à-vis head-movement:

a. unicity of heads

b. constraints on head-movement:

(a) head-movement always upward, thus leftward.

(b) the moved head always ends up as a left-adjunct to a c-commanding head

Does head-movement exist?

Germanic V/2 (with “prefix float”)

(6) a. Den Mann sah Hans

the-ACC man saw Hans

“Hans saw the man”

b. Marie denkt, [CP dass Hans den Mann sah]

Marie thinks that Hans the-ACC man saw

“Mary thinks that Hans saw the man”
(7) a. *Den Mann haben wir gesesehen*  
the-ACC man have we seen  
“We have seen the man”

b. *Marie denkt, [CP dass wir den Mann gesessen haben]*  
Marie thinks that we the-ACC man seen have  
“Mary thinks that we have seen the man”

(8) a. *Hans sagt, [CP dass Arnold glücklich sei]*  
Hans said that Arnold happy is

b. *Hans sagt, [CP glücklich sei Arnold]*  
Hans said happy is Arnold

(9) a. *Wir müssen jetzt das Licht anmachen*  
we must now the light on make  
“We must now turn the light”

b. *Wir machen jetzt das Licht an*  
we make now the light on  
“We are now turning the light”

*Den Besten’s (1981) account:*

(10) a. Underlying structure:  
[IP Subject [VP Object (Prefix-)V] I ]

b. When C is filled: do nothing.

c. When C is empty:
   i. move the tensed verb to C (because C carries some V-feature tense?)
   ii. move some XP to Spec(CP) (because of EPP?)

*Verb-placement in French vs. English (Emonds 1978, Pollock 1989ff, etc.)*

*Placement of finite main verbs*

(11) a. *Do you like spinach?*  
[CP Do [IP Subj V Obj ]]

b. *We don’t like spinach*  
[IP Subj do not V Obj]

c. *We often eat chocolate*  
[IP Subj Adv V Obj]

d. *They all love Mary*  
[IP Subj all V Obj]

(12) a. *Aimez-vous les épinards*  
[CP V [IP Subj Obj ]]

b. *Nous (n’)aimons pas les épinards*  
[IP Subj (ne) V pas Obj]

c. *Nous mangeons souvent du chocolat*  
[IP Subj V Adv Obj]

d. *Ils aiment tous Marie*  
[IP Subj V tous Obj]
(13) a. *Like-you spinach?
   b. *We like not spinach
   c. *We eat often chocolate
   d. *They love all Mary

(14) a. *Nous (ne) pas aîmons les épinards
   b. *Nous souvent mangeons du chocolat
   c. *Ils tous aîment Marie

Placement of French infinitives vis-à-vis negation

(15) a. Manger les épinards, c’est bon pour la santé
   b. Ne pas manger les épinards, c’est mauvais pour la santé
   c. *Ne manger pas les épinards, c’est mauvais pour la santé

Placement of modals and auxiliaries vs. placement of (main) verbs (Pollock’s (1989) discovery)

(16) a. We have not eaten spinach [IP Subj Vaux not Vmain Obj]
   b. Have you eaten spinach? [CP Vaux [IP Subj Vmain Obj]]

(17) a. He could not speak French
   b. Could he speak French?

(18) a. Ne pas être heureux est une condition pour écrire des romans.
   Not to be happy is a requirement for writing novels
   b. N’être pas heureux est une condition pour écrire des romans.

(19) a. Ne pas avoir de voiture en banlieue rend la vie difficile.
   Not to have a car in suburbia makes life difficult
   b. N’avoir pas de voiture en banlieue rend la vie difficile.

(20) a. Ne pas sembler heureux est une condition pour écrire des romans.
   Not to seem happy is a requirement for writing novels
   b. *Ne sembler pas heureux est une condition pour écrire des romans.

(21) a. Ne pas posséder de voiture en banlieue rend la vie difficile.
   Not to own a car in suburbia makes life difficult
   b. *Ne posséder pas de voiture en banlieue rend la vie difficile.
Head-movement and locality

(22) Assume that head-movement does exist. It too is ‘local’.

(23) a. *They could have left
   b. *Could they ti have left?
   c. *Have they could ti left?

(24) a. *Like you spinach?
   b. Do you like spinach?

(25) a. *We like not spinach
   b. We don’t like spinach

(26) a. Whatever can move to INFL can also move to COMP.
   b. Whatever moves to COMP must have moved to INFL movement of the verb to
      COMP requires that the verb first moves to INFL.
   c. Head movement can proceed only through the next higher head head movement
      can’t skip heads.

(27) Relativized Minimality (Rizzi 1990f): Y is in a Minimal Configuration
     with X only if there is no Z such that:

     a. Z is of the same structural (and featural?) type as X

     b. Z c-commands Y and does not c-command X (i.e., Z “intervenes” between X
        and Y

     “Structural types” ranges over positions (and their “features”?/ here, A-Spec, \(\bar{\text{A}}\)-
     Spec, head.

Recap

(28) a. Implications for:

   • question formation (V-to-C or not)
   • placement of negation (V-Neg vs. Neg-V)
   • placement of certain adverbs (V-Adv vs. Adv-V)
   • quantifier placement (V-Quant vs. Quant-V)
   • distribution of main verbs vs. auxiliaries (any contrast?)
   • distribution of finite vs. non-finite verbs
   • etc.
b. A verb-movement (V-to-I) parameter?

(c) A V-to-I parameter with a morphological trigger?

(Inflectional morphology as locus for cross-linguistic variation? Learnability considerations?)

One left-over issue: How many landing sites for V in IP? (Another disvoery by Pollock 1989)

(29) Do French finite verbs and finite auxiliaries move in one fell swoop from V to INFL?

In French, finite verbs and finite auxiliaries must precede negation and clause-internal adverbs (this is not optional, pace Roberts 2000:122)

(30) a. * Il (ne) pas parle français
   He doesn’t speak French

   b. * Il souvent parle français
   He often speaks French

(31) a. * Il (ne) pas a parlé français
   He has not spoken French

   b. * Il souvent a parlé français
   He often has spoken French

(32) a. Il (ne) parle pas français
   b. Il parle souvent français
   c. Il (n’)a pas parlé français
   d. Il a souvent parlé français

(33) a. In French, non-finite main verbs cannot precede pas (see (20) (21)).
   b. Are these verbs pronounced in VP/vP? Consider (34).

(34) a. Ne pas lire les journaux, c’est déplorable
   Not to read the newspapers, that’s deplorable

   b. * Ne lire pas les journaux, c’est déplorable

(35) a. Souvent lire les journaux, c’est bien
   To often read the newspapers, that’s good

   b. Lire souvent les journaux, c’est bien

(36) a. Ne pas souvent lire les journaux, ...
   To not often read the newspapers, ...
b. *Ne lire pas souvent les journaux,

c. Ne lire souvent les journaux,

(37) a. The “explosion” of INFL:

\[
[CP \ldots [IP \ldots \text{INFL VP}], \ldots] \leftrightarrow [CP \ldots \text{INFL}_1 \ldots \text{INFL}_2 \text{VP}], \ldots
\]

b. What are the features of “INFL₁” and “INFL₂”?


(38) Morphology in Verb Placement “Mirror Principle” (à la Baker) and verbal affixation as a “trigger” (cf. (28b) (28c))?

Move to INFL if inflectional morphemes need to be stacked as affixes on V (cf. Lasnik’s Stray Affix Filter).


(39) a. Before Fr V-raising

\[
\begin{array}{c}
\text{AgrP} \\
\downarrow \\
\text{Agr'} \\
\downarrow \\
\text{Agr}^0 \\
\downarrow \\
\text{TP} \\
\downarrow \\
\text{T'} \\
\downarrow \\
\text{T}^0 \\
\downarrow \\
\text{VP} \\
\downarrow \\
\text{V'} \\
\downarrow \\
\text{Obj} \\
\end{array}
\]

\[\text{aim}\] ‘love’

b. After Fr V-raising

\[
\begin{array}{c}
\text{AgrP} \\
\downarrow \\
\text{Agr'} \\
\downarrow \\
\text{Agr}^0 \\
\downarrow \\
\text{TP} \\
\downarrow \\
\text{T'} \\
\downarrow \\
\text{T}^0 \\
\downarrow \\
\text{VP} \\
\downarrow \\
\text{V'} \\
\downarrow \\
\text{Obj} \\
\end{array}
\]

\[\text{aim}\] ‘love’

(40) a. How does the English finite verb collects its inflectional suffixes (e.g., -s and -ed)? INFL-lowering (at PF)?

b. Recall Chomsky’s (1957) Affix Hopping:

\[
\begin{align*}
\text{Verb} & \quad \mapsto \quad \text{Aux} + \text{V} \\
\text{Aux} & \quad \mapsto \quad \text{C} (\text{M}) (\text{have} + \text{EN}) (\text{be} + \text{ING}) (\text{be} + \text{EN}) \\
\text{C} & \quad \mapsto \quad \text{one of} \{ +s, +\emptyset, +ed \} \\
\text{Aff} + \text{v} & \quad \mapsto \quad \text{v} + \text{Aff}\# \\
\end{align*}
\]

[See Lasnik’s (2000) Syntactic structures revisited]
A digression:

(41) a. **The “Cinquean explosion” of INFL:**
    \[ CP \ldots [INFL_1P \ldots INFL_1 [INFL_2P \ldots INFL_2 [INFL_{3,45} \text{ VP }]]]\]

  b. Cf. the “Rizziesque explosion” of COMP:
    \[ \text{COMP}_1P \ldots \text{COMP}_1 [\text{COMP}_2P \ldots \text{COMP}_2 [\text{COMP}_3P \ldots \text{COMP}_4P \ldots \text{COMP}_4 \ldots] ]\]

In English and Italian:
\[ \text{Force}_{P} \text{RelOp}_{P} \text{che} \text{that}_{P} \text{Focus}_{P} \text{wh-phrases}_{P} \text{Focus}_{P} \text{Fin}_{P} \text{di}/\text{for}_{P} \text{IP} \ldots \]

  c. Also see Larson’s VP-shells, Ritter’s articulated DP, etc.

**Back to locality “long” head-movement**

An excursion into wh-movement for evidence on “relativized” intervention

**Q-split in French:**

(42) a. \[ \text{Combien de livres}_i \text{ a-t-il consultés } t_i ? \]
    How-many of books\_i has-he consulted \_t_i ?

  b. \text{Combien}_i \text{ a-t-il consulté } [t_i \text{ de livres}] ?
    How-many\_i has-he consulted \_t_i of books ?

(43) a. \text{Il a consulté } [\text{beaucoup de livres}]
    He has consulted \cite{many of books}

  b. \text{Il a beaucoup consulté } [t_i \text{ de livres}]
    He has many\_i consulted \_t_i of books

Q-split obeys islands as adjuncts do:

(44) a. \[ \text{Combien de problèmes}_i \text{ sais-tu } [\text{comment}_j \text{ PRO résoudre } t_i t_j ] \]
    How-many of problems\_i do you know \_how\_j PRO to solve \_t_i \_t_j

  b. *\text{Combien}_i \text{ sais-tu } [\text{comment}_j \text{ PRO résoudre } [t_i \text{ de problèmes} ] t_j ]
    How-many\_i do you know \_how\_j PRO to solve \_t_i \_t_j of problems

Pseudo-opacity in French:

(45) \text{Il a beaucoup consulté ces livres}
    He has a\_lot \_many\_times consulted these books

(46) a. \[ \text{Combien de livres}_i \text{ a-t-il beaucoup consultés } t_i ? \]
    How-many of books\_i has-he a\_lot consulted \_t_i \?

  b. *\text{Combien}_i \text{ a-t-il beaucoup consulté } [t_i \text{ de livres}] ?
    How-many\_i has-he a\_lot consulted \_t_i of books \?
(47)  *Beaucoup* in Spec(VP) is an “intervening other Z”: *beaucoup* is in A-bar position that interferes with adjunct extraction, on a par with *who* in intermediate Spec(CP) in (4b) (Rizzi 1990).

“Relativized” intervention in long head-movement? Breton V-to-C movement à la Roberts

(48) a.  *Lenne* en *deus Yann al lever*
    Read   3sg-masc has Yann the book
    ‘Yann has read the book’

b.  *Lenne* n’ en *deus ket Yann al lever*
    Read   NEG 3sg-masc has NEG Yann the book
    ‘Yann has not read the book’

*O lenn*  *emañ Yann al lever*
    Prog read is Yann the book
    ‘Yann is reading the book’

(49) Roberts’s (2000:144) typology of heads vis-à-vis Relativized Minimality:
    a. Lexical vs. functional heads (the progressive auxiliary is lexical)
    b. Among functional heads, operator vs. non-operator heads (C and Neg are operator heads while T is a non-operator head).

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<th>Head-movement in the DP?</th>
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Distribution and interpretation of adjectives across Romance (Bernstein 1992)

(50) a.  *El simple hombre* ...  ‘The simple/mere man ...’  (Spanish)
    b.  *El hombre simple* ...  ‘The simple(-minded) man ...’
    c.  *El hombre es simple*  ‘The man is { simple-minded | *mere }’
    d.  *El accidente es mero*  ‘The accident is mere’
    e.  *El mero accidente* ... vs. *El accidente mero* ...

(51) a.  *Il pover’uomo* ...  ‘The pitiable man ...’  (Italian)
    b.  *L’uomo povero* ...  ‘The impoverished man ...’
    c.  *L’uomo è povero* ...  ‘The man is { impoverished | *pitiable }’
    d.  *L’accidente è mero*  ‘The accident is mere’
    e.  *Un mero accidente* ... vs. *Un accidente mero* ...

(52) a.  *Une certaine chose* ...  ‘A certain (i.e., particular) thing ...’  (French)
    b.  *Une chose certaine* ...  ‘A certain (i.e., sure) thing ...’
    c.  *La chose est certaine*  ‘The thing is { sure | *particular }’
d. * La maison est autre ‘The house is other’
e. L’autre maison . . . vs. * La maison autre . .

Where does N raise to?

(53) Un gros camion rouge
     A big truck red

(French)

(54) a. [DP Il mio Gianni ]
     The my Gianni
     ‘My Gianni’

       b. * [DP mio Gianni ]

       c. [DP Gianni mio ]

(Italian)

(55) hu ir-raggel il-kbir
     brother the-man the-big
     ‘the man’s big brother’ / ‘the big man’s brother’

      (Maltese)

(56) beyt ha-iʃ ha-godol
     house the-man the-big
     ‘the man’s big house / ‘the big man’s house’

      (Hebrew)