

- properties of a head as in Kayne's (1984) treatment.
27. Infinitivals may contain T. However, they should not contain tense operators.
  28. The same order holds within subordinate finite clauses.
    - (i) Rydw i 'n gwybod y bydd hi 'n cyrraedd yfory  
be-PRES-1SNG I PRT know PRT be-FUT-3SNG she PRT arrive tomorrow  
'I know that she will arrive tomorrow'
    - (ii) dyma 'r fan y cwmpodd hi  
here-is the place PRT fell-PAST-3SNG she  
'Here's the place she fell'
  29. (70) is taken from Rouveret (1990) and is formal Welsh.
  30. That is to say, when it is an unexpanded node, rather than a zero morpheme, it is unable to L-mark.
  31. We have argued above, however, that all the Celtic languages exhibit the same pattern of agreement: synthetic agreement fails to occur with a lexical NP. Welsh "pronominals" that appear to occur with the synthetic agreement should, I suggested, be treated as extensions of the agreement inflection.
  32. This amounts to adopting the claim that AGR functions as a subject for the Specified Subject Condition, a position taken in Chomsky (1981) but not Chomsky (1986a). Chomsky (1986a) does not appeal to binding theory to explain the ungrammaticality of (i).
    - (i) the men<sub>i</sub> said that each other<sub>j</sub> were sick  
Instead Chomsky posits that anaphors undergo LF movement and cliticize to I. A sentence like (i) will have an LF like (ii).
    - (ii) the men<sub>i</sub> [<sub>i</sub> each other<sub>j</sub> [<sub>i</sub> said [<sub>j</sub> were sick]]

The structure (ii) violates the ECP because the trace in the embedded subject position is not properly governed. Yet this LF-raising account for the ungrammaticality of (i) cannot be extended to Welsh. The anaphors in the subject position of the non-finite clauses in (69) will undergo LF-raising just as the subjects of the English infinitives arguably do and we will not have an explanation for the contrast between the Welsh (69) and the English (65). It will not help to suggest that *i* or *how* occupy C in these constructions and hence project a C' node functioning as a barrier by the Minimality Condition. In Hendrick (1988: ch. 6) I show that synthetic agreement in Welsh can function as a proper governor. This means that the trace of the anaphor should satisfy the ECP in structures like (69) since the non-finite clause contains synthetic agreement.
  33. Further work is needed on the murky area of intransitives in Celtic and how they behave in periphrastic constructions. No doubt such work will prompt further revision of the hypothesis offered here for the projection of subjects. Similarly I have paid no attention to the interaction of adverbs with verb raising and, as Sabine Iatridou reminds me, attention to that interaction may well provide evidence bearing on the claims of this article.

## 9 A reinterpretation of evidence for verb movement in French

Edwin Williams

### 1 Introduction

In this paper, I will examine a very influential analysis of the structure of the English and French auxiliary systems, an analysis which posits verb raising or movement as a central device. The authors' assumptions about very basic aspects of linguistic structure lead inevitably to this description. I, in fact, am more interested in these assumptions than in whether or not verb movement is a device in the repertoire of syntactic description, as it surely is, for these assumptions are widely shared and reasonable ones, but I think incorrect.

The analysis is Emonds' (1978) and Pollock's (1989). The reasonable assumption lying behind the analysis is that adverbs, and other modifiers, such as negation, occupy fixed positions, so that any observed alternation of their positioning with respect to verbs must therefore be due to verb movement. What is of most interest in this context is to determine more precisely what the rules of distribution and interpretation for these elements are. I will reject the idea that there are universal "slots" in which adverbs of various kinds can appear, one slot for each type of adverb; nor do I think that adverbs are distributed in the same way in different languages. The modes of modification are more various than that. On the other hand, I do think there is a simple elegant set of notions of scope and modification which gets the adverbs right, interacting in the popular way with language-wide parameter settings. I believe that once this is adequately worked out, the role of verb movement disappears. In other words, the differences between the word orders of French and English will be due to a difference in the combinatorics of the basic elements of the two languages, not to movement.

## 2 Pollock's theory, and its dependence on negation and adverb distribution.

In the X-bar theory that Pollock and others assume, VP is embedded in AGRP, which is embedded in IP, which is embedded in CP. Correspondingly, a verb can move to the head position of any of these phrases, but movement cannot skip over a head. The following movements are observed:

	French infinitives		French tensed	English non aux aux	
	aux	main			
to Agr	x	x	x		x
to Infl	(x)		x		x
to COMP			x		x

Adverbs are adjoined to VP; hence, movement to AGRP will be movement over an adverb; on the other hand, negation is adjoined to AGRP (or, is a head which takes AGRP as a complement); hence, movement to IP will be movement over negation.

The power of Pollock's theory in making predictions derives from the implications of the locality of movement; for example: if the verb can move over an adverb, then it can move over negation. Thus, if the order V-Neg-NP exists, then V-Adv-NP must exist as well.

- (1) [<sub>IP</sub> NP I [<sub>NegP</sub> Neg [<sub>AGRP</sub> AGR [<sub>VP</sub> adverb V NP]]]]

The difference between English and French for Pollock comes down to a difference in movement: in French, but not in English, main verbs can move to AGR (and hence to IP); in French infinitives, the main verb can move to AGRP but not to IP, while auxiliary verbs can move to IP.

- (2) Jean embrasse souvent Marie (ex 4b)

Il n'a pas compris (ex. 11b)

\*Ne semble pas heureux....(ex. 16b)

The parameter responsible for this difference between French and English is the *strength of AGR* parameter: strong in French, not in English.

Pollock's description of French vs. English adverbs and negation is not limited to this parameter; in fact, two further parameters, or perhaps more, are required.

In order to explain (3) Pollock is required to postulate that English

(but not French) has a null auxiliary verb which moves from a VP-adjoined position to IP (and whose movement is blocked by *not*, giving ungrammaticality). (Chomsky instead postulates "LF" V-to-I, with the same effect.) Since this is not a part of French grammar, this must count as a second difference between the two languages.

- (3) \*John not left

A third difference between French and English is illustrated in the following:

- (4) John recently was talking to Bill

\*Jean récemment parlait à Pierre

Adverbs in French cannot precede the tensed verb. Presumably, the auxiliary *was* in English occupies the same position that *parlait* occupies in French—namely, I. For some reason, adverbs cannot precede this position in French, but they can in English. So, this constitutes a third difference between the two languages.

In fact, then, Pollock has three independent differences between French and English.

### 2.1 Baseline theory of adverbs in the two languages

As a beginning, we will describe by means of subcategorization the facts of the sort that Pollock would explain by movement; subcategorization by classes, as in the case of adverbs, and by individual lexical items, as in the case of negation. Later, if more insight than this approach allows shows itself to be possible, so much the better. The following facts are pertinent.

First, adverbs in English in general can occur in the pre-tense position, and in any position in the auxiliary. Adverbs cannot occur between the verb and direct object:

- (5) a. John probably left early  
 b. John will probably leave early  
 c. \*John will see probably Bill

The word *not* is similar in its distribution to adverbs, except that it cannot occur in the pre-tense position:

- (6) a. \*John not left early  
 b. \*John left not early  
 c. John will not leave early  
 d. John will have not seen Bill

Therefore, the English facts can be summarized in the following sub-categorization specifications:

English:

- (7) adv: \_\_VP  
 (V[+aux]\_\_)  
 (8) not: \_\_XP[-tense]  
 V[+aux, +tense]\_\_

French differs from English in two ways. First, adverbs in French cannot occur in the pre-tense position. At the same time, they can occur between the direct object and the verb:

- (9) a. Jean a vu récemment Pierre  
 b. \*Jean récemment a vu Pierre  
 c. Jean a récemment vu Pierre  
 d. Jean a vu Pierre récemment

The French word *pas* is distributed in the following way:

- e. Jean n'a pas vu Pierre  
 f. \*Jean ne pas a vu Pierre  
 g. \*Jean ne a vu pas Pierre  
 h. ne pas avoir appris...  
 i. ne avoir pas appris...

French:

- (10) adv: \_\_V[-tense] (including negation)  
 V\_\_  
 (11) pas: \_\_V[-tense]  
 (V[+tense]\_\_)  
 (V[+inf, +aux]\_\_)

If we suppose that *pas* is an adverb, then we may in fact be able to simplify the above. The fact that *pas* cannot occur in the pre-tense position would follow from the fact that no adverb can. We might adopt the following convention:

#### CONVENTION:

If X is a lexical subclass of Y, then X can have a narrower distribution than Y, but not a larger. (X's subcategorization must be a subclass of Y's.)

#### 2.2 Negation in English and French

I will now attempt a more refined analysis of negation. An important concept in what follows is the notion of *head*, as exposed in Discullo & Williams (1986) and Williams (1978a, 1981); specifically, the notion of *relativized head*, a concept common to both syntax and morphology.

In general, the head determines the features of the whole, and it does so by having the features itself. In the special case where the head is not marked for a feature and the non-head is, then the non-head will contribute that feature to the whole. This is similar to unification, except that it always succeeds, for if there is a conflict, then the head always wins. So we have:

- (12) a. 
$$\begin{array}{c} [+a, +b] \\ \hline \begin{array}{cc} [+a] & [-a, +b] \\ \text{Head} & \text{Complement} \end{array} \end{array}$$

We may speak of [+a] as the "absolute" head, but of [-a,+b] as the "b" head. Given this convention, there must be some means of identifying the (absolute) head in the first place, as feature matching is no guide since feature matching is calculated on the basis of an already-given identification of the absolute head. In morphology, at least in the languages under consideration here, the head is always the rightmost element, even when a suffix; the suffix *-ion*, for example, is a (bound) noun, that combines with a stem to form a noun. French differs from English in having, as we shall see, left-headed compounds, or at least, left-headed constructions at the X<sup>0</sup> level. Both French and English are left-headed in the syntax.

The theory of negation to be outlined below will solve the following two puzzles, which are here presented as a tease.

First, why is it that, while there are "negative" adverbs, like *seldom*, which provide "affective" environments, the morphologically productive affixes *in-* and *un-* do not create affective adverbs (13)?

- (13) a. \*Infrequently does John come here  
 b. Seldom does John come here

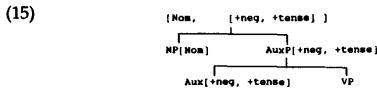
The second puzzle is, why does the relative scope of the modal and the auxiliary change under subject-aux inversion in the following examples?

- (14) a. John *mustn't* be there (nec [not [...]])  
 b. *Mustn't* John be there? (not [nec [...]])

### 2.2.1 English negation

English negatives consist of the adverbs *not*, *never*, *seldom*, etc., the negative auxiliaries *can't*, *wouldn't*, *won't*, etc., and the word *not*. The negative auxiliaries differ in significant ways from the word *not*, ways that suggest that the negative auxiliaries are not derived by cliticization of *not* in syntax. In other words, the *n't* of the negative auxiliaries is added by lexical rule, while the word *not* is a free form in syntax, appearances and assumptions notwithstanding.

A first hint that this is so is the fact that the negative auxiliaries do not have a uniform sort of interpretation. From the order Modal *n't* the natural assumption is that the interpretation would be Modal (*not*... and for *mustn't* and the other necessity modals this is correct, but for the possibility modals this is wrong; *can't* is interpreted as *not* (*can* ... This may be nothing more than lexical variation, but that alone suggests that the negative auxiliaries are words, in every sense. So, the negative auxiliary is simply another auxiliary, and occupies the same position as any other auxiliary, namely, head of an AuxP. If Aux is the head of S (or, rather, as I have speculated elsewhere, [Tense, Nom] is the complex head of S), then the structure of sentences with negative auxiliaries is:



Hence, the negation on these auxiliaries will have sentential scope; in general, a head has scope over its phrase (Head Scope Rule, Williams (1984)).

#### 2.2.1.1 The syntax of *not*

By contrast, the negative word *not* is a free syntactic word. It heads a projection, not P, and can take any XP as its complement. It lacks cate-

gorial content itself, so the category of the projection is determined by the nonhead; thus, for example, [not AP] will categorially be an AP, and have the distribution of an AP:

- (16) John seems sad  
 John seems not sad  
 \*John seems an idiot  
 \*John seems not an idiot

In this view of *not* I depart from Kayne (1989a) and Zanuttini (1990), who hold that *not*, unlike *n't*, is not a complement-taking head but an adverb.

*Not* does have one feature of its own, namely -tense. This means that its projection will be untensed, and so can never stand as the main predicate of a tensed clause:

- (17) a. \*John [not left]  
 b. I want John (not) to (not) have (not) left  
 c. John must (not) have (not) been (not) thinking

In (a), although *left* is tensed, since *not* is the head, its tenseless feature dominates, and so the tense of the VP cannot become the tense of the whole clause. In tenseless constructions, *not* does not interfere; whatever features *to* has which makes it appropriate as the head of an infinitive, *not* does not have their contraries, so *not* occurs transparently in infinitives.

There are three considerations that lead to the conclusion that *not* is a head. First, there is the fact that it takes its complement strictly to the right—this is the rule for complement-taking heads in English, and the fact that *not* observes this rule follows:

- (18) \*I like him not

Adverbs, for example, are not heads in this sense, as they can appear, in general, in the position of *not* in (18). There is nothing intrinsic about negation that says that it will be a complement-taking head—in fact the negative adverb *seldom* clearly is not; and in some languages, for example German, it is likely that the negative (*nicht*) is not a complement-taking head, but is simply an adverb.

The second reason to consider *not* to be a head is its behavior in prenominal position. In prenominal, or in general in prehead position, modifiers must be head-final; it seems that [not XP] constructions are excluded from this position, which would follow if *not* were the head:

- (19) a. \*The mad at his wife man  
 b. The very tall man  
 c. \*The [not happy] man is Pete  
 d. The man not happy is Pete  
 e. The seldom happy man

The fact that [not happy] can occur postnominally further supports the point, as postnominal modifiers generally require a complement to the head. A systematic set of counterexamples to the headness of *not* are such expressions as *a not impossible situation*; these, however, are contrivances of artful language, and so perhaps should be put aside.

A final reason to consider *not* to be a head is that it supports VP Deletion, or more generally, XP Deletion:

- (20) a. ...and Bill can probably not  
 (21) b. I consider Bill intelligent and I consider Sally not  
 c. \*I consider Bill intelligent and I consider Sally

VP Deletion can be seen as a sort of missing complement phenomenon, in general the missing complement of a modal. But in these cases, it is the missing complement of *not*. Even the adjunct small clause can have VP Deletion (b), but only if it contains *not*:

- (22) We had hoped that everyone would be cooperative, but with John not, we were forced to do most of the work ourselves

"Main verb" *be* does not support a missing complement, which shows that this property is lexically idiosyncratic:

- (23) \*John was being obnoxious, and Bill was being, too

Again, adverbs do not support VP Deletion, and hence are probably not to be analyzed as complement-taking heads; this might be why adverbs do not take complements at all, of any sort:

- (24) \*I consider John ridiculously verbose, and I consider Peter hardly

It seems then that the syntax of *not* can be boiled down to the following: it takes an optional XP complement, and it lacks categorial features, except -tense:

- (25) not [-tense]; \_\_XP

### 2.2.1.2 Interpretation of *not*

The principal facts of interpretation follow from the syntactic facts just given, plus the following stipulation:

- (26) Only predicates and propositions can be negated.

This can be seen from the following:

- (27) a. John is probably not a doctor  
 b. John seemed not friendly  
 c. I consider John not friendly  
 d. \*John saw not a doctor  
 e. \*Not a doctor saw Bill  
 f. \*You can do that not in my car

As these examples show, when *not* is prefixed to anything which is not a predicate the result is ungrammatical. In fact, *not* cannot be prefixed directly to a proposition either:

- (28) \*John believes not that Bill is here

However, there are circumstances when *not* has propositional scope. Although *not* cannot be prefixed to the non-predicative PP in (f) above, when that same PP is fronted, the result is grammatical:

- (29) Not in my car can you do that

In this example, *not* has sentential scope; this is shown by the fact that Subject-Auxiliary Inversion has taken place, which only happens in the presence of sentential negation. The reason *not* has sentential scope is a consequence of the Head Scope Rule. First, *not* is the head of *not in my car*; secondly, *not in my car* has been moved to the head position of the matrix clause; hence, by transitivity of the *head of* relation, *not* is the head of the matrix clause, and thus includes it in its scope. Negation is here the head of two phrases, the PP, and the matrix S; but only the matrix S qualifies as a scope for negation.

One must carefully distinguish the notion of *scope* from some other notions. For example, one is tempted in (29) to say that it is the PP *in my car* that is "negated"; similarly, for the following:

- (30) You cannot do that IN MY CAR

In actual fact, negation simply has sentential scope in both these examples. The sense that it is the PP that is "negated" derives from the fact that in both cases the PP is the focus of the sentence, and the sentence carries a presupposition that *you can do that somewhere*. The Head

Scope Rule has nothing to tell us about the focus-presupposition structure of a sentence, only about scope.

Note as well that there is no intrinsic connection between where the negation is generated and what scope it ultimately has. The negation in (29) is what might be ordinarily termed *constituent negation* in Klima's (1964) terms; however, the configuration determines that it has sentential scope.

In the following, both the fronted phrase and the matrix S qualify as a scope for negation, and so the sentence would be ambiguous, except that Subject-auxiliary Inversion is compatible only with sentential negation:

- (31) a. Not sad, John arrived  
b. Not sad did John arrive

In (a), the *not* has the predicate *sad* as its scope, and it serves simply to invert this predicate. In the (b) example, on the other hand, *not* takes the full S as its scope, and the meaning is the denial of *John arrived sad*. The two sentences are similar in meaning, but distinguishable.

The Head Scope Rule is but one way that scope is established in language. There are two others: Adjunction Scope and Quantified NP Scope Assignment. Adjunction Scope is the scope of adjoined material. The scope is always the phrase adjoined to. Adverbs, for example, always have adjunction scope. Quantified NP Scope Assignment is the scope of quantified NPs. It is always some phrase containing the quantified NP.

Negation participates in all three of these scope systems. We have already seen several examples of Head Scope. In addition, negation shows Adjunction Scope:

- (32) John comes here seldom

Here, *seldom* is adjoined to the VP, and has VP scope.

And, of course, NPs like *no one* are assigned scope by the Quantified NP Scope Assignment discipline, about which much is written.

### 2.2.1.3 Lexical vs. syntactic negation

We can now answer the two puzzles posed earlier. The key to each is that in English, the direction of complementation is different in words and phrases: in words, the head is on the right, while in phrases, the head is on the left.

The negative prefixes *in-* and *un-* occupy nonhead positions. This means that their scope is determined not by the Head Scope Rule,

but by the Adjunction Rule—namely, their scope is determined to be exactly what they are adjoined to. This means that the scope is restricted to the word that the prefix is an immediate constituent of. So, for example, in *unnecessary* the scope of *un* is strictly *necessary*—that is, the *un* simply inverts the predicate *necessary*. This is the reason that words formed by prefixation of *in* and *un* are not affective items—they are not truly negative adverbs, in that the scope of the negation is confined to the word in which it occurs, and cannot be taken to be sentential negation. So, for example, (c) is the true paraphrase of (a), not (b):

- (33) a. John came infrequently  
b. It is not the case that John came frequently  
c. John came a certain number of times, and those times were not numerous

(b) represents the reading in which the *in-* is construed as having sentential scope. That it cannot have such scope is shown by the failure of these adverbs, unlike *seldom*, for example, to condition polarity items or trigger Subject-Auxiliary Inversion:

- (34) a. \*Infrequently did anyone come  
b. Seldom did anyone come

By contrast, the negative auxiliaries have the negative morpheme in the head position of the word; hence, the negation of these auxiliaries is not restricted to the word itself, but extends to anything that the word is head of, usually an entire clause. Hence, these are truly negative, and condition negative polarity items:

- (35) Can't anyone do anything?

It is worth comparing these negative auxiliaries with the contractions *should've*, *could've*, etc. These contractions do not undergo Subject-auxiliary Inversion, as shown by Selkirk (1972):

- (36) \*Could've John been there?

The question is, why do the contractions involving *n't* undergo Subject-Auxiliary Inversion, but not the ones involving *have*? (If Selkirk is right in her particular conclusions, the contractions involving *have* are not really contracted forms at all; but then the question remains, why are these forms different in their analysis from the negative auxiliaries—put differently, how does the child know to treat these two

types of reductions differently?)

I believe the answer lies in the fact that the forms like *should've* do not qualify as possible words from the point of view of the head-complement relation. If these were words, the contracted *have* would occupy the head position of these words, but semantically *have* is the complement of the modal—so these cannot be words.

This analysis is bolstered by the facts of the second puzzle mentioned at the beginning.

Recall that the negative versions of the necessity modals differed from the others in having negation subordinate to necessity. This interpretation is anomalous, given that the negation occupies the head position in these cases. These words are deviant, from the point of view of the laws of word formation.

That this is so is indicated by their behavior in syntax. When these words are moved, their interpretation alters, so as to become non-anomalous:

- (37) a. John *mustn't* be there (nec [ not [... ] ]  
 b. *Mustn't* John be there (not [ nec [... ] ])

Suppose, for concreteness, that there were two *mustn't*s. The moveable *mustn't* (b) fits the laws of word formation. The *mustn't* that appears in (a) is perhaps similar to *must've*, which we have seen is not a true word, in that it does not undergo inversion.

### 2.2.2 French negation

French negation differs from English negation in ways predictable from the way French word and phrase syntax differs from English word and phrase syntax. The French negative word *pas* has two separate functions. In one function, it is a complement-taking head, just like English *not*; in the other function, it is an adverb, like English *seldom* or German *nichts*.

#### 2.2.2.1 French adverbs

French adverbs differ from English adverbs in two ways. First, adverbs cannot appear in pre-tense position:

- (38) \*Jean souvent a vu Marie  
 John often has seen Mary

Second, adverbs can occur between the main verb and the direct object:

- (39) Jean embrasse souvent Marie (Pollock, ex 4b)  
 John embraces often Mary

It is an interesting empirical question whether these two differences are independent of one another. Pollock (1989) has it that they are, but Kayne (1989a) and Déprez (pc) have suggested not. I will ignore the question for the time being.

I will insist, however, that the ability of adverbs to appear between the verb and the direct object is of a piece with a couple of other features of French, namely, the ability (even necessity) of adjectives to intervene between a noun and its complement, and of French compounds to be head-initial:

- (40) a. la destruction rapide de la ville  
 b. \*the destruction rapid of the city  
 c. poisson chat 'fish cat' cat fish  
 oiseau mouche 'bird fly' hummingbird

I believe, as I have written elsewhere (Williams 1990), that all three of these features of French derive from the fact that French permits structures of the form (41) in general, whereas English does not. The head-initiality of French compounds shows up even in the number system, where low-number suppletion does not infect the higher compound numbers, as it does in English—this is because English, but not French, is right-headed:

- (41) [<sub>X<sup>0</sup></sub> X<sup>0</sup> Y]  
 (42) eighty-first  
 quatre-vingt-unieme  
 \*quatre-vingt-premier

#### 2.2.2.2 *Pas* as adverb

The French word *pas* is ambiguous: it is both an adverb and a complement-taking head. As an adverb, *pas* inherits the property that it cannot occur in pre-tense position:

- (43) \*Jean pas est arrivé

But it also inherits the possibility of adjoining an X<sup>0</sup> on the right:

- (44) Jean n'est pas arrivé  
Jean ne voyait pas Pierre

*Pas* as an adverb is restricted to modifying tense:

- (45) *pas*, adv, tense\_\_

The constituency of adverbial *pas* is demonstrated by the following cases of VP Fronting (V. Déprez, personal comm.):

- (46) a. \*[*Pas rapidement examiné*] Pierre ne l'est t  
b. [*rapidement examiné*] Pierre ne l'est pas t

*Pas* is clearly joined to the tensed element, and not to the VP, in such examples.

The constituency is further shown by the following, in which *pas* interacts with the S/VP reading of an ambiguous adverb:

- (47) a. Jean n'[a [*intelligemment pas*]] répondu à la question  
only subject-oriented  
b. Jean n'[a *pas*] [*intelligemment répondu à la question*]  
only manner

In the first example, *intelligemment* cannot be adjoined to VP, as it precedes *pas* and *pas* has sentential scope—hence the adverb has strictly the subject-oriented interpretation; in the second, the adverb can be adjoined to the VP, as it follows *pas*, and so has the manner interpretation.

The scope of adverbial *pas* is given by a combination of scope rules: the Adjunction Scope Rule, the Head Rule, and the transitivity of scope. The Adjunction Scope Rule says that *pas* will have scope over tense; the Head rule says that tense will have scope over the S; hence, *pas* will have scope over the S, and hence is perceived as sentential negation. *Ne* is in fact reserved to mark sentential negation.

### 2.2.2.3 *Pas* as a head

As a head, *pas* takes its complement to the right. Like English *not*, *pas* is -tense:

- (48) *pas*, neg, -tense

Hence, it cannot precede the tensed verb, just as *not* in English cannot.

Note the generalization that *pas* as either adverb or as head cannot precede the tensed verb. This would appear to be a lost generalization

in an analysis which treats *pas* as ambiguous. But, perhaps not. There are in fact two independent generalizations: first, as heads, neither *not* nor *pas* can precede the tensed verb; for this reason, we have posited that the negative, when a head, is -tense in both languages. As an adverb, the negation will behave as adverbs in the language behave—in French, this means that it will not occur pre-tense, as no adverb does; and in English, *not* does not occur as an adverb. Pollock's account does not in fact reduce the behavior of *pas* to adverbs, as mentioned above—the failure of adverbs to occur pre-tense in English and French is a stipulation independent of the difference of adverbs in the two languages to appear in the V\_Direct-Object slot. And the fact that *not* cannot occur in pre-tense position in English is independent, in Pollock's account, of the fact that *pas* cannot occur pre-tense in French; in English it is due to an abstract "LF" *do* movement rule; in French, it is due to a syntactic verb movement rule. Hence, the two systems simply capture two different generalizations—in my system, *pas* is ambiguous; it is included in a generalization about French adverbs when it is an adverb, and when it is a complement-taking head, it presumably will fall under whatever generalization covers the (unambiguous) English word *not*: perhaps universally, the negative head is -tense.

As a head, *pas* takes its complement to its right, and it always has scope strictly over that complement. As in English, *pas* is restricted to apply to predicates and propositions. In the following, *pas* is taking a predicate as its complement; the absence of *ne* shows that the scope is not sentential:

- (49) Jean (\*n')est arrivé pas heureux  
Cet histoire (\*n')est devenu [pas triste]

Like English *not*, *pas* is devoid of features, and so the phrase [*pas* XP] is an XP, and has the distribution of an XP.

*Ne* is, in this account, not an instance of negation in itself, but rather a marker of sentential negation. It is in fact omissible in colloquial French.

*Ne* is not in any case a very sensitive scope marker, as the examples (47) show, repeated below:

- (50) a. Jean n'[a [*intelligemment pas*]] répondu à la question  
only subject-oriented  
b. Jean n'[a *pas*] [*intelligemment répondu à la question*]  
only manner



Here, the scope of negation is determined strictly in terms of the order of *pas* and *intelligement*; *ne* precedes in both cases.

The analysis given of *pas* and *not* and *n't* here make verb movement rules unnecessary. The rules given here are rules governing lexical insertion itself. Any theory must have such rules, including Pollock's. It is an empirical question what form these rules take. I have argued for the particular form of the rules for these words. If these are correct, they fully determine the positioning of these elements with respect to the verb and other elements of the clause by themselves.

### 3 Conclusion

Let us assume that the analysis just presented is correct. We may then speculate: why is the verb movement analysis not an entertaining one in this context?

Before turning to an answer to this question, we might consider briefly another very influential, and I think incorrect, analysis based on verb movement, Larson's (1988) theory of the English double object construction in particular, and of the post-verbal material in general. The reasonable assumption that led to the postulation of verb movement in this case is that the laws of the binding theory are based exclusively on the c-command relation, again a widely held assumption, and an assumption towards which work of the past 18 years has been tending. In fact, I think Larson's proposal, with verb movement, is the only one which meets this assumption and at the same time respects the tenets of X-bar theory, and so his work gives a special opportunity to examine the question. Given certain asymmetries in the double object construction, as illustrated in (52), and given the notion just mentioned, that binding is based solely on c-command, we are led inevitably to the conclusion that the direct object asymmetrically c-commands the direct object, and from there to a structure like the following:

(51) [<sub>VP</sub> V<sub>i</sub> IO [<sub>VP</sub> t<sub>i</sub> DO]]

- (52) a. Mary assigned John himself  
b. \*Mary assigned himself John

Here, verb movement serves in essence to connect the two VPs. I believe, though, that linear precedence plays a role in addition to c-command in binding theory, and if this is so, then Larson's conclusions do not follow, and, in particular, verb movement is not required in this construction, and in any case the structure in (51) can be shown to be

wrong and inadequate even for describing the binding facts.

I do not have the space here to draw out my critique of Larson in full, but the reader is referred to Williams (1990) and Williams (in preparation) for a full discussion; if the case against Larson is completely persuasive, we must ask again: why is Larson's analysis not an available one? Verb movement certainly exists. Subject-Auxiliary Inversion in English and V2 in German are just two examples of a widely found phenomenon. I think the answer lies in theta theory. The peculiar thing about the putative verb movements in French and English is their interaction with the way that theta roles are assigned.

In Pollock's case, the movement preserves the configuration in which theta roles can be assigned (Theta Role Assignment Configuration (TRAC), to use the term of Williams (in preparation)). The movement of the verb does not alter the left-right order of verb and arguments, and it does not visibly alter the local configuration of verb and arguments. So long as this is so, we may imagine that the child will not posit verb movement. German V2 and English Subject-Auxiliary Inversion alter the TRAC in an obvious way, moving the verb to the left of the subject in English, and interchanging the order of verb and complement in German. Hence verb movement is posited as a means of reconciling the surface order with the requirements of theta theory, that there be a consistent TRAC.

The child will not entertain Larson's proposal for a similar reason—in Larson's analysis, there is no consistent TRAC, as the verb stands in different structural relations to its arguments at different levels, and is not in a valid TRAC with all of them at any one level; hence, the child would never entertain verb movement here. Besides, the child knows about the role of linear precedence in binding theory, and is therefore not motivated by the same considerations that Larson was.