

Head movement

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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— θ -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_i*]
- (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 gesehen*
 the-ACC man have we seen
 “We have seen the man”
- b. *Marie denkt, [CP dass wir den Mann gesehen **haben**]*
 Marie thinks that we the-ACC man seen have
 “Mary thinks that we have seen the man”
- (8) a. *Hans sagte, [CP dass Arnold glücklich **sei**]*
 Hans said that Arnold happy is
- b. *Hans sagte, [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** Marie* [IP Subj *all* **V** Obj]
- (12) a. ***Aimez**-vous les epinards* [CP **V** [IP Subj Obj]]
- b. *Nous (n’) **aimons** pas les epinards* [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 aimons les epinards*
 b. * *Nous souvent mangeons du chocolat*
 c. * *Ils tous aiment Marie*

Placement of French infinitives vis-à-vis negation

- (15) a. *Manger les epinards, c'est bon pour la santé*
 b. *Ne pas manger les epinards, c'est mauvais pour la santé*
 c. **Ne manger pas les epinards, 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 V_{aux} not V_{main} Obj]
 b. *Have you eaten spinach?* [CP V_{aux} [IP Subj V_{main} 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_i they t_i have left?*

c. **Have_i they could t_i 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{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 discovery 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/*v*P? 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 pas lire souvent les journaux,*
 c. * *Ne lire pas souvent les journaux,*

(37) a. **The “explosion” of INFL:**

[_{CP} ... [_{IP} ... INFL VP]] ⇨ [_{CP} ... [_{INFL₁P} ... INFL₁ [_{INFL₂P} ... INFL₂ VP]]]

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

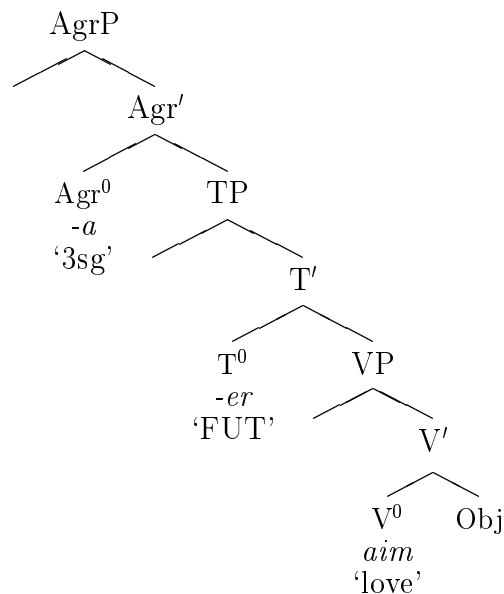
[Cf. Pollock 1989 vs. Belletti 1990 vs. Chomsky 1991, etc.]

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

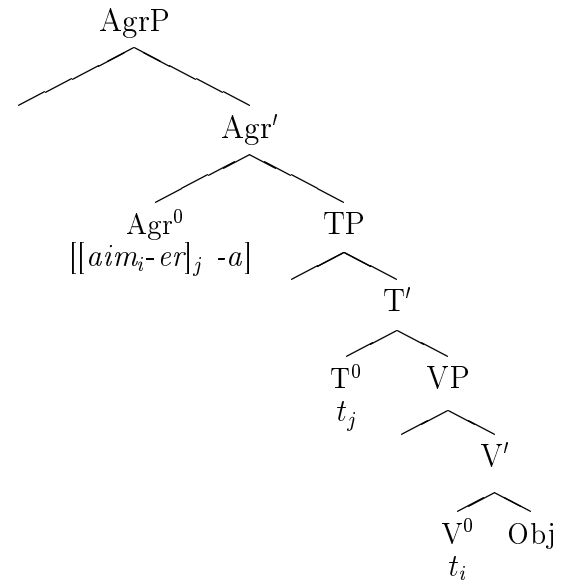
Move to INFL if inflectional morphemes need to be stacked as affixes on V (cf. Lasnik’s *Stray Affix Filter*).

[For discussion and alternatives, see Pollock 1989, Chomsky 1993, Roberts 1995, Rohrbacher 1994, Vikner 1995, Bobaljik 2001, etc.]

(39) a.



b.



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

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

Verb ⇨ Aux + V

Aux ⇨ C (M) (*have* + EN) (*be* + ING) (*be* + EN)

C ⇨ one of { +s, +∅, +ed }

Aff + v ⇨ v+Aff#

[See Lasnik’s (2000) *Syntactic structures revisited*]

A digression:

(41) a. The “Cinquean explosion” of INFL:

[_{CP} ... [_{INFL₁P} ... INFL₁ [_{INFL₂P} ... INFL₂ ... INFL_{1,345} VP]]]]

b. Cf. the “Rizziesque explosion” of COMP:

[_{COMP₁P} ... COMP₁ [_{COMP₂P} ... COMP₂ [_{COMP₃P} ... COMP₃ [_{COMP₄P} ... COMP₄ ...

In English and Italian:

[_{ForceP} **RelOp** [_{Force'} *che/that* [^{*}_{TopicP} [_{FocusP} **Focus-**/*wh-phrases* [^{*}_{TopicP} [_{FinP} [_{Fin'} *di/for* [_{IP} ...

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

Back to locality—“long” head-movement

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

Q-split in French:

(42) a. [*Combien de livres*]_i *a-t-il consultés t_i* ?

[How-many of books]_i has-he consulted *t_i* ?

b. *Combien_i a-t-il consulté [t_i de livres]* ?

How-many_i has-he consulted [*t_i of books*] ?

(43) a. *Il a consulté [beaucoup de livres]*

He has consulted [many of books]

b. *Il a beaucoup_i consulté [t_i de livres]*

He has many_i consulted [*t_i of books*]

Q-split obeys islands as adjuncts do:

(44) a. [*Combien de problèmes*]_i *sais-tu [comment_j [PRO résoudre t_i t_j]]*

[How-many of problems]_i do you know [how_j [PRO to solve t_i t_j]]

b. **Combien_i sais-tu [comment_j [PRO résoudre [t_i de problèmes] t_j]]*

How-many_i do you know [how_j [PRO to solve [t_i of problems] t_j]]

Pseudo-opacity in French:

(45) *Il a beaucoup consulté ces livres*

He has a-lot / many-times consulted these books

(46) a. [*Combien de livres*]_i *a-t-il beaucoup consultés t_i* ?

[How-many of books]_i has-he a-lot consulted *t_i* ?

b. **Combien_i a-t-il beaucoup consulté [t_i 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. ***Lennet*** *en deus Yann al lever*
 Read 3sg-masc has Yann the book
 ‘Yann has read the book’
- b. ****Lennet*** *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:
- Lexical vs. functional heads (the progressive auxiliary is lexical)
 - Among functional heads, operator vs. non-operator heads (C and Neg are operator heads while T is a non-operator head).

Head-movement in the DP?

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* (French)
 A big truck red
- (54) a. [_{DP} *Il mio Gianni*] (Italian)
 The my Gianni
 'My Gianni'
 b. * [_{DP} *mio Gianni*]
 c. [_{DP} *Gianni mio*]
- (55) *hu ir-raggel il-kbir* (Maltese)
 brother the-man the-big
 'the man's big brother' / 'the big man's brother'
- (56) *beyt ha-if ha-godol* (Hebrew)
 house the-man the-big
 'the man's big house' / 'the big man's house'