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About Agr(P)

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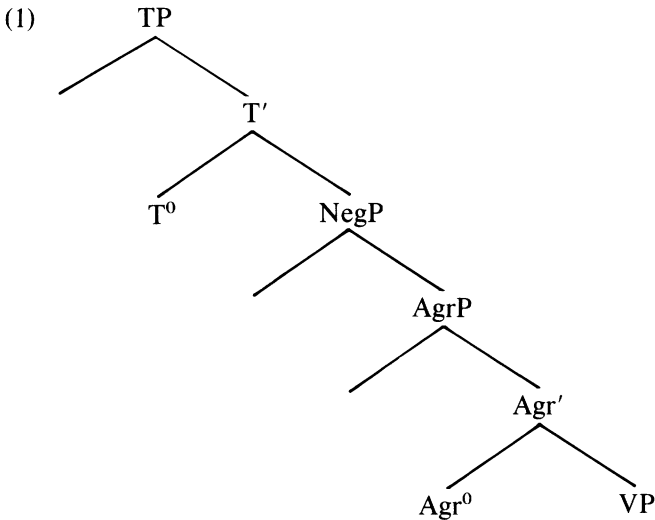
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## About Agr(P)

Sabine Iatridou

### 1. The Issue

The main proposal of Pollock (1989) is that the Infl node be split open, as it were, and that each of the elements contained in this node (Tense, Agr, and Negation) head its own maximal projection. Under this proposal, the structure of the smallest sentence containing negation is as follows:



One of Pollock's major goals is to provide evidence for the existence of AgrP, a maximal projection below Tense (or Negation, when this is present) and above the VP.<sup>1</sup>

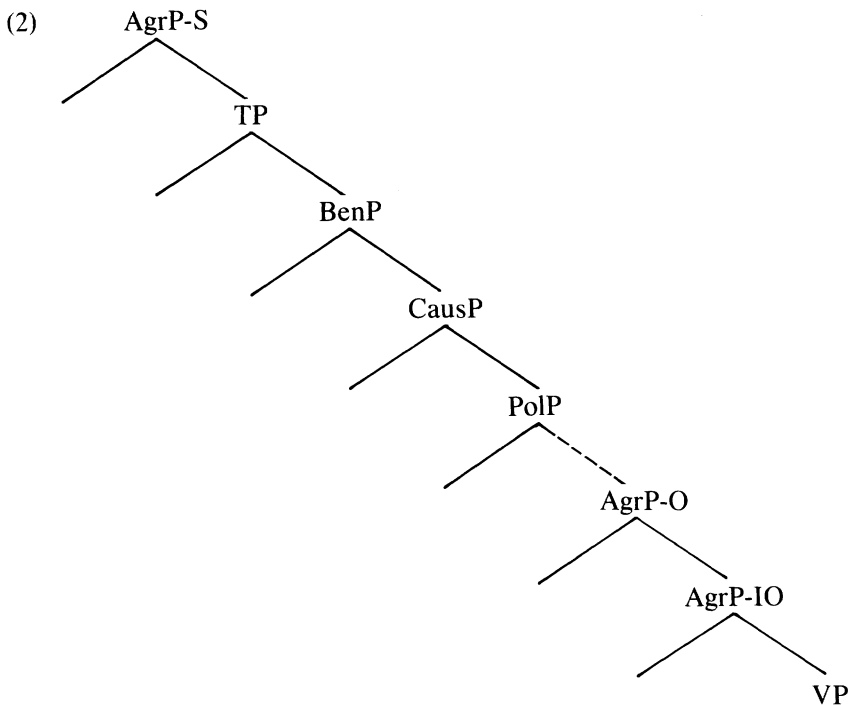
In this article I will argue that the evidence for the existence of the maximal projection that Pollock calls "AgrP" is not as strong as it might appear at first. More specifically, I will argue that all the English data that Pollock attributes to AgrP can—

This article grew out of my MIT syntax generals paper written during the academic year 1988–1989. First and foremost, I would like to thank the members of my generals committee—Noam Chomsky, Ken Hale, and Morris Halle—for all their help and support. I was very fortunate to participate in a highly interactive and funny generals workshop. For this, I would like to thank the people who made it possible: those who conducted it—Jim Higginbotham and David Pesetsky; and those who *were* it—Eulàlia Bonet, Lisa Cheng, Hamida Demirdache, Michael Hegarty, Mika Hoffman, Peter Ihionu, Utpal Lahiri, and Paul Law. For helpful discussions, I am especially indebted to Phil Branigan (a great roommate for a generals year), Richard Larson, and Howard Lasnik. Last, but far from least, I would like to thank a particularly insightful reviewer for many helpful comments. The usual disclaimers apply.

<sup>1</sup> Nothing in Pollock's argumentation depends on that maximal projection carrying the agreement features for the subject of the sentence. In fact, Chomsky (1989) accepts Pollock's arguments for the existence of a maximal projection in that position of the syntactic tree, but renames it object-AgrP, that is, the maximal projection carrying agreement features for the object. I will not address the question of the nature of that maximal projection, but I do want to emphasize that Pollock's arguments for the existence of the node do not depend at all on the answer to that question.

in fact, must—be explained otherwise. With respect to French, I will argue that only a subset of Pollock's arguments are consistent with his general position, and that his analysis is insufficient for that subset.

The question that arises at that point is more general: are data from one language in favor of a functional projection sufficient for us to postulate that the same functional category exists in all languages? If the null hypothesis is that all languages are maximally alike, the answer is yes. This leads to the position that functional categories like (direct and indirect) object-AgrP exist in languages like English and Chinese, the former showing only subject agreement, the latter no agreement at all. This position is taken by (among others) Chomsky (1989). However, it unavoidably leads to an explosion of functional categories. For example, in many languages the passive is formed without an auxiliary verb but only with special morphology on the verb. In other languages morphology on the verb can mark the binding properties of its arguments. In still other languages the verb can carry affixes for Causative, Benefactive, Locative, Politeness, and more (see Baker (1988) for an impressive list of possible verbal affixes). If the aforementioned position is correct, then since there is sufficient reason to believe that a PassP, a BindP, a CausP, a BenP, and so on, exist in the Infl area of at least one language, it follows that these categories should exist in all languages and that the structure of a simple sentence in English, for example, could look something like this (abstracting away from the order of the functional categories):



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 (or CausP, BenP, and so on) will have to be found in each language separately. Postulating an AgrP is one way of deriving morphological facts—namely, by head-to-head movement of the verb. Even if this is a plausible—in fact, actual—way of deriving verbal morphology, it is far from obvious that it should be the only way.

In this article I argue that in English and probably French there is no Agr(P). More specifically, for English tensed clauses, I will follow Pollock (1989) and predecessors in adopting the position that only auxiliaries move to Tense. With respect to English infinitival sentences, however, I will argue that not even auxiliaries move. This differs from Pollock's proposal, since he crucially uses data from English auxiliary verbs in infinitival clauses to argue that AgrP is needed as an independent target for verbal heads.

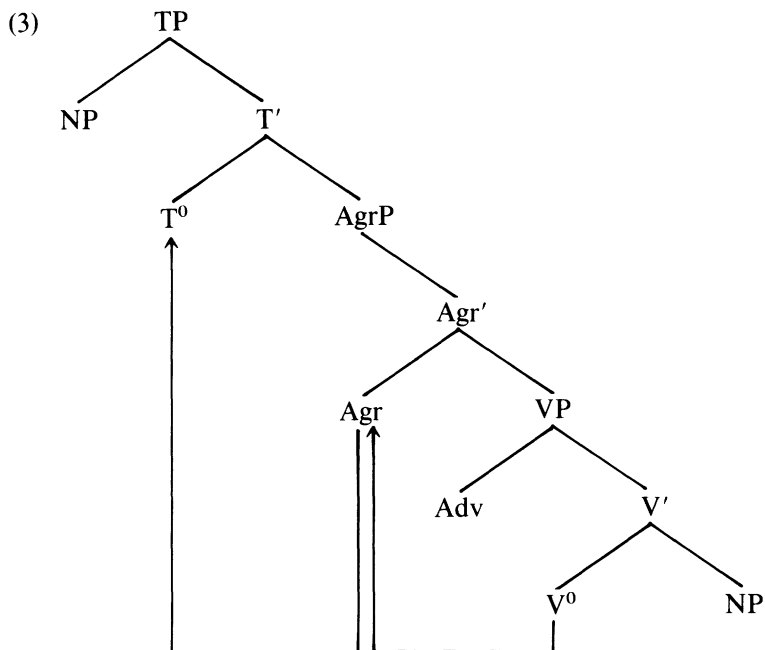
For French, I will again follow Pollock and his predecessors in adopting the position that both auxiliaries and main verbs move to Tense in tensed sentences and that in infinitival sentences only auxiliaries move to Tense. But I will differ from Pollock in arguing that apparent movement of the main verb in infinitival sentences to the left of the VP-initial adverb is not movement of the same sort at all. In other words, my proposal does not differ from Pollock's for the cases that he and others have analyzed as movement to Tense. It differs only for those cases that Pollock attributes to movement to AgrP. But these are the only relevant ones: it is impossible to argue for the existence of AgrP on the basis of movement through that position to the higher position of Tense. The only relevant cases are those where movement is supposed to have used AgrP as a landing site.

In sections 2 and 3 I examine Pollock's arguments for the existence of AgrP in English and French, respectively. In section 4 I argue that AgrP is not needed to account for parametrization between the two languages either. In section 5 I outline a proposal to derive English and French verbal morphology without recourse to Agr(P). In the Appendix I discuss English negation and infinitival auxiliary movement.

## 2. English

### 2.1. *The V + Adv + V Order*

One difference between French and English, first described by Emonds (1978), is that main verbs raise out of VP and onto Tense in French but not in English. According to Pollock, this difference arises from the fact that the movement shown in (3) is possible—in fact, obligatory—for all verbs in French, but impossible in English finite sentences without auxiliaries, resulting in the grammatical (4a) for French, but the grammatical (5b) for English:



- (4) a. Je mange souvent des pommes.  
       I eat     often     apples  
 b. \*Je souvent mange des pommes.  
 (5) a. \*I eat often apples.  
       b. I often eat apples.

English auxiliary verbs do move to finite Tense:

- (6) I have often eaten apples.

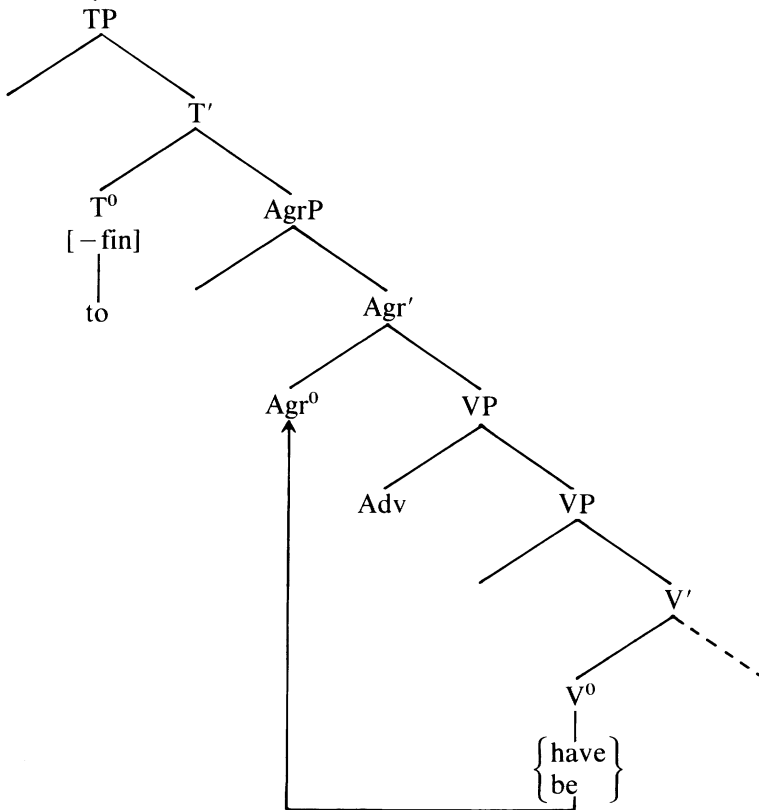
According to Pollock, the movement possibilities of English main and auxiliary verbs differ because the former but not the latter are “thematic verbs” in the sense that they have a  $\theta$ -role to assign and therefore cannot move into an opaque head like the English Tense (or Agr). Auxiliary verbs, on the other hand, not having a  $\theta$ -role to assign, can move to an opaque head. Since nothing in this article relies on any way of expressing this behavioral difference between English main and auxiliary verbs, I will not address this point further.

As noted, however, tensed sentences do not tell us much about the existence of a maximal projection below Tense. If there is an AgrP, the verb will move through it on its way to Tense; and if there isn’t, Verb Movement reduces to movement out of the VP directly onto Tense. So let us have a look at infinitival sentences.

Pollock postulates a certain instance of movement that he calls *short Verb Movement*. By this term he refers to the cases where a verb optionally moves into the Agr(P)

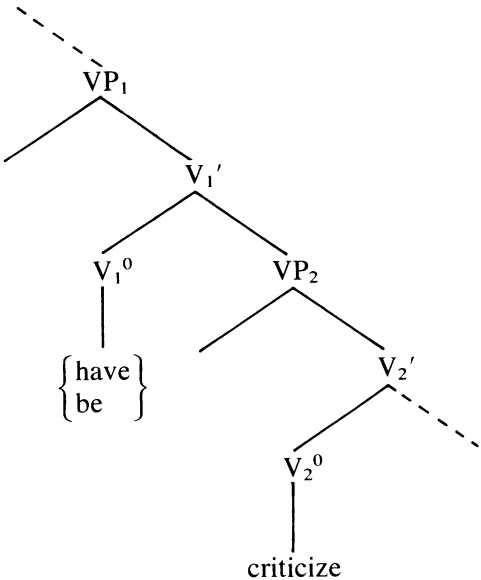
and stays there; that is, it does not move onto Tense. In English it is only the auxiliary verbs that undergo short movement. For example, the difference between the (a) sentences and the (b) sentences of (7) and (8) is that in the (b) sentences the auxiliaries have moved out of the VP into the AgrP as shown in (9):

- (7) a. John is believed to frequently have criticized Bill.  
 b. John is believed to have frequently criticized Bill.  
 (8) a. John is believed to frequently be criticizing Bill.  
 b. John is believed to be frequently criticizing Bill.  
 (9)

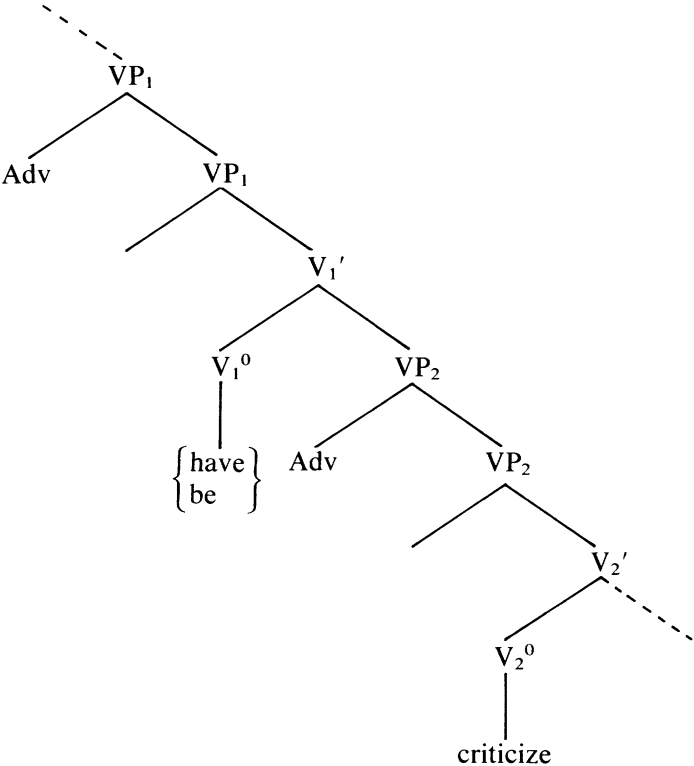


But is short Verb Movement really the most plausible explanation for (7b) and (8b)? Under Pollock's account, auxiliary verbs are generated inside the main VP, but the fact that they are independent lexical items strongly suggests that they head their own maximal projections. This idea, in fact, has been around in some form or other for a long time (see Ross (1967) and Akmajian, Steele, and Wasow (1979) and the references cited there for early accounts of auxiliaries as main verbs). If this is correct, then part of the structure of (7)–(8) is as shown in (10a):

(10) a.



b.



The point is that each of these two VPs can have a VP-peripheral adverb position, as shown in (10b), and both of them can be filled simultaneously (note also the differences in meaning between the (a) and (b) sentences):

- (11) a. John is believed to frequently be rudely criticizing Bill.
- b. John is believed to rudely be frequently criticizing Bill.
- (12) a. John is believed to frequently have rudely criticized Bill.
- b. John is believed to rudely have frequently criticized Bill.

The Aux-VP-peripheral adverb can appear alone:

- (13) John is believed to frequently/rudely be criticizing Bill.
- (14) John is believed to frequently/rudely have criticized Bill.

Or just the main-VP-peripheral adverb can appear:

- (15) John is believed to be frequently/rudely criticizing Bill.
- (16) John is believed to have frequently/rudely criticized Bill.

The idea that there are several positions for generating adverbs is hardly new; see, for example, Jackendoff (1972; 1977) and Travis (1988). The point is that if this idea is correct, then the word order contrast between the (a) and (b) sentences of (7) and (8) does not necessarily indicate movement of the auxiliary verb over the adverb. In fact, given (11)–(12), it should not.

Moreover, if the order *Aux + Adv + V* could occur only as the result of optional movement, then the existence of a sentence like (17) would presuppose the unmoved version, namely, (18). However, (18) is not an acceptable sentence:

- (17) Mary is believed to be completely revising her dissertation.
- (18) \*Mary is believed to completely be revising her dissertation.

The contrast between (17) and (18) is readily explained in the present account; as mentioned, different adverbs have different base-generated positions. We conclude, then, that the contrast shown in (7) and (8) should not be explained as the result of movement. One could argue that the contrast between (17) and (18) is due not to movement but to the fact that an adverb like *completely* can be generated only on the main VP. But such an argument would depend on showing that (7a–b) are *not* the result of different base-generated positions of the adverb, before one could convincingly argue that this pair is the result of movement.

## 2.2. The V + Adv + Adj Order

Pollock also argues that *be* in its predicative use can undergo short Verb Movement. The fact that (19a) is grammatical and (19b) is not indicates that *be* has moved onto Tense:



- (19) a. John is not sick.  
 b. \*John does not be sick.

Since it can move onto Tense, the copula *has*, according to Pollock, passed through Agr(P). On his account, it follows that in the infinitive, the predicative copula can optionally move into Agr(P) and stay there. In his analysis, (21) (his (39c)) would be derived from (20) (his (39a)) by movement of *be* over the adverb into the Agr node:

- (20) I believe John to often be sarcastic.  
 (21) (?)I believe John to be often sarcastic.

(The grammaticality judgment on (21) is Pollock's.) Again the question arises whether the best way to explain (20)–(21) is by movement of *be*.

An adverb may be part of a predicate. This can be shown with a sentence containing a small clause:

- (22) I consider John consciously/deliberately evil.

In (22) the small clause is [*John [consciously/deliberately evil]*] and its predicate is [*consciously/deliberately evil*]. Similarly, *often sarcastic* can be a predicate inside a small clause:

- (23) (?)I consider John often sarcastic.

David Pesetsky (personal communication) has pointed out to me that the acceptability of (24) is consistent with this view of the predicate phrase:

- (24) Often sarcastic though John is, he is still very popular.

Moreover, as one reviewer pointed out, the grammatical status of (21) and (23) is close to that of (25),

- (25) I believe John to have been often sarcastic.

and here, as with (23), a short Verb Movement analysis has nothing to offer. On the view that *often sarcastic* forms a constituent in the above cases, (25) follows without problem. If all these observations are correct, then we have reason to begin to doubt that in (21) *be* has moved over the adverb *often*.<sup>2</sup>

<sup>2</sup> For some English speakers (21) and (23) are marginal. This points toward the marginality of [*often sarcastic*] as a constituent of these sentences. Pollock uses the adjective *sarcastic* and the adverb *often* in his examples, and I think that their nature obscures something crucial. *Sarcastic* can be an individual-level predicate as well as a stage-level predicate (Kratzer (1988), after Carlson (1977)):

- (i) He is sarcastic (in general).  
 (ii) He is being sarcastic (right now).

If we follow Kratzer (1988), *sarcastic* in (i) would be an individual-level predicate and could therefore be argued to lack an event variable. The stage-level reading does have this variable. An adverb like *often* can modify only a stage-level adjective, that is, an adjective that contains an event variable that can be quantified over by the adverb. As the contrast between (iii) and (iv) illustrates, unambiguously individual-level adjectives

On the other hand, with a different choice of adverb, we again find a range of acceptability depending on the compatibility of the adverb with the adjective of the predicate:

- (26) a. I believe John to deliberately be sarcastic.
- b. I believe John to be deliberately sarcastic.
- (27) a. \*I believe John to clumsily/tolerably be sarcastic.
- b. I believe John to be clumsily/tolerably sarcastic.
- (28) a. I believe John to regularly be sarcastic.
- b. ??I believe John to be regularly sarcastic.

If it were correct that the alternation between (20) and (21) shows movement of *be* over the adverb, it would be impossible to explain the contrast between (21)/(27b) and (28b) (that is, why movement should be sensitive to the nature of the adverb), as well as the contrast between the acceptability of short Verb Movement of predication *be* and what Pollock considers the movement of aspectual *be* and *have*.

Moreover, under Pollock's theory, the fact that a sentence like (27b) is acceptable could mean that *be* has undergone (optional) movement into AgrP. This theory would predict that the unmoved version of the sentence, (27a), is also acceptable. But this is not borne out. If, on the other hand, one were to claim under this analysis that (27a) is unacceptable because these adverbs can only modify adjectives, one would first have to prove that the examples with *V + Adv + Adj* order are *not* instances of modification of an adjective, before being able to analyze them as the result of movement.

In my proposal, the *Adv + be + Adj* order indicates that the adverb's position is to the left of the verb and the *be + Adv + Adj* order is possible to the extent that the adverb and the adjective are semantically compatible and can form a constituent.

Pollock also takes the contrast between (21) and (28) to indicate that although *be* can move out of the VP over an adverb into the Agr node, a thematic verb like *sound*

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cannot take *often*:

- (iii) \*He is often mortal/sickly/male, etc.
- (iv) He is often annoying/absent.

Thus, *often* must be predicated of an event variable. As a result, the presence of *often* in (20)–(21) and (23) necessarily brings out the stage-level, event reading of the adjective. However, the matrix clauses of (20)–(21) and (23) are for some speakers only marginally compatible with a complement denoting a stage-level predicate, and so the marginality of (21) and (23) can be attributed to Pollock's combination of adjective and adverb.

Note also that the class of adjectives that can appear with *be* in the progressive is a subset of those that can appear with adverbs like *often*. To take *often*, an adjective must be stage-level. But to take progressive *be*, that is "agentive *be*," the adjective must in addition permit the agentive reading. For this reason, as a reviewer has pointed out, although both (i) and (ii) are acceptable, there is a contrast between (v) and (vi):

- (v) He is often hungry.
- (vi) \*He is being hungry.

There is a clear sense in which *he* is the agent of "behaving in a sarcastic manner" in (ii), whereas "being hungry" does not permit an agentive reading. The distinction between agentive and nonagentive predicates is an old one.

cannot. (Again, the choice of adverb and adjective is Pollock's. (29a) and (29b) are Pollock's (39d) and (39b), respectively.)

- (29) a. \*I believe John to sound often sarcastic.  
 b. I believe John to often sound sarcastic.

According to Pollock, the contrast between (29a) and (29b) is due to the thematic (main) verb status of *sound*, which does not allow it to undergo movement. However, I think that the unacceptability of (29a) again arises from a semantic incompatibility between the verb (*sound*) and the reading of the lower predicate (*often sarcastic*) imposed by the adverb.

There are two verbs *sound*: one that depends on auditory perception (SOUND<sub>1</sub>) and one that is a raising predicate (SOUND<sub>2</sub>). On the SOUND<sub>1</sub> interpretation, a sentence like (30)

- (30) John sounds happy.

asserts that John is making sounds (whistling, tap dancing) from which it can be inferred that he is happy. On the SOUND<sub>2</sub> interpretation, (30) asserts that some reports about John would lead the hearer to believe that he is happy. Though SOUND<sub>1</sub> can only be used when the subject is present and therefore requires perceivable, temporary properties (stage-level predicates), SOUND<sub>2</sub> is only marginally compatible with them; this explains the contrast between sentences like *He sounds wonderful* and \**You sound wonderful* (for obvious reasons, the second person strongly favors the SOUND<sub>1</sub> interpretation). So if someone asserts that *John sounds happy*, John must be present in the reading of SOUND<sub>1</sub> but can be absent in the reading of SOUND<sub>2</sub>. The two D-Structure representations are (31) and (32a):

- (31) John [sound happy] (SOUND<sub>1</sub>)  
 (32) a. EC [sound [John happy]] (SOUND<sub>2</sub>)  
 b. John [sound [t happy]]

The meaning of (32) can alternate with the unraised (33):

- (33) It sounds like John is happy.

Returning to the contrast between (29a) and (29b), it becomes obvious that the phrase *sound often sarcastic* contains SOUND<sub>2</sub>, since SOUND<sub>1</sub> and *often* have conflicting temporal pragmatics and inference from a single perception (SOUND<sub>1</sub>) to a predicate that ranges over time, like *often sarcastic*, is not feasible. Note that the finite sentence (34) is marginally acceptable:

- (34) (?)John sounds often sarcastic.

(34) is neither better nor worse than the other sentences—like (21)—where [*often sarcastic*] is a constituent. So something additional must be said to account for the much more degraded status of (29a).

It appears that there is a loss of acceptability when verbs like *believe* and *consider* are followed by what might be called a perceptual raising verb. According to one reviewer, this is attested by the unacceptability of (35):

(35) ??I believe John to seem (to be) incompetent.

Because of this incompatibility (whatever its source might be) between *believe/consider* and such raising predicates, the contrast in acceptability between (21) and (29a) does not need to be attributed to the possibility versus impossibility of movement of the verb to AgrP. The acceptability of (29b), on the other hand, is unproblematic: since *often* modifies the verb, the interpretation of SOUND<sub>1</sub> is permitted, and *believe* is fully compatible with SOUND<sub>1</sub>.

In footnote 2 I argued that the presence of *often* permits only the stage-level reading of *sarcastic* and above that SOUND<sub>2</sub> is at best marginally compatible with stage-level predicates. It is possible to say (36) with the SOUND<sub>2</sub> meaning:

(36) John sounds happy now.

However, the *now* of (36) refers not to a point but to a period in time, just as it does in *John has quit jogging; he plays tennis now* without implying that the English present progressive forms a stage-level predicate. In other words, the marginality of (34) appears to be due to the weak compatibility of SOUND<sub>2</sub> with a stage-level predicate modified by *often*.

As at other points in his article, Pollock's choice of adverb-predicate combination is crucial; he interprets the unacceptability resulting from a (semantically) incompatible pair of adverb and predicate as indicating the impossibility of movement. A different choice of adverb might make this point clearer. Consider a pair like (37a–b), which lacks the acceptability contrast that we saw in (29a–b):

- (37) a. John is believed to deliberately sound sarcastic.  
 b. John is believed to sound deliberately sarcastic.

According to the present account, [*deliberately sarcastic*] is a constituent in (37b), whereas *deliberately* is a pre-VP adverb in (37a). A subject-oriented adverb like *deliberately* can disambiguate SOUND<sub>1</sub> and SOUND<sub>2</sub>. (38) can have only the reading of SOUND<sub>1</sub>:

(38) John deliberately/consciously sounds happy (so that you won't worry).

This follows, since SOUND<sub>2</sub> does not assign a  $\theta$ -role to a subject position and therefore cannot carry an adverb that modifies such a subject. For the same reason, (39) is impossible:

(39) \*John deliberately seems to have spilled the milk.

But if the same adverb is placed in the lower clause, which does have a thematic subject (assuming that such modification is established at D-Structure; see Lasnik and Fiengo

(1974)), the sentence becomes acceptable:

(40) John seems to have deliberately spilled the milk.

On the other hand, if the subject-oriented adverb is placed below the verb *sounds*, the meaning conveyed by SOUND<sub>2</sub> (the raising predicate) becomes possible again. In other words, (41) can also be said in John's absence:

(41) John sounds deliberately happy/sarcastic.

The fact that (41) is more acceptable than (34) and that (37a–b) do not contrast in the way that (29a–b) do is due to the ability of [*deliberately sarcastic*], but not [*often sarcastic*], to behave like an individual-level predicate in (41) and therefore be fully compatible with SOUND<sub>2</sub>.

### 3. French

Pollock argues that French also provides evidence for AgrP. In this section I will argue that his discussion of French is inconsistent with assumptions made in his treatment of English, and that his arguments from French reduce to a small factual domain, which his analysis cannot handle.

In French both auxiliary and main verbs move to finite Tense. Pollock maintains that both auxiliary and main verbs can undergo short Verb Movement as well. The optionality of this movement for auxiliaries and main verbs is purportedly shown in (42a–b) and (43a–b), respectively:

- (42) a. Souvent être triste . . .  
         often be sad  
         'To often be sad . . .'  
       b. Être souvent triste . . .  
         be often sad
- (43) a. À peine comprendre l'italien . . .  
         hardly understand Italian  
         'To hardly understand Italian . . .'  
       b. Comprendre à peine l'italien . . .  
         understand hardly Italian

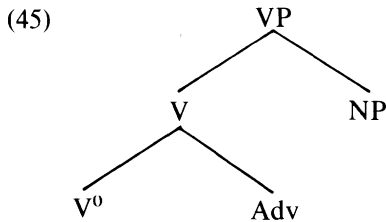
However, infinitival French auxiliaries differ from infinitival French main verbs in that the former, but not the latter, can move up to Tense. This is shown in (44a–b) (recall that *pas* is supposed to be situated between Tense and AgrP):

- (44) a. N'être pas triste . . .  
       b. \*Ne comprendre pas l'italien . . .

With respect to short Verb Movement of French aspectuals and copula, I believe that the same comments hold as those made in section 2; I will not go into this issue again for reasons of space but will limit the discussion to short Verb Movement of main verbs.

According to Pollock, the *V + Adv + object* order of (43b) shows that the *V* has moved out of the VP, across the VP-peripheral adverb, and into the AgrP. Here again, there are alternative accounts that do not depend on the presence of AgrP. I will mention two without choosing between them. I will, however, point out some problems that the AgrP account of (43b) leads to.

According to Di Sciullo and Williams (1987, 101), Italian and French share the structure (45):



For Di Sciullo and Williams, (45) arises because the morphological component provides [V Adv] words. If they are right, then (43) could have the structure shown in (45) without any syntactic movement being required.

Another possible analysis is that of Travis (1988), who argues that some adverbs are heads without a maximal projection and can be sisters to the verb. This would imply that *comprendre à peine* in (43b) is a sort of complex verb.

As mentioned, I will not choose between these alternatives here, but simply point out that there are other ways to explain the order of constituents in (43b). In the rest of this section, I will argue that, whatever the correct analysis is for (43b), it is not the one proposed by Pollock.

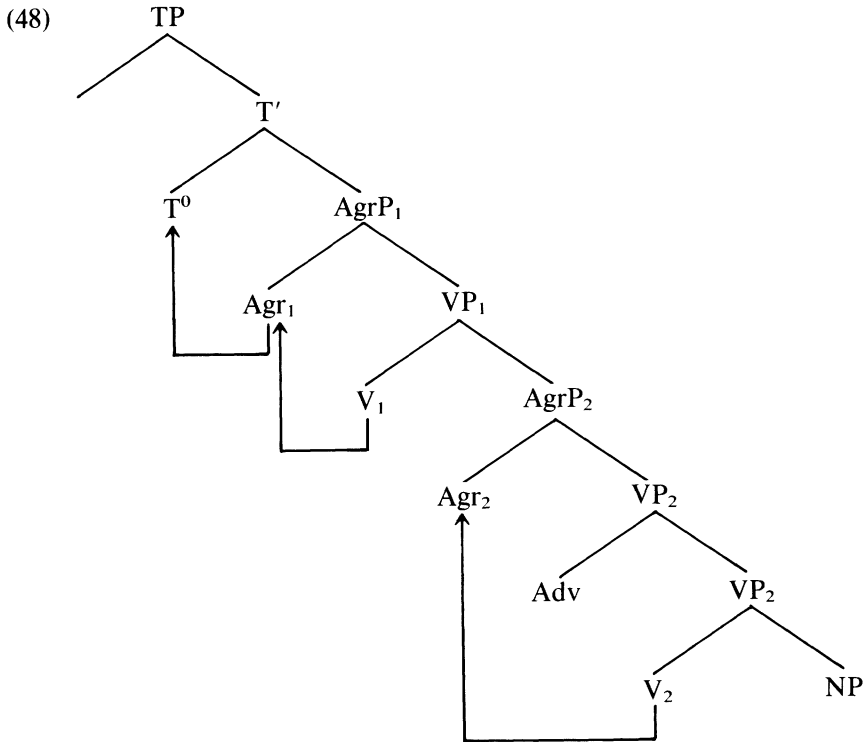
If the *V + Adv* order indicates movement of the verb into Agr, then there are some data that are problematic for Pollock's analysis. Consider (46)–(47):

(46) Pierre a à peine vu Marie.

Pierre has hardly seen Marie

(47) Pierre a vu à peine Marie.

Recall that the *V + Adv* order signifies for Pollock movement of the verb into the AgrP. But in (47) both the aspectual and the main verb precede the adverb. Have both verbs moved into or through the AgrP? To resolve the problem that this question poses for the movement analysis, Pollock introduces a structure like (48) (see his (129) and related comments).



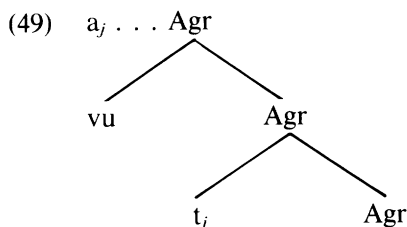
The aspectual verb in this structure is generated in  $V_1$ , out of which it moves through  $Agr_1$  onto  $T^0$ . The main verb/participle is generated in  $V_2$  and moves out of there, over the adverb, and into  $Agr_2$ , yielding the order of (47). Pollock does not justify suddenly generating the aspectual verb in a separate VP, outside the main VP, and the adverb below the aspectual verb. But adopting (48) implies losing as arguments for Pollock's theory all the facts of short Verb Movement of the aspectuals: if the adverb *à peine* can be generated between the aspectual verb and the main verb, then one can no longer claim that sentences like (14) and (16) show "short Verb Movement"—namely, movement of the aspectual verb out of the VP, over the adverb, and into Agr. It also follows that in tensed sentences, in French just as in English, where the aspectual verb precedes the adverb, one can no longer argue that these "nonthematic" (aspectual) verbs have moved out of the VP over the adverb.<sup>3</sup> In other words, when Pollock suggests an adverb

<sup>3</sup> According to Noam Chomsky (personal communication), structure (48) by itself indicates that Pollock is mistaken about naming his proposed maximal projection "subject-AgrP" (that is, "carrying the agreement features for the subject"). What in fact would it mean for two such nodes to exist in a sentence with only one subject?

Chomsky would claim that the (optional) order *vu à peine* of (47) is due to movement of the participle *vu* out of its VP, over the VP-peripheral adverb *à peine*, and into the object-AgrP. Following Belletti (1988), Chomsky (1989) takes the order of Tense and subject-AgrP to be the opposite of that proposed in Pollock (1989). The order of constituents for Chomsky then is *subject-Agr + Tense + object-Agr*. Belletti's argument

position below the aspectual verbs, as in structure (48), his arguments for AgrP reduce to data like (43b) (short Verb Movement of main verbs) and (21) (short Verb Movement of predication *be*). If I am correct in ruling out Pollock's analysis of (21), then the arguments for the existence of an AgrP in English and French in fact reduce to cases like (43b). In effect, Pollock's proposal for these cases is no better or worse than those made by Di Sciullo and Williams or by Travis: it is designed to handle just those cases. By themselves, data like (43b) are not sufficient to choose Pollock's analysis over the others. More importantly, however, such data are not sufficient to warrant postulating an additional maximal projection in the two languages discussed.

Is there a way to save Pollock's analysis for (47) without structure (48) and all its consequences? One could claim, for example, that multiple adjunction to Agr is possible. If the *V + Adv* order means that the verb is in Agr, then Agr in (47) should contain both the trace of *avoir* and the participle itself:



This, however, violates the Empty Category Principle with respect to the trace *t*: the closest head is *vu*, which cannot antecedent-govern *t*, the trace of *a<sub>j</sub>*. Clearly the account would have to be modified, perhaps by some mechanism of trace deletion at S-Structure.

But this modification of Pollock's theory becomes even more problematic if we consider an infinitival version of (47). Consider (50):

- (50) Ne pas avoir lu complètement/entièrement ce livre]/Sartre dénote un  
 neg have read completely/entirely this book/Sartre denotes a  
 manque d'intérêt pour la littérature contemporaine.  
 lack of interest for the literature contemporary

On Pollock's analysis, the fact that the infinitive *avoir* follows the negation would indicate that it has not moved out of Agr onto Tense. If *avoir* is indeed in Agr and the *V + Adv*

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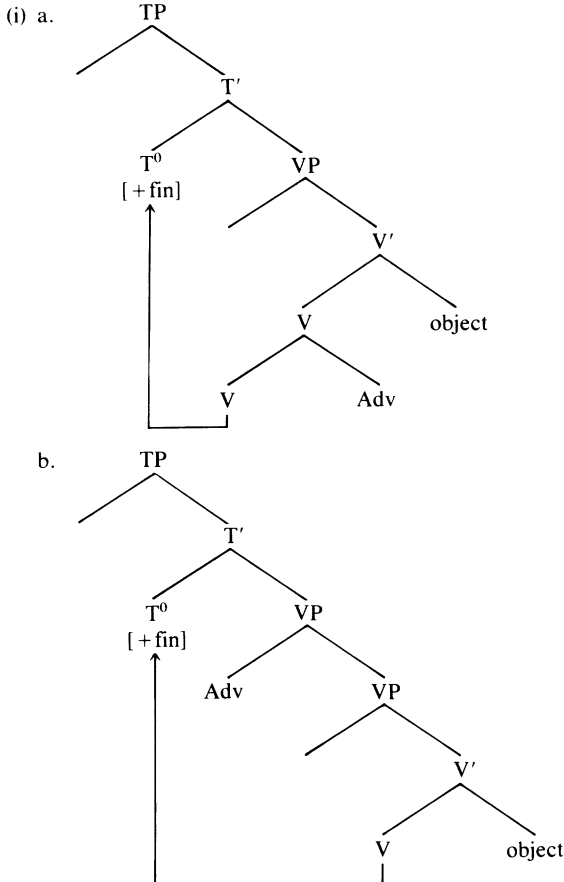
is basically that in languages where the Tense morpheme can be distinguished from the subject-Agr morpheme, the former is closer to the stem of the verb than the latter. This would follow if on its way up the verb picked up first the Tense morpheme and then the Agr morpheme. But according to Ken Hale (personal communication), both orders of morphemes are found in languages. This might be answered by a parametric variation in the order in which the two constituents can occur cross-linguistically. However, this has at least one obvious problem. If the relationship between Tense and AgrP is taken to be one of semantic selection or subcategorization, then what could be said about those two elements if Tense can subcategorize for AgrP and AgrP can subcategorize for Tense as well? The cases of word order parametrization that I know of involve linear, not structural, ordering. For example, comparison of VO and OV languages does not lead to the conclusion that in some languages the verb subcategorizes for the object, and in others the object subcategorizes for the verb. The hierarchical order is taken to be the same in both language types.



order indicates movement into Agr, then Agr in (50) carries two heads: *avoir* and *lu*. Multiple adjunction might be possible in principle, but it will not yield the right order for (50). If *avoir* moves into Agr, forming [<sub>Agr</sub> *avoir* [<sub>Agr</sub> *affix*]], subsequent adjunction of *lu* will yield the incorrect order [<sub>Agr</sub> *lu* [<sub>Agr</sub> *avoir* [<sub>Agr</sub> *affix*]]]. Thus, there is no clear way to save Pollock's analysis for (47), without adopting structure (48) and thereby losing the facts of short Verb Movement of auxiliaries as arguments for the proposed AgrP.<sup>4</sup>

But there is another reason for ruling out Pollock's analysis for (43b). Consider a

<sup>4</sup> On the other hand, if there were an independent, optional mechanism that reverses the *Adv* + *V* order (like that proposed by Di Sciullo and Williams or by Travis), then that mechanism would be responsible for the *vu à peine* and *lu complètement* orders of (49) and (50). That such a mechanism would optionally invert the *Adv* + *V* order in infinitivals has no bearing on the word order of finite sentences. Since the verb in French raises to finite Tense anyway, there is no way to detect whether it moves out of a "coanalyzed" structure (ia) or out of a structure where coanalysis has not applied (ib); in either case the resulting word order will be *V* + *Adv* + *object*:



sentence with two VP-initial adverbs:

- (51) Souvent mal faire ses devoirs, c'est stupide.  
 frequently badly make poss homework that is stupid  
 'To frequently do one's homework badly is stupid.'

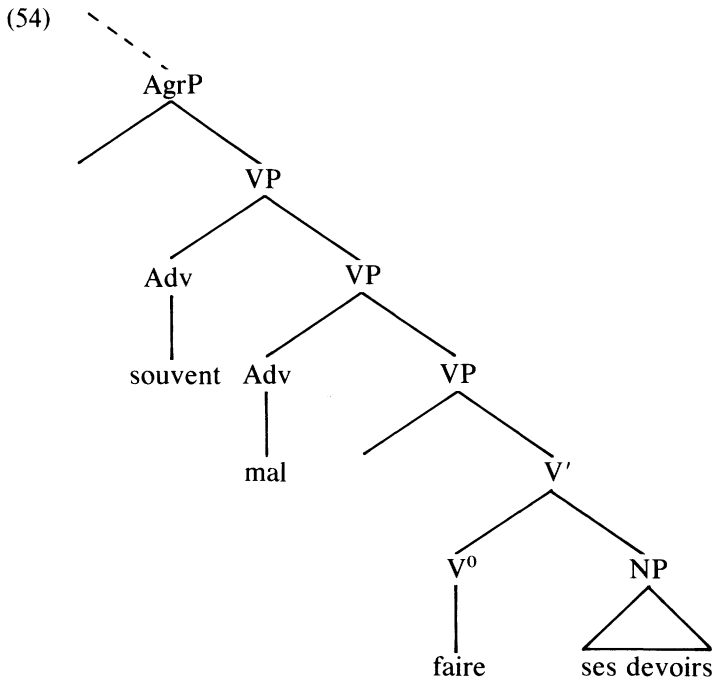
As in (43b), the main verb can move to the front of the sentence. Under Pollock's analysis, (52) would be the result of short Verb Movement:

- (52) Faire souvent mal ses devoirs, . . .

However, there is a third alternative. The verb can appear between the two adverbs:

- (53) Souvent faire mal ses devoirs, . . .

Under Pollock's analysis, there is no way to derive (53). In fact, as this analysis stands, it predicts that (53) should not be possible: there is no landing site for the verb between the two adverbs:<sup>5</sup>



Thus, we see that the problems associated with Pollock's analysis of (43b) make it unlikely that the *V + Adv* order of (43b) indicates movement of the verb into Agr.

<sup>5</sup> Again, an account of reanalysis (or coanalysis) would permit (53) by treating it as coanalysis of the verb with only one adverb.

#### 4. Parametrization

After eliminating AgrP, can we still account for the same range of comparative data that Pollock accounts for with AgrP? We will see, in fact, that the framework of Emonds (1978), along with a suggestion proposed by Chomsky (1957), was already sufficient to account for the differences in question.

Why can only aspectual verbs move out of their maximal projections in English? As far as the chief mechanism is concerned, I do not think that anything more needs to be said than has already been said by Pollock (1989) and Chomsky (1989). Pollock and (with minor modifications) Chomsky claim that in English some affixes are weaker than their counterparts in French. As a result, when an English verb adjoins to such an affix, creating the structure [<sub>Aff</sub> [<sub>Aff</sub> verb [affix]]], the ‘‘opaqueness’’ of the weak English affix blocks the transmission of the thematic properties of the main verb to its trace. Therefore, the only English verbs that can move onto a weak affix are the ones that have no thematic properties anyway: aspectual *have* and *be* and predication *be*. On Pollock’s analysis, both English finite Tense and AgrP are weaker than their French counterparts. In French, since finite Tense and AgrP are strong, auxiliary and main verbs can adjoin to them. This idea may be correct, but it is sufficient to adopt it for Tense. It is sufficient to claim that English finite Tense is weak and that therefore only nonthematic verbs will move toward it. This is in fact quite plausible, given that the English infinitival morphology is indistinguishable from the present tense morphology, except in the third person singular. So finite Tense will attract only auxiliaries in English, but both auxiliaries and main verbs in French.

According to Pollock and Chomsky, infinitival Tense is weaker than finite Tense. Again, this is sufficient. For French, it would explain why only auxiliaries can move to infinitival Tense. In English, auxiliaries do not move to infinitival Tense. This does not have to follow from a difference in weakness between English infinitival Tense and its French counterpart; we can simply follow up on an old idea that English infinitival Tense is not an affix (Chomsky (1957; 1989)). This would explain the contrast between the French (55) and the English (56) (see the Appendix):

(55) n’être pas triste  
be neg sad

(56) \*(to) be not happy

Note that Pollock’s analysis, too, will need recourse to this, because it will have to account for the difference between (55) and (56). The fact that (55) is acceptable in French but not in English would seem in Pollock’s system to point toward French infinitival ‘‘weak’’ Tense being in some way stronger than English infinitival Tense, since the former but not the latter can carry auxiliary verbs. It is doubtful that such a gradation

of “weakness” can be maintained. Since Pollock claims that auxiliary verbs in both languages can move into Agr, what does the contrast between (55) and (56) follow from?<sup>6</sup>

We see, then, that we can still account for the contrast between French and English, as well as for the contrasts between tensed and tenseless sentences in each language, by adopting Pollock’s idea of weak affixes but without adopting his AgrP.

## 5. Concluding Remarks

In this article I have argued that Pollock’s (1989) arguments for the existence of a maximal projection between Tense and the VP in English are insufficient if not incorrect. I have not considered the function that that maximal projection is supposed to have. According to Pollock, it contains the agreement features for the subject. As noted in section 1, however, none of Pollock’s arguments depends on his calling this maximal projection “AgrP”; all his arguments revolve around showing that it exists as a target for Verb Movement. If no such maximal projection exists in English, where would the agreement features for the subject be located? Would they be, as in the standard account, one of the features of Infl? But if Pollock’s claim is correct that Tense and Negation head their own maximal projections—and there seems to be no reason to think that it isn’t—it becomes difficult to put the Agr features in the Infl area. If we add a feature [ $\pm$  Agr] to Tense, as in Chomsky (1981), we lose the simplicity of having Tense as a head by itself.

I would like to propose that the impasse of spatially locating Agr in languages like English and French be resolved by altogether eliminating the Agr node/feature from the Infl area of these languages. This would follow the intuition that Agr is not a structural position but a relationship, specifically a spec(ifier)-head relationship, as has often been suggested. I will shortly return to a more specific expression of this.

When Agr was first proposed, it was postulated to be active in binding and Case theory. However, its role in the binding module was eliminated in Chomsky (1986b) when the notion of governing category was redefined in terms of complete functional complexes. With respect to its role in Case theory, it has been argued that Agr is necessary for the assignment of nominative Case (Chomsky (1981), Raposo (1987)). But

<sup>6</sup> Howard Lasnik (personal communication) points out that Pollock’s analysis makes the wrong prediction with respect to the English imperative as well. His analysis would predict that *\*be not stupid* is acceptable, just like *n’être pas stupide*, since *be*, being “nonthematic,” should be able to raise to Tense. In other words, this analysis cannot account for the existence of *Do* Support, yielding the correct form in (i):

- (i) Don’t be stupid.

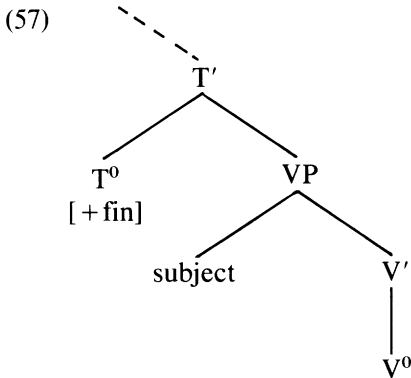
One could rebut this criticism by analyzing the verb *be* in (i) as an instance of what has been called “main verb *be*,” the one that appears in the progressive in sentences like (ii):

- (ii) Don’t mind him, he is being ridiculous.

So if *be* in (i) is a main verb, this would explain the lack of raising and the need for *Do* Support. But it would still not explain why *\*be not stupid* is not possible; since on Pollock’s analysis the auxiliary *be* can move onto infinitival Agr, why can it not move higher, just like its French counterpart? It seems, then, that Verb Movement in English is possible only if Tense is [ $+$  finite]. This was also the conclusion reached in Lasnik (1981).

none of these accounts crucially relies on Agr being a feature/node in the Infl area rather than just a feature on the verb. As far as I can tell, both accounts can be read as arguing only for the significance of Agr for nominative Case; neither contains any arguments specifically in favor of Agr starting out as an entity outside the verb. In other words, no other module provides any reason to have Agr in the Infl area.

So how does agreement get on the verb in English or French? In the rest of this section I will outline a proposal for deriving subject-verb agreement without any recourse to Agr in Infl. This proposal is not intended to be definitive but is intended merely to indicate that it is possible to derive verbal agreement without Agr in Infl. Under proposals for VP-internal subjects made by Kitagawa (1986), Sportiche (1988), and others, the subject and the verb already find themselves in a spec-head relationship at D-Structure. Under this configuration, the appearance of the agreement morphology on the verb can be reduced to a mechanism of feature checking, or selection in the lexicalist sense, triggered by government by a [+finite] Tense:

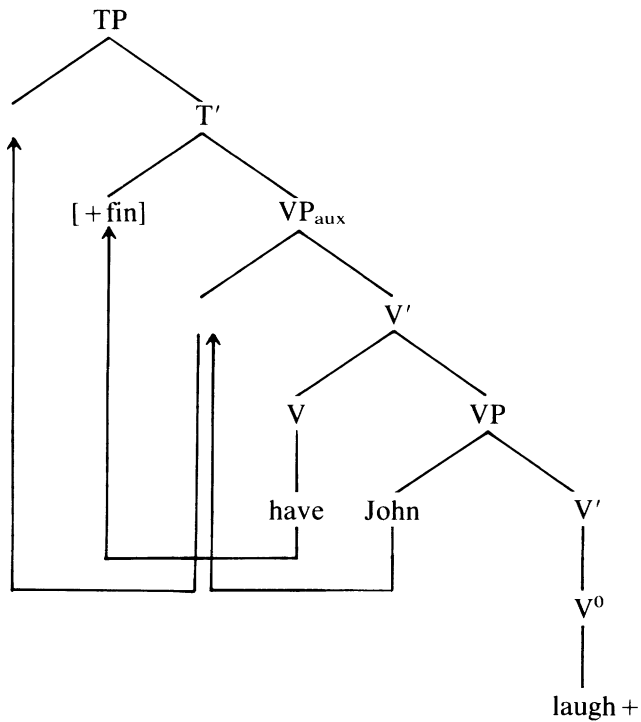


When a maximal projection intervenes between [+finite] Tense and the VP, then government by Tense of the VP, and the therein contained spec-head relationship, is blocked. As a result, the main verb does not agree with the subject. Such a maximal projection can be an aspectual verb, or negation. Adverbs do not block government, since they are adjoined to the VP (Chomsky (1986a)). The D-Structure representations of (58a–b) are (59a–b), respectively (*laugh+* signifies the uninflected form of the verb):

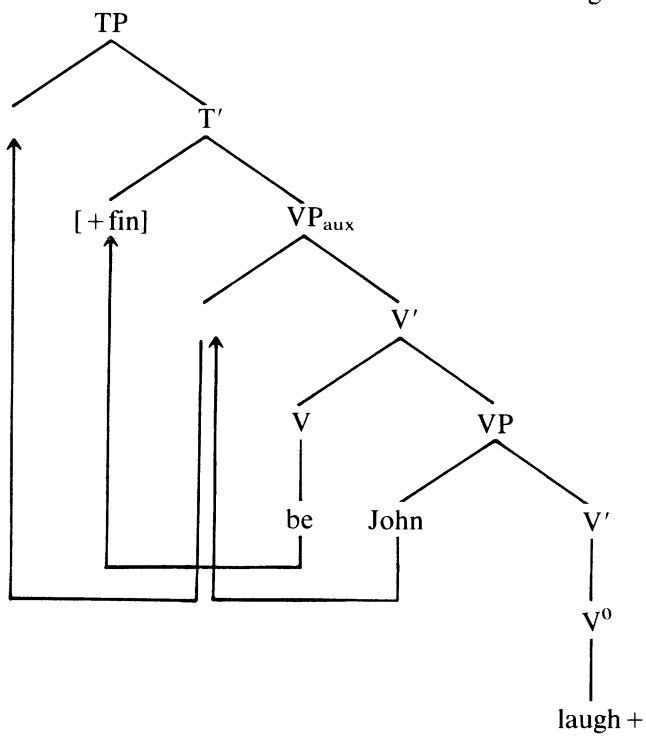
- (58) a. John has laughed.  
 b. John is laughing.

The maximal projections headed by *have* (59a) and *be* (59b) block government of the VP by [+finite] Tense. As a result, agreement of *laugh+* with *John* is not triggered. But when *John* moves up, it will enter a spec-head relationship with *have* and *be* (which raise to Tense), and this spec-head relationship will be inside the government domain of [+finite] Tense. The affixes *en* and *ing* are assigned or lexically selected by the aspectual verbs under government.

(59) a.



b.

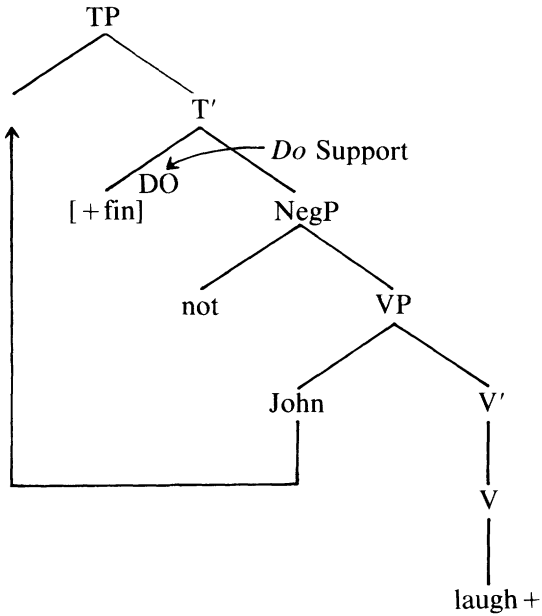


When NegP intervenes between Tense and VP, English behaves differently from French. (61a–b) are the D-Structure forms of (60a–b), respectively:

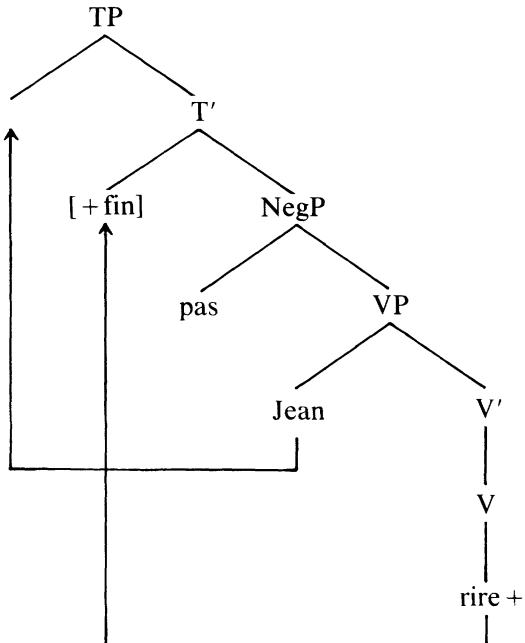
(60) a. John does not laugh.

b. Jean ne rit pas.

(61) a.

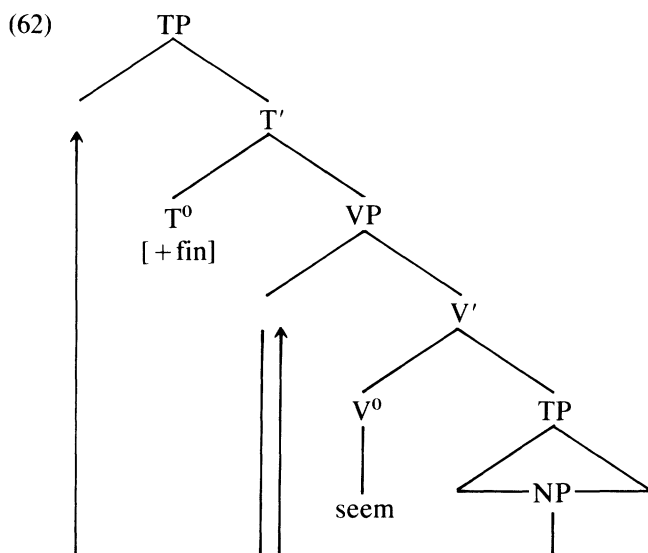


b.



In both (61a) and (61b) the VP-internal spec-head relationship is not governed by [+finite] Tense. In (61b) *Jean* and *rire* + find themselves in a spec-head relationship governed by Tense, when the former raises to [Spec,TP] and the latter adjoins to [Head,TP]. In (61a), however, owing to the absence of (main-)Verb Movement in English, *John* and *laugh* + will never find themselves in a spec-head relationship governed by Tense. As a result, *laugh* + will never agree with the subject. But after the subject has raised to [Spec,TP] and *Do* Support has applied,<sup>7</sup> the verb *do* and *John* will be in a spec-head relationship governed by Tense, and subject-verb agreement will be triggered.

This mechanism would also take place in cases like raising, where the subject and the raising verb are not in a spec-head relationship until after movement of the subject:<sup>8</sup>



In Iatridou (1988) I discuss the above suggestions in greater detail. If proposals along those lines prove correct, then the presence of Agr in the area of Infl can be eliminated altogether.

### Appendix

In the main text I have supported the position that in English no Verb Movement takes place in infinitivals at all. This differs from the position taken by Pollock (1989) that

<sup>7</sup> I will not go into the details of *Do* Support. See Laka (1989) for a comparison of several accounts of this phenomenon.

<sup>8</sup> I will not go into the details of notions like "lexical selection under government." Note that the theories that do place Agr in the Infl area (whether as head of a maximal projection or as a feature) also require some sort of feature-checking mechanism, to ascertain that the features under Agr are appropriate for the subject.

Also, I do not discuss what it is about government by [+finite] Tense that triggers spec-head agreement, just as Pollock does not discuss what it is about [+finite] Tense that triggers the presence of person and number features in AgrP, and just as theories prior to his do not discuss what it is about [+finite] Tense that requires it to be accompanied by +Agr. This ability of [+finite] Tense is a completely open issue.



auxiliaries do move (to the putative maximal projection AgrP). I also raised the question why, if English auxiliaries move to the AgrP, they do not raise higher up, to Tense (a question that is relevant only to Pollock's proposal, since mine does not invoke "short Verb Movement"). Finally, I pointed out that the nonaffixal status of English infinitival Tense explains why auxiliaries do not move to it, and that this position would also be compatible with Pollock's analysis.

In this appendix I will consider data (not discussed by Pollock) that might appear at first sight to support his analysis, in that they would indicate movement of English auxiliaries to infinitival Tense. If they did, they would automatically solve one apparent discrepancy in Pollock's system, namely, the availability of only short Verb Movement for English infinitival auxiliaries.

Consider (63) and (64):

(63) To not have played football for many years is a disadvantage in a major game.

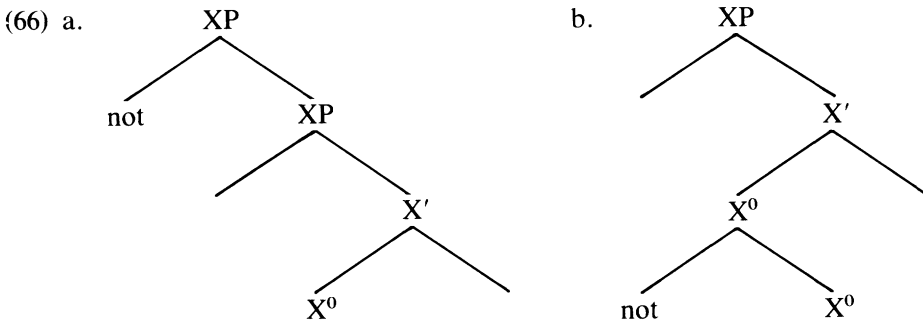
(64) To have not played football for many years is a disadvantage in a major game.

(63) and (64) are identical except for the order of negation and auxiliary verb. Is it possible to analyze (64) as the result of movement of the auxiliary onto Tense? I think not. First of all, an adverb can appear between *to* and *have*:

(65) To willingly/allegedly have not played football . . .

The positioning of the adverb in (65) shows—also in Pollock's terms—that *have* is not in Tense. I will argue that the aspectual verb in (64)–(65) stands in its base-generated position and that the negation that follows it is an instance of constituent negation.

My suggestion, then, is that the negation in (63) is—as on Pollock's analysis—sentential negation and that the negation in (64)–(65) is constituent negation. Constituent negation is generated, in some sense, on the constituent it negates; it can be represented as shown in (66a), (66b), or both:



So how can we distinguish constituent negation on the V(P) from sentential negation? Obviously, the answer must come from the different scopes that the two negations will have: constituent negation cannot c-command anything that is outside the VP. Because

of its higher positioning in the tree, sentential negation can have scope over elements that are outside the VP (as long as they are lower than the sentential negation, of course). A number of tests can be constructed along those lines; the first one is due to Howard Lasnik (personal communication).

If a quantifier is inside the scope of negation, then there are two interpretations for the sentence, one corresponding to the LF structure where the quantifier has raised and has negation in its scope, and one where negation has scope over the quantifier. For example, (67) can mean either (68a) or (68b):

(67) John has not been playing football for many years.

(68) a. John used to play football and he hasn't played in the last fifteen years. (*many* has scope over *not*)

b. John started playing football only one year ago. (*not* has scope over *many*)

If a sentence contains only constituent negation, then a quantifier in an adjunct will not be c-commanded by that negation. As a result, such a sentence will have no interpretation on which the negation has scope over the quantifier. This prediction is borne out. Sentence (69) can be interpreted only along the lines of (68a), not along the lines of (68b):

(69) John has been not playing football for many years.

Now let us return to (63) and (64). Since (63) is claimed to contain sentence negation and (64) constituent negation, we predict that (63), but not (64), will be ambiguous. This is indeed what happens: (63) has the readings of both (68a) and (68b); (64) can only be interpreted like (68a).

This contrast in meaning cannot be accounted for by the suggestion that in (64) the auxiliary has moved over the negation to Tense, since the negation would still c-command the quantifier in the adjunct.

Similar judgments are found with *because*-adjunct clauses (Linebarger (1987)). Sentence (70) is ambiguous and consistent with either (71a) or (71b):

(70) John didn't grow corn because he wanted to make money.

(71) a. John grew not corn but (for example) rice, because the latter's market price is higher.

b. John did grow corn, because the government ordered him to and not out of monetary considerations.

Now consider the infinitival versions:

(72) To not have grown corn because he wanted to make money . . .

(73) To have not grown corn because he wanted to make money . . .

Sentence (72) (which contains sentential negation) is ambiguous just like (70). Sentence (73), however, can be interpreted only along the lines of (71a). This is consistent with

the present analysis of negation (and with Linebarger's treatment of *because*-clauses), since constituent negation is too low in (73) to c-command the *because*-clause.<sup>9</sup>

If a negative polarity item is clearly inside the VP, then constituent negation will be able to c-command it. For example, a negative polarity item in the complement position of the verb will be licensed by either sentential negation or constituent negation, since either one will be in a position to c-command it:

(74) To not have studied anything is stupid.

(75) To have not studied anything is stupid.

The contrast between (63) and (64) and between (72) and (73) cannot be accounted for if (64) and (73) are analyzed as resulting from movement of *have* over sentential negation; the latter would still c-command the quantifier or the *because*-clause, and the interpretations of (68b) and (71b) should still be available.

Given the order (*aspectual*) *have* + *not* + *participle*, then, *not* is an instance of constituent negation and the sentence should not be analyzed as indicating movement of *have*, over *not*, onto Tense. Though I will not go through them for reasons of space, the above tests yield the same results for aspectual *be*, as well as for predication *be*.

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<sup>9</sup> There appears to be some dialectal variation with respect to the (lack of) ambiguity of (64) and (73). According to one reviewer, there is an extremely specialized, weak colloquial rule raising certain nonfinite occurrences of *have*—enclitic occurrences, occasionally misspelled as *of*—but not of infinitival *be*. For speakers with this rule, (64) and (73) are ambiguous.

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## Some *Wh*/Operator Interactions

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The scope that a quantificational operator may have with respect to a *wh*-element depends on its syntactic position. *Wh*/operator interactions call for some kind of theoretical characterization, and two such characterizations are the Logical Form (LF) representations of May (1985, 1988 (henceforth: May)) and the Scoped S-Structure (SSS) representations of Williams (1986, 1988 (henceforth: Williams)). May proposes that LF representations are subject to a version of the Path Containment Condition (PCC) of

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