

# Syntax II, Lecture 6 Notes: Verb Movement and Word Order

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- Icelandic problem: explain why nominative case assignment is a problem for Woolford (and others)

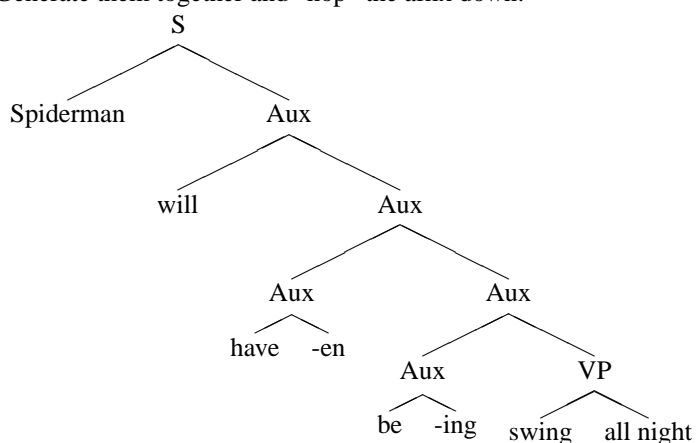
## 1 VP-Internal Subjects

Handout from lecture 4.

## 2 Verb Movement and Affix Hopping

Original Affix Hopping (Chomsky 1957):

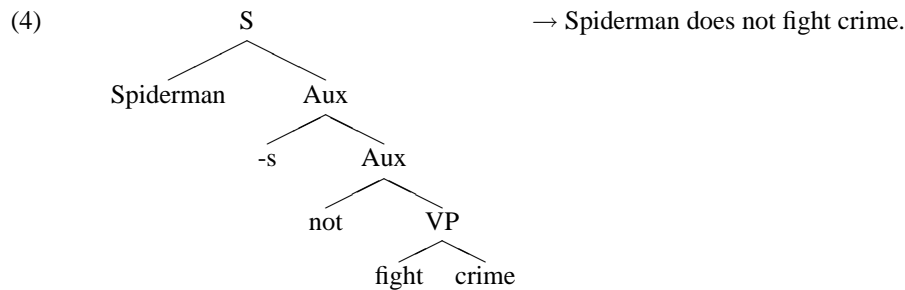
- (1) Dependency between *have* and *-en*, *be* and *-ing*:
  - a. Mary Jane **has** never **seen** Spiderman without his mask.
  - b. The Green Goblin **is** always **flying** on that mechanical bat.
  - c. Spiderman will **have** **been** **swinging** all night.
- (2) Generate them together and “hop” the affix down:



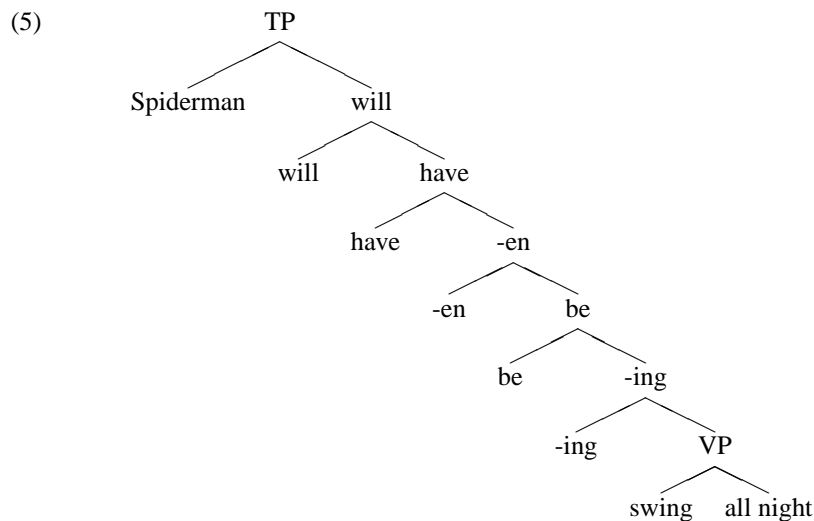
(We can add another dependency, between passive *be* and *-en*: Spiderman **has** not **been** being defeated in a long time.)

This was Chomsky’s *Auxiliary Transformation*; there was also a *Number Transformation* that hopped *-s* and Past down onto verbs; if the structural description was not met, *do* was inserted:

- (3)
- 
- ```
graph TD
    S --> Spiderman
    S --> Aux
    Aux --> s["-s"]
    Aux --> VP
    VP --> fight
    VP --> crime
```
- Spiderman fights crime.



Nowadays Affix Hopping is usually reserved just for the Number Transformation, that is, hopping Tense onto a verb that hasn't moved to T. The other affixes are usually handled through something like selection: *have* selects as complement the past participle form of the verb, and *be* selects the present participle—however that is done, sometimes by the morphology heading its own projection:



## 2.1 A Few Things to Note

Verb movement seems to have a certain character:

1. Heads (verbs) seem to only move to other head positions (Like-attracts-like constraint);
2. Head movement, except for Affix Hopping, is always upward (c-command condition on traces);
3. Head movement does not seem to be able to skip heads (the Head Movement Constraint);
4. There seems to be morphology involved: anything in a complex head has to together form a single word; and some heads cannot stand by themselves but require head movement to form a well-formed word.

Most of these are just background assumptions of Pollock's; keep them in mind as we go through his paper.

## 3 Pollock 1989

Pollock (1989) adds his own empirical observations to those of Chomsky and Emonds (1976, (1978))—who dealt with differences between the English and French auxiliary systems—, and proposes an updated analysis of auxiliaries, verb movement, and Affix Hopping.

### 3.1 Old Observations

French has V-to-I movement, English does not:

- (6) Negation:
- a. \* John likes not Mary.

b. Jean (n')aime pas Marie.

(7) V-to-I-to-C:

a. \* Likes he Mary?

b. Aime-t-il Marie?

(8) Adverbs:

a. \* John kisses often Marie.

b. Jean embrasse souvent Marie.

c. John often kisses Marie.

d. \* Jean souvent embrasse Marie.

(9) Floated Qs:

a. \* My friends love all Marie.

b. Mes amis aiment tous Marie.

c. My friends all love Marie.

d. \* Mes amis tous aiment Marie.

- English auxiliaries/main verbs *have* and *be* act like French, and move to I:

(10) a. John is not dating Mary.

b. Is John dating Mary?

c. John is often accompanying Mary.

d. My friends are all dating Mary.

- English uses an auxiliary *do*, which appears in places main verbs can't.

(11) a. John did not date Mary.

b. Did John date Mary?

c. John doesn't often accompany Mary.

d. My friends didn't all date Mary.

### 3.2 Questions

Pollock asks and attempts to answer:

(A) Why is Verb Movement to INFL lexically restricted in Modern English?

(A') Why can't Affix Movement apply in French tensed clauses?

(B) Why does UG allow for Affix Movement, a lowering rule?

(C) Why does the negative particle *not* block Affix Movement whereas other (negative) adverbs do not?

(D) Why is verb movement obligatory whenever it can apply?

The answers he gives:

(A) "Transparency" of Agr: English Agr is not transparent enough, blocks theta-role transmission via trace of verb; auxiliaries do not assign theta roles, hence transmission being blocked is not a problem.

(A') French Agr is transparent enough; and [+Finite] Tense has to have the trace of verb movement to bind as a variable.

(B) Not answered; several possibilities suggested (on p.394).

(C) Negation and adverbs never block Affix Movement; *not* heads a NegP, which forms a barrier only to movement of a null counterpart of *do*; the overt version has to be used instead.

(D) [+Finite] Tense needs the trace of the verb to bind as a variable.

### 3.3 New Observations on Infinitives

Following Chomsky, assume that infinitives differ from finite clauses only in feature specification of INFL.

- French infinitives show same auxiliary-lexical verb contrast as in English

(12) Auxiliaries optionally move (P15,21):

- Ne pas être heureux est une condition pour écrire des romans.  
'Ne to not be happy is a prerequisite for writing novels.'
- N'être pas heureux est une condition pour écrire des romans.  
'Ne to be not happy is a prerequisite for writing novels.'
- To not be happy is a prerequisite for writing novels.
- ? To be not happy is a prerequisite for writing novels. (terrible in my judgement; best is *To not be happy*...)

(13) Lexical verbs may not move (P16,22):

- Ne pas sembler heureux est une condition pour écrire des romans.  
'Ne not to seem happy is a prerequisite for writing novels.'
- \* Ne sembler pas heureux est une condition pour écrire des romans.  
'Ne to seem not happy is a prerequisite for writing novels.'
- Not to seem happy is a prerequisite for writing novels.
- \* To seem not happy is a prerequisite for writing novels.

This means that Affix Hopping must take place in French infinitives.

(14) Lexical infinitives seem to be able to move a short distance in French (P27–28):

- Oublier presque son nom, ça n'arrive pas fréquemment.  
'To forget almost one's name...'
- J'ai entendu mes enfants raconter chacun une histoire différente.  
'I have heard my kids tell each...'

(15) but not in English (P38–39):

- \* To look often sad during one's honeymoon is rare.
- I believe John to often be sarcastic.
- (?) I believe John to be often sarcastic.

Assuming adverbs do not move, this means that lexical verbs move a short distance in French (to some yet to be named location; or, objects move to the right), auxiliaries move all the way to INFL.

- Pollock, p.382: "Verb Movement to INFL exhibits lexical restrictions in tensed clauses if and only if short Verb Movement [in infinitives] is also lexically restricted."

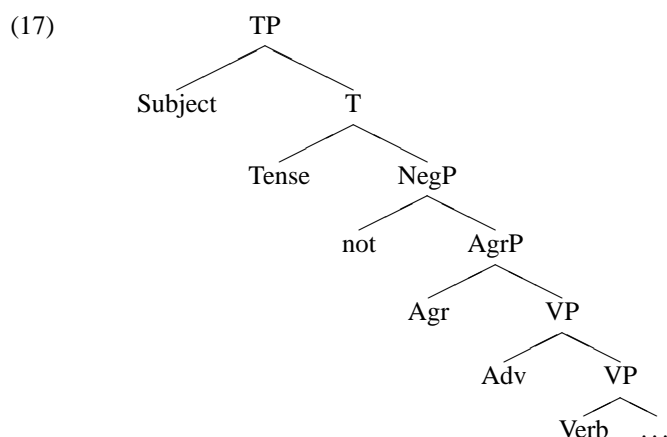
Although there's no necessary connection, Pollock suggests that this should naturally be the work of the Head Movement Constraint:

(16)  $[_{IP} NP [_I V_1] (pas/not) e_1 [_{VP} (Adv) t_1 \dots ]]$   
↑ ↑  
(b) (a)

See also the criticism in Iatridou (1990).

### 3.4 Exploded INFL

Pollock suggests that each of the features thought to be present under INFL—Tense, Negation, and Agreement—head their own projections:



Footnote 19 contains some important points:

1. Not all languages must have AgrP.
2. Order of AgrP and TP (and of other phrases) may vary.
3. AgrP and TP should have specifier positions. (Spec-TP is subject position; what about Spec-AgrP?)

This gives us the position; how does it help us with lexical restrictions?

### 3.5 Theta-Role Assignment

- (18) Verb movement to Affix:  
 $[_{Aff} [ V ] Aff]$

**English:** Agr is not “transparent” enough; adjoining the verb to it prevents that verb assigning its theta roles.

**French:** Agr is “transparent” enough for a verb adjoined to it to assign its theta roles.

- (19) Affix lowering:  
 $[_V V Aff]$

- (20) Verb movement to Tense:  
 $[_T [_{Agr} V Agr] T]$

If [–Finite] Tense is always “opaque,” we get universal restriction against verb movement to INFL in infinitival clauses.

Auxiliaries, modals, **lexical have**, do not have theta-roles to assign. In some cases Pollock adopts analyses—some of which have been independently proposed—according to which **the verb is not the main predicate** (i.e., there can be something else assigning the theta role).

### 3.6 Why Must Verb Movement Take Place?

Pollock concludes that it’s only a property of [+Finite] Tense that verbs must move; in infinitives, lexical verbs do not move to Tense, and auxiliaries only optionally move (in French and in English). Pollock wants to relate this to the conclusion that **negation only blocks Affix Hopping in finite clauses** (hence, never in French).

- (21)  $[ +finite ]$  Tense (that is,  $[ \pm Past ]$ ) is an operator. (P59)

Like all operators, [+Finite] Tense will have to bind a variable; this is the **trace of verb movement**, which can be identified with the **event variable** of a predicate.

This gives us French, **what about English**, where verb movement can’t take place because of the **opacity of Agr?**

- Pollock: an **auxiliary** generated outside VP can **replicate** the theta grid of the lexical verb and **thereby leave a trace** that can count as a variable for Tense.

- (22) John did not go. =  
 $[_{TP} John [_{T_I} [_{Agr_I} [_{V_I} do] Agr] T] [_{NegP} not] [_{AgrP} e_1 [_{VP} go] ] ]$

(23) John leaves. =  

$$[_{TP} \text{ John } [_{T_I} [_{Agr_I} [_{V_I} \emptyset] \text{ Agr}] T] [_{AgrP} e_1 [_{VP} \text{ leave}] ] ]$$

- Affix Hopping can still take place because nothing blocks it. It must take place because null *do* cannot support the affix (why can't it support a zero affix? or does it? can we tell?).
- In negative sentences, the overt *do* can void the barrierhood of Neg, but the null *do* cannot.
- In movement to C, TP acts like NegP, forming a barrier to null *do* but not to overt *do*.
- Affix Hopping won't take place if overt *do* is present, because it can attach to *do*. Is there anything that actually prevents it from taking place though?
- Why is there a null *do*? Why don't we use overt *do*?

## 4 German and V2

Want to say anything here?

For a good overview, see Chapter 3 of Vikner 1995.

## 5 Further Readings (Possible Squib Topics)

**AgrP and TP** Jonas and Bobaljik 1993, Bobaljik and Thráinsson 1998

## References

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