

## Verb movement, Universal Grammar, and the Structure of IP

### 1. Where we left last week

The status of Agr: *transparent* in French  
*opaque* in English

So, in French, V can move to Agr and still be able to assign the subject  $\Theta$ -role. This is not possible in English, except for verbs that do not assign  $\Theta$ -roles (i.e., *be* and *have*). For lexical verbs, Agr must lower down to V.

This doesn't depend on the sentence being finite or non-finite, since finiteness only matters for movement to I.

Note two things:

1. For English lexical verbs: Pollock doesn't explain why Agr-to-V lowering should make any difference. He simply states it (p. 386).
2. For French non-finite lexical verbs: they can surface both in V or in Agr. This was possible in 1989, because both structures could be generated, and none was ruled out by any constraint. However, this wouldn't be possible in the current framework.

### 2. Verb movement and quantification theory in French

The main question is, what forces movement to I?

Pollock's answer: assume that finite Tense is an operator  
(cf. Davidson 1967)

Sentences are not:  $\lambda x \lambda y$  [read (x)(y)]  $\rightarrow x$  reads  $y$

Instead, they are:  $\lambda x \lambda y \lambda z$  [read (x)(y)(z)]  $\rightarrow x$  reads  $y$  at time point  $z$   
 $z$  is an event variable

Operators must bind a variable so as to not violate the ban on vacuous quantification  
Variables must be bound by an operator so as to be interpretable  
Therefore, Tense must bind an event variable  
(obviously, the trick is what counts as an event variable)

Crucial definitions:  $x$  is a variable for Tense iff  $x = [v e_i]$  bound by Tense (p. 392)  
(i.e., traces of verb movement qualify as event variables)

$x$  is bound by  $y$  iff  $x$  is c-commanded and coindexed with  $y$  (p. 393)

Even more crucially: "Tense can only receive an index by inheriting one from a verb" (p. 393)

Therefore, V-to-Agr movement creates an event variable. Agr-to-T movement passes the verb's index on to Tense, so that the variable can be bound in accordance with the above definitions.

Why doesn't non-finite I trigger movement? Because it is not an operator. Therefore, movement is not necessary (though he assumes it is possible, if nothing blocks it)  
Moreover, Pollock assumes that non-finite Tense is universally opaque, i.e.,  $\Theta$ -grid cannot be copied to it. Therefore, only non-thematic verbs (i.e., auxiliaries) are allowed to move to non-finite T.

This gives the following picture.

1. V-to-Agr is possible because Agr is transparent in French
2. Agr-to-T movement is obligatory in finite clauses so that the Tense operator can bind the variable created by V-to-Agr movement.
3. Non-finite Tense is opaque and non-quantificational. Therefore, only auxiliaries, being non-thematic, can move there.

### 3. Verb movement and quantification theory in English.

English auxiliaries can be treated in a way similar to French ones, since their behaviour is parallel. The problem comes with lexical verbs, which always stay in V.

Non-finite clauses: the verb cannot move to Agr because Agr is opaque in English. But nothing forces it to raise to I either, because non-finite Tense is not an operator. Therefore, it stays in V, and no constraint is violated.

For finite clauses, we seem to reach a paradox

The verb can't move at all (for the reasons above)  
But if it doesn't move, Tense has no variable to bind.

Pollock assumes that English finite clauses always contain a semantically empty verb, *do*, which can be pronounced or not. This verb moves from Agr (or this is what one can infer from Pollock's representations), creating an event variable, to I, passing the index to the Tense operator, so as to bind the variable.

If we use the overt version of *do*, the tense morpheme attaches to it.

If we use the silent version, the tense morpheme must undergo Affix Hopping (an S-Structure process) down to the verb in V.

Sentences like *John not left* are ruled out by the ECP. Silent *do* is not lexical, therefore –as opposed to full *do*– it can't L-mark NegP, so it can avoid the barrierhood of NegP, and the trace can't be properly governed.

However, nothing prevents the generation of a sentence like *John did not leave*, which is ungrammatical unless heavy stress is placed on *did*.

## Part II: Iatridou's *On Agr(P)*

"Are the data from one language in favour of a functional projection sufficient for us to postulate that the same functional category exists in all languages? [...] I will prefer the weaker position according to which languages vary with respect to the functional categories they instantiate and that therefore evidence for an AgrP [...] will have to be found in each language separately." (p. 352-353)

(cf. more recent work by Thrainsson 1996, Grimshaw 1997, Bobaljik & Thrainsson 1998, and as opposed to Rizzi 1997 and, especially, Cinque 1999)

### 4. English

**She considers these sentences:** John is believed to *frequently* have criticized Bill  
John is believed to *have frequently* criticized Bill

Instead of Agr-to-T movement of *have* over *frequently*, Iatridou assumes that *have* heads its own VP, which is independent of the VP headed by *criticize*. If *frequently* can attach to either VP, the alternation follows. More importantly, we do not have to postulate optional movement, which is always tricky.

**For these other two sentences:** Mary is believed to *be completely* revising her thesis  
\* Mary is believed to *completely be* revising her thesis

she argues that Pollock predicts that both can be grammatical (and she is right). In her system, the second one is ruled out because *completely* can only be attached to the lower VP (note, though, that she doesn't say where this difference between *frequently* and *completely* stems from. It could probably be the semantics of adverbs classes...).

**More problems for SVM:** I believe John to *often be* sarcastic  
I believe John to *be often* sarcastic  
  
I believe John to *be clumsily/ tolerably* sarcastic  
\* I believe John to *clumsily/ tolerably be* sarcastic

Same as above: there's no way Pollock can predict this contrast. For Iatridou, it depends on whether the adverb and the adjective it modifies are semantically compatible.

**SVM with thematic verbs:** \* I believe John to *sound often* sarcastic  
I believe John to *often sound* sarcastic  
  
I believe John to *deliberately sound* sarcastic  
I believe John to *sound deliberately* sarcastic

Again, it all depends on the semantics of adverbs: *sound often sarcastic* is not a perception verb, because its punctual semantics can't take a complement that ranges over time (*often sarcastic*). It is a (perceptual) raising verb (cf. *It sounds like John is happy*), which are normally bad under ECM predicates (e.g., *??I believe/expect John to seem to be incompetent*).

[For more on the semantics of adverb placement, see Svenonius 2002 (chapter in *Subjects, Expletives, and the EPP*, OUP), and Nilsen 2003 (*Eliminating positions*, PhD thesis, Utrecht)]

### 5. French

Iatridou's main argument against the presence of AgrP in French is that it can't explain certain sentences, such as:

Pierre a à peine vu Marie vs. Pierre a vu à peine Marie  
*Pierre has hardly seen Marie* *Pierre has seen hardly Marie*

For Pollock, *vu à peine* means that the participle has moved to Agr across the adverb. But the auxiliary also heads its own VP, and moves to I. Therefore, one can argue that *à peine* can attach to either VP, and cover the data without invoking AgrP (cf. the English data above).

More problematic data: in a sentence with two VP adverbs, the non-finite verb can surface following both, preceding both, or between the adverbs. This last order is impossible to derive for Pollock, because there is no landing site between the adverbs:

(Faire) souvent (faire) mal (faire) ses devoirs, c'est stupide  
make frequently make badly make one's homework is stupid

So, what's Iatridou's solution for *V Adv* and *Adv V* orders? She really hasn't one, just hints at two possibilities, which are roughly equivalent:

**DiSciullo & Williams:** the morphological component supplies words of both forms [*v V Adv*] and [*v V*]

**Travis:** syntax can sometimes have an adverb as a sister of the verb, and form a sort of complex verb (cf. Neeleman 1994, Neeleman & Weerman 1999 for something similar for particle verbs in Dutch).

**What everything reduces to in Iatridou's system:**

- V-to-I movement for lexical verbs is obligatory in French but banned in English
- There's still a difference between lexical verbs and auxiliaries, which shows in their different possibilities for V-to-I raising

### 6. Wrap up

**So, any evidence for SVM after all?** Maybe Lasnik's pseudo-gapping examples:

- John read a magazine, and Peter did a book  
...and Peter did [<sub>AgrP</sub> a book [<sub>Agr</sub> ... [<sub>VP</sub> read<sub>ε</sub> ]

And also, verb-particle constructions in English:

- I threw the book away / I threw away the book