WHICH ADVERBS IN SPEC, VP?*

Lidia Lonzi - Università di Milano

1. The problem

If we assume a base structure like (1a), with the adverb in the specifier position of VP, and a Verb Movement rule to Infl (i.e. to (Agr to) Tense) (Pollock, 1989), we obtain the obligatory order Inflected Verb + Adverb of (1b):

(1)  a.  [IP NP I [VP [Adv] V ... ]

and we can explain the acceptability contrast of the pair (2) vs (3) for the Italian adverb completamente ("completely"), which, as complètement in Pollock’s analysis, we might tentatively assume to be originated in Spec, VP:

(2)  Ha completamente perso la testa
   pro has completely lost DET head
(3)  *Completamente perse la testa
   pro completely lost ...

In (2), the aspectual auxiliary verb (head of an AuxP projection between AgrP and VP) has moved to Infl satisfying the Verb Movement rule; in (3), the inflected verb does not precede the adverb and our premises are not fulfilled.
With an adverb like *meramente* (‘merely’), or *puramente* (‘purely’), however, presenting in (4)-(5) the same contrast seen in (2)-(3):

(4) Ha meramente annuito
    pro has merely noded
(5) *Meramente annui
    pro merely noded

the same explanation would be patently wrong. In fact, if the equation were correct, the acceptability of both (6) and (7) should be expected:

(6) Perse completamente la testa
    pro lost completely DET head
(7) *Annuì meramente
    pro nodded purely

Why *meramente* doesn’t occupy the postverbal position, as, predictably, the adverb in (6)?

Given (7) and (4), I suggest that *meramente* is licensed in the specifier position of the AuxP node. In this way, (4) should be explained with the movement of the auxiliary verb across the adverb, differently from (2) in which the auxiliary verb is originated higher than the adverb; and the unacceptability of (7) should be explained with the fact that there is no auxiliary and no AuxP node.

The following example:

(8) Meramente annuire è da bambinetti
    to merely nod is childish

could be explained by admitting that the untensed sentence has at its disposal an AuxP node, with a possibly null head, permitting to the *meramente* type adverbs to precede the infinitival lexical verb (see 2.2.).

This result can only be obtained by supposing that Italian too, like French (Pollock, 1989), has an Affix Movement Rule (or, simply, a lexical insertion rule for the infinitival verb), which, however, leaves (9) unexplained.
(9) *Completamente perdere la testa è pericoloso
to completely loose Det. head is dangerous

If the Affix lowers to V, and the adverb is in Spec, VP, (9) should in fact be grammatical.

It should be noted that the obvious explanation of (9) with the obligatory Verb Movement to Infl, is not available, given the acceptability of (8): (8) could indeed be explained with a higher position for *meramente - e.g. Spec, AgrP (in Pollock’s framework the lower functional head, or F2) - but this would in turn predict the welformedness of (7).

The purpose of this paper is to analyze a theoretically possible solution to this problem, and its implications for the representation of sentence structure in Italian.

2.1. Effects of the Movement to Infl

A unitary explanation for the disparate behavior of adverbs in (2) - (9), is made possible by the theory of Verb Movement to Infl, i.e. by the intrinsic structural ambiguity of every attested adverbial position that follows from such a theory.

For instance, (10a) or (11a) can either derive from Verb Movement or preexist to it. The postverbal position can either derive from the Spec, VP position, or also, crucially, from the VP final position (Pollock, 1989) (with possible right NP adjunction to VP: Kayne, quoted in Pollock, 1989; Kayne, 1989).

In short: the sequence (10a) may either derive from Verb Movement, as in trace; or preexist to it, as in (10c), where the base position of the adverb is already to the right of the verb trace:

(10) a. V (+finite) + Adv
   c. [Aff [V] Aff] [VP [Ø] ti Adv]

Examples of (10b): parla sempre / appena (‘pro speaks always / hardly’); of (10c): parla bene / troppo (‘pro speaks well / too much’). In (10c), Ø is a
null adverbial position; we can in fact have: *parla sempre troppo* (‘pro speaks always too much’) (for the typology of adverbs underlying these and the following examples, see Lonzi, to appear).

In (10b), differently from (10c), the adverb is crossed by the verb moving to its Affix.

Similarly, the postauxiliary position may either derive, as I have hypothesized for (4), from the Spec, AuxP base position, see (11b); from the Spec, VP base position, see (11c); or from any position justifying in an independent way the preparticipial occurrence of preadjectival modifiers like degree adverbs, see (11d): for concreteness Spec, AgrP-O\(^2\). In short, the order (11a), may either derive from Verb Movement of the aspectual auxiliary, as in (11b), or preexist to it in two ways: in (11c) with an adverb in Spec, VP, in (11d) with an adverb, say in Spec, AgrP-O:

\[
(11) \quad \begin{align*}
\text{a. } & \text{ Aux (+finite) + Adv + PstPrt} \\
\text{b. } & \text{ [Aff [Aux] ] Aff} [\text{AuxP [Adv ti] [VP [Ø] V]}] \\
\end{align*}
\]

Examples of (11b): *ha meramente equivocato* (‘pro has merely misunderstood’); of (11c): *ha sempre ascoltato* (‘pro has always listened’); and of (11d): *è straordinariamente cresciuto* (‘pro has (lit. ‘is’) extraordinarily grown up’; whereas *
straordinariamente crescere ...* (‘to extraordinarily grow up’), proves that the adverb is not VP initial. Since Ø stays for a null adverbial position, we can also have: *ha solo sempre equivocato* (‘pro has only always misunderstood’), for both (11b) and (11c); and: *è solo straordinariamente cresciuto* (‘pro has only extraordinarily grown up’), for (11d)\(^3\).

2.2. Untensed sentences

As far as infinitival sentences are concerned, another source of structural ambiguity is the preverbal position, which may derive either from the Spec, VP (e.g. *complètement perdre la tête*, and, in Italian, *sempre protestare* (‘to always protest’)) or the Spec, AuxP base position (e.g. *meramente*
equivocare (‘to merely misunderstand’), both with Affix Movement; or, finally, from the left-joined VP position⁴, as we will see. In this section we will however focus on the postverbal position, as a possible effect of Verb Movement.

In fact, Verb Movement in Tense [-finite], which may only apply to auxiliary verbs in Pollock’s framework, should obviously be at the root of structural ambiguities, so much so that it is difficult to find evidence of this movement, since the auxiliary is already to the left of the lexical verb and of two adverbial positions (VP final and Spec, VP) - adjoined positions aside. Now, my hypothesis of an obligatory position in Spec, AuxP, for adverbs like meramente, may provide evidence in favor of the existence of such a rule also for Italian (though not positively to the highest functional head), if we find an adverb assigned to Spec, AuxP, resulting in postauxiliary position in untensed sentences (see below).

Also Short Movement in Agr (Pollock, 1989) should be a source of ambiguity, since the [-finite] Verb must cross the adverb in Spec, VP, and, in principle, the adverb in Spec, AuxP.

As we have seen, in order to argue that the position of meramente is exactly Spec, AuxP, one must suppose that the infinitival sentence, unlike the finite sentence, has at its disposal a null AuxP projection. This difference could be justified with the difference in the respective incorporation processes: Movement to Infl of the lexical verb, in a way excludes the intermediate AuxP node⁶.

When the auxiliary is present in an infinitival sentence, it precedes any predicate adverb. Hence, if we admit that the adverb is in the specifier of this projection, we get evidence of such a movement. The auxiliary moves to Infl and crosses the adverb (see (13)). It must be observed that the apparent counterexample to my analysis of meramente (see the ungrammatical: *annuire meramente, which should be allowed by Short Movement in Agr), becomes an argument in favor, since the infinitival could optionally move to the empty head position of the null AuxP projection, rather than to Agr.

The ungrammatical (14), compared to (12), shows that the auxiliary moves higher than the lexical verb. In fact, (14) can be explained with the obligatoriness of Verb Movement for Aux, which gives the obligatory order Aux [-finite] + Adverb.

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(12) Meramente annuire è da bambinet ti (= 3)
to merely nod is childish
(13) Avere meramente annuito è stato da bambinet ti
to have merely nodded has been childish
(14) *Meramente avere annuito etc.

Compare now (12)-(14) with (15)-(17):

(15) Benevolmente rilevare un errore è gentile
to benevolently notice a mistake is kind
(16) Avere benevolmente rilevato un errore è stato gentile
to have benevolently noticed a mistake PstAux been kind
(17) *Benevolmente avere rilevato ...

Also in this case, the identity of paradigm must not deceive us (see note 4). Paradigm (15)-(17) is not sufficient to identify an adverbial position, and can be explained both with a Spec, AuxP, and a Spec, VP position. More precisely, if Affix Movement is admitted, (15) may be explained with both positions; the postverbal position of the adverb, in (16), may either derive from the Auxiliary Verb Movement across Spec, AuxP, as in (13), or preexist to it, as an initial VP position (see note 4); finally, since Verb Movement for auxiliary verbs seems to be obligatory, given (14), (17) must be explained with the non application of the rule, without saying anything about the adverb position. Only sentences with two auxiliaries, like (18) (19), provide us with a solution to this problem:

(18) a. Essere stato meramente / benevolmente redarguito
to have (lit. be) been merely / benevolently blamed
(19) a. Essere meramente / *benevolmente stato redarguito

While (18a), with the adverb after the second auxiliary, is still structurally ambiguous, (19a) shows that meramente is higher than benevolmente. The structure underlying (18a), then, will be different for the two adverbs: i.e. (18b), for meramente, and (18c) for benevolmente, irrelevant details aside. I represent the AgrP-O projection of the auxiliary past participle in order to get the auxiliary verb crossing the Spec, AuxP adverb, whereas, for the sake of simplicity, I omit the analogous
projection in the representation of the lexical past participle see (11d) and note 2):

(18b)

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Infl
  \[\text{essere}\]
   \[\text{AuxP}\]
     \[\text{Adv}\]
       \[\varnothing\] \[\text{Aux}\]
         \[\text{AgrP-O}\]
           \[e\]
             \[\text{Agr}''-\text{O}\]
               \[\text{Agr-O}\]
                 \[\text{AuxP}\]
                   \[\text{stato}\]
                     \[\text{Adv}\]
                       \[\text{Aux}\]
                         \[\text{meramente}\] \[\text{Aux}\] \[\text{VP}\]
                           \[e\] \[\text{Adv}\]
                             \[\varnothing\]
                               \[V\]
                                 \[\text{redarguito}\]
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From (18c) we see that *meramente* is in the specifier position of the second auxiliary, and *benevolmente* is adjoined to VP (see note 4), but this difference has no impact on the surface sequence.

Structure (19b), however, has *meramente* in the specifier position of the first auxiliary, where *benevolmente* is not allowed, and in this case the difference has indeed an impact on the surface sequence: the VP adverb, in fact, cannot be adjacent to the first, but only to the second auxiliary.
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(19b)

\[
\begin{array}{c}
\text{Infl} \\
\text{essere}_1 \\
\text{Adv} \\
\text{meramente} \\
*\text{benevolmente} \\
\text{Agr'-O} \\
\text{Agr-O} \\
\text{stato}_1 \\
\text{Agr} \\
\text{VP} \\
\text{redarguito}
\end{array}
\]

2.3. The preparticipial position

2.3.1. I still have to answer to the question: why, if the infinitival lexical verb is allowed to stay in its base position, (9) is not acceptable? More precisely: why any adverb occupying the Spec, VP position should not precede an infinitival verb, as meramente does - see (8), repeated as (12) - and as we know that VP adverbs do in French (see Pollock, 1989)? Our question makes sense since we assume that Affix Movement (or any structural equivalent of it) is possible in Italian too, as the acceptability of (8) would prove.

I suggest that, differently from its French counterpart in Pollock's proposal, an adverb like completamente can essentially be assigned to the resultative class of VP "final" adverbs analyzed below, and its position in (2) - which I tentatively suggested in 2.1. to be Spec, AgrP-O - can be
accounted for by its additional character of adjectival specifier. An argument in favor of this hypothesis comes from the non-occurrence of this type of adverbs in the preverbal position of absolute participial clauses, in which the AgrP-O node is assumed to have no specifier (Belletti, 1989a; see also Kayne, 1989, for the hypothesis that the participle is in C\textsuperscript{0}). Compare: "enormemente ingrandita la fotografía ... (‘enormously enlarged the picture’); facilmente risolto il problema ... (‘easily solved the problem’); completamente sovvertite le regole ... (‘completely subverted the rules’), with: amorevolmente consolato il fratello ... (‘lovingly consoled the brother’); attentamente valutato il pro e il contro ... (‘carefully weighed all the pros and the cons’); bonariamente congedato il colpevole ... (‘friendly dismissed the culprit’), that can be interpreted with the agentive Adv left-adjointed to the relevant projection (cf Belletti, 1989a). This is in accordance with the movement capacity of the last class of adverbs (agentive adverbs) vs the staticity of the class of completamente (resultative adverbs) and of AP specifiers like degree adverbs.

The intuitive idea behind the proposal of banning resultative adverbs from the Spec, VP position also with participles, is that although they may function as specifiers of an Adj (see for instance: completamente rosso (‘completely red’), mortalmente noioso (‘mortally boring’), this function is somewhat secondary wrt their proper meaning of V modifiers, intrinsically different from the meaning of VP specifiers.

2.3.2. To illustrate the behavior of adverbs like completamente, I will consider resultative lexical adverbs like bene, male, meglio, volentieri (‘well, badly, better, willingly’) which are purely VP final.

It should be noted that the explanation of the immediate postverbal position of bene in (20a) with a base position in Spec, VP and Verb Movement to Infl, must be rejected, given (20b):

\begin{quote}
(20) a. Prendi bene i bicchieri 
Take well the glasses 
b. *Non aveva bene preso i bicchieri
pro NEG had well taken the glass
\end{quote}

although, according to Pollock (1989), from the unacceptability of (21a) (22a), we should conclude that bene, male (like presque and à peine in the French examples: *Il comprend la question presque; *Il lit les journaux à
peine) are not VP final.

(21) a. *Capisce la questione bene
    pro understands the question well
  b. Capisce bene la questione

(22) a. *Legge i giornali male
    pro reads the newspapers badly
  b. Legge male i giornali

Given the unacceptability of both (20b) and (21a), we should conclude that there are VP adverbs "unhosted" both by the VP final and the VP initial position.

The way out of this paradox is that certain adverbs not only behave like strictly subcategorized adverbs (see further), but may form a complex unity - a sort of idiom - with the verb they modify (cf Sportiche, 1988). As Paola Benincà pointed out to me in the discussion, (20b) is acceptable with the short form of the adverb, criticized onto the verb (see: Ha ben capito la questione ‘pro has well understood the question’). Their immediate postverbal position is so regular, that to adopt the explanation of a right-adjunction to VP of the object NO, for (21b)-(22b), seems quite unnatural.

Not unexpectedly, and differently from the VP initial adverbs, all resultative adverbs can be topicalized (not, however, clefted), and extracted, observing subjacency (Lonzi, 1988; Cinque, 1990):

(23) a.i. COMPLETAMENTE hanno svaligiato l’appartamento
    completely pro have burgled the apartment
  a.ii. COMPLETAMENTE mi risulta che abbiano svaligiato l’appartamento!
    completely I have been told that pro have burgled ...

(24) a. ii. VOLENTIERI mi rimetterei t a lavorare!
    willingly I would start again to work
  a.ii. ??VOLENTIERI, ricordo che aveva mangiato t
    willingly remember (1st p.) that pro had eaten

(25) a. ?BENE penso che abbia risposto t
    well think (1st p.) that pro has answered

(26) a. ?MEGLIO DI TE penso che vesta t
    better than you think (1st p.) that pro dresses
In particular, they observe the same prohibition against dislocation constructions observed by strictly subcategorized adverbs.

(23) b. *I ladri, completamente, avevano svaligiato l'appartamento
the thieves completely had burgled the apartment

(24) b. *Giovanni, volentieri, si rimetterà a lavorare
Giovanni willingly will start again to work

(25) b. *Bene, aveva risposto
well pro has answered

(26) b. *Meglio, mi vestirei
better would (1st p.) dress

Taking all these data into consideration, I explain the unacceptability of (9) by assuming that completamente does not originate in Spec, VP. In so doing, I leave Pollock's analysis untouched, with the wellformedness prediction for the sequence Adv + Verb [-finite] in case the adverb should actually originate in this position.

2.3.3. Under the present analysis, completamente, differently from bene, male, etc. is allowed to occupy the preparticipial position. it shares this position with other -mente adverbs of the resultative class (pesantemente ('heavily'), distintamente ('neatly'), facilmente ('easily'), etc.), and, particularly, of the degree class. These are adjective and adverb specifiers, like enormemente ('enormously'), straordinariamente ('extraordinarily'), which may, in turn, modify psychological verbs, and, more generally, non-agentive verbs.

This is a crucial question, since either we explain in this way the acceptability contrast between (2) and (9), or we must admit that the Verb with Tense [-finite] obligatorily moves to Infl, giving up our explanation of another contrast - i.e. (12) vs (14) - in terms of Affix Movement for lexical verbs and Movement to Infl for Auxiliary verbs.

Adverbs like completamente may occupy the preinfinitival position only in contexts that are stylistically marked, and, I would say, with a "degree" flavor (maybe degree adverbs do have access to Spec, VP, see (27)-(30). In the (b) sentences, the adverb has lost its proper meaning of resultative V
modifier, still evident in the unacceptable (a) sentences, in which the adverb must follow the verb as any verbal complement does:

(27)  a. *Mortalmente colpire una persona dev’essere terribile
to mortally strike a person must be terrible
b. ??Mortalmente anoiarsi in vacanze interminabili era il suo
   destino
to mortally grow weary in endless holidays was the POSS
destiny
(28)  a. *Facilmente risolvere questo problema è impossibile
to easily solve this problem is impossible
b. ??Facilmente ricordare qualunque nome è una dote
to easily remember any name is a gift
(29)  a. *Leggermente caricare la macchina è importante
to lightly charge the car is important
b. ??Leggermente insistere per ottenere qualcosa di ambito, è
   permesso
to slightly insist for to obtain something desired is licit
(30)  a. *Profondamente scavare nel terreno è faticoso
to deeply dig in the soil is hard
b. ??Profondamente dolersi per le sventure dei nostri simili è umano
to deeply grieve for the misfortunes of our fellows is humane

Also agentive adverbs, though possibly adjoined to the relevant projection (see note 4), give a result which is stylistically marked (31)-(32), differently from adverbs of will (33):

(31)  ??Lucidamente scegliere di sacrificarsi ...
to lucidly choose to sacrifice oneself ...
(32)  ??Minuziosamente verificare tutte le correzioni ...
to minutely check all the corrections ...
(33)  Volutamente offendere ...
to deliberately offend

The preinfinitival position is tied to the Spec, VP position, see (27)-(30), or to the left adjoined position, see (31)-(33).
Now, (27)-(30) show that the preinfinitival position of resultative adverbs is somehow accessible, but cannot be considered the proper one, differently
from the preinfinitival position of adverbs of will, see (33). Resultative adverbs are to be considered VP final in the sense made clear in 2.2.1.: hence they occupy most naturally a postinfinitival position. Agentive adverbs are better than the resultative in the preinfinitival position, see (31)-(32), but I suggest that, in the left adjoined position, they are not as acceptable as adverbs of will, due to their primary function of V modifiers, analogous to that of the resultative adverbs (both types are "manner" adverbs).

I consider that adverbs of will are right adjoined to VP (or, in certain cases, NegP) (Lonzi, to appear), and are "transferrable" like their cognate infinitival purpose clauses (cf. Roberts, 1987).

For all these adverbs normal sequence is (34):

(34) T [-finite] Adv

Therefore, since we adopted Pollock's analysis of possible Affix Movement for infinitival lexical verbs, we must conclude that in sequences like (34) the resultative adverb occupies a base final position in a structure like (35a), and not a derived final position in a structure like (35b).

(35) a. VP[v V [-finite] ... Adv]
   b. Aff[[ V1 ] Aff] [VP [Adv] t1]

Although (35b) would be allowed as a result of Short Movement, it would imply a base order which, for these adverbs, is either unattested, see (9) (*Completamente perdere la testa...), or marginal, see (27)-(30).

2.3.3. If completamente is either a VP final adverb or an adjectival specifier, our examples (2) and (4) must be explained in two different ways. But we have seen that structural ambiguity is inherent to the theory adopted here (essentially Pollock, 1989), and it seems to me preferable to save the possibility of a unitary explanation for every single adverbial behavior, on the basis of a concrete structural position, rather than to save it for every surface sequence observed.
3. A (partial) view of the Italian infinitive

From this exploration, an analysis of Italian infinitival sentences similar to that offered by Pollock (1989) for French, seems to be possible. At the same time, it appears that Italian VP adverbs are allowed not to occupy the Spec, VP position more frequently than one might infer from Pollock. I tentatively suggest that adverbs are primarily to be distinguished in complements and specifiers, in the X-bar theory sense: only specifiers may occupy the specifier position of VP, and, as I have argued, AuxP.

The starting question: Which adverbs may originate from a Spec, VP position? has in fact found the following indirect answer: those adverbs that: i) may follow the inflected verb, and ii) enter the sequence: Adv + V [-finite]. If they enter this sequence, they are also capable of entering the alternative sequence: V [-finite] + Adv, as predicted by Pollock. For instance:

(36)  a. Sempre studiare non va bene, bisogna anche giocare
       to always study NEG is good, one must also play
       b. Studiare sempre non va bene, etc.
(37)  a. Anche fumare, è troppo!
       to also smoke, is too much
       b. Fumare anche, è troppo!

We do not find, among these adverbs, neither completamente, which is a V modifier, nor meramente, licensed in the Spec, AuxP⁸.

If an adverb does not enter the sequence Adv + V [-finite], it is specialized as a V modifier, like all lexical "manner" adverbs: bene, male, meglio, or a VP final adverb proper, like ieri, domani, oggi - 'yesterday, tomorrow, today' - and, in French: hier, demain, aujourd'hui (Pollock, 1989), hence it cannot occupy the preverbal position unless as a specifier of the participle (see completamente).

If, finally, it does not follow the (lexical) inflected verb, it is tied to the position Spec, AuxP (as meramente).

In Pollock's analysis the obligatoriness of Verb Movement with Tense [+finite] is crucial (see also Chomsky, 1989): Tense [+finite] requires Verb
Movement to (F2 to) F1, and prohibits Affix Movement; Tense [-finite] does not require Verb Movement and does not prohibit Affix Movement.

I would like to interpret the obligatoriness of Verb Movement for V [-finite], cautiously noted for Italian by Pollock (1989: 412), and advocated by Belletti (1990), as an obvious obligatoriness of postverbal position for VP final adverbs (in the intended sense).

Evidence of the possible Affix Movement for V [-finite] (or, alternatively, lexical insertion) comes from adverbs like *meramente*, see (8), and from a group of adverbs presumably occupying the Spec, VP position like *sempre, solo, anche* (always, only, also''), predictably compatible with short Verb Movement, see (37a, b). Also resultative adverbs like *mortalmente, facilmente*, may occur in preininitival position in stylistically marked contexts, see (27)-(30), whereas agentive adverbs, like of adverbs of will, though they behave consistently with this analysis, do not lend any positive evidence.

Should my analysis of *meramente* prove correct, short Verb Movement could be viewed as an instance of head substitution in the adjacent null projection of the auxiliary verb, and this could have some consequences upon the question of the structure of Infl.

NOTES

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1. See Jackendoff (1972), Emonds (1976), for the "auxiliary position" of *merely*, and for an analysis of "non manner" predicate adverbs, relevant to our problem.

2. Following Pollock, I assume that Affix Movement (or, alternatively, any structural analogue of it, as lexical insertion) applies also to participles.
3. We must admit that adverbs which can be VP specifiers, can also occupy the Spec, AuxP position, in order to explain their interauxiliary occurrence in sequence like:

(i) *E' sempre stato viziato da tutti
     pro has always been spoiled by everyone

This seems to be fairly natural. The converse, however, is not true: AuxP specifiers are only licensed in the relevant position, though marginally susceptible to some interchange, see:

(ii) **Ha sempre meramente equivocato
     pro has always merely misunderstood

(iii) *Ha meramente ribattuto bene
     pro has merely replied well

In fact, *meramente seems to block any other adverb: not only specifiers as i (ii), but also "complements", as in (iii):

4. Agentive adverbs are "transferrable" - differently from resultative adverbs - and I tentatively assume that they can be left-adjointed to maximal projection. However, the preparticipial position (possibly Spec, AgrP-O) might be accessible to more kinds of adverbs than degree and resultative adverbs, and, if so, the relevant contrast would be the following:

(i) Paolo non aveva saggiamente commentato
     Paolo did not have wisely commented upon

(ii) Paolo non aveva, saggiamente, commentato

In (i) the adverb could be in the relevant specifier position; in (ii) it could be adjoined. I leave the question open, since it does not bear directly on the present issue.

5. If the auxiliary is present, it is the auxiliary that moves to Infl, and not the lexical verb. In infinitival sentences, the lexical verb does not exclude the presence of an auxiliary, at least in Pollock's (1989) sense, which extends to verbs like pouvoir, vouloir, devoir.

6. See the following examples:

(i) a. *SOLO so che Maria ha t protestato
     only know (1st p.) that Maria has protested
     b. *SOLO Maria a protestato

(ii) a. *MERAMENTE Giovanni ha equivocato
     b. *MERAMENTE so che Giovanni ha equivocato
7. In the light of our data, short Verb Movement could be viewed as an optional movement to an immediately adjacent empty head, given that the infinitive of the lexical verb would move to the head position of the null auxiliary projection. The auxiliary itself seems instead to obligatorily move to Infl, given the ungrammatical (14).

To further support the analysis of the infinitival verb in its base position, rightward movement of tutti should also be accounted for (Sportiche, 1988; Belletti, 1990). I will simply note that, if we admit with Pollock (1989), Kayne (1975) (see Sportiche for discussion), that tutti is allowed to occupy adverbial position, it could be argued that it behaves like a VP final adverb (more precisely a "manner" agentic adverb) since it occupies higher position only as a left adjoined (or, maybe, parenthetical, see note 4) subject-oriented adverb (exactly like another adverbial quantifier: spesso ("often"), as pointed out in Belletti, 1990: in my analysis either a VP final adverb or a sentence modifier, see Lonzi, to appear).

I assume that, if they are not in otherwise illicit positions, parentheticals are not necessarily separated by virtual commas from the rest of the sentence, being still characterized by a lowering curve in the intonational profile of the sentence. Hence the difficulty of the relevant judgements.

8. Belletti (1989b) assumes that mai, più, ancora (not) ever, (not) anymore, (not) yet, may be either in Spec, NegP, or in Spec, VP, and that these positions give sequences (ia) and (ib), respectively:

(i) a. Non l'ho ancora visto
   NEG him(cl.) have yet seen
   b. Non l'ho visto ancora

(ib) must be explained with Movement to Agr of the participle, crossing the adverb. (The analogous contrast in non-negative sentences for adverbs like sempre ("always"), etc. should be explained with the functional projection PositiveP. See Belletti, 1990).

In Pollock's framework, (ia) is straightforwardly explained with the Spec, VP position; the sequence (ib), somewhat marked in standard Italian (cf Belletti, 1990), could derive from a pendant of the short Verb Movement proposed for the infinitive, marginally allowed by the irrelevance of the Agr-P-O projection at LF (Chomsky, 1989)

In my view, despite the crucial role that the analysis of negation has in Pollock (1989), the relation between pas and other negative adverbs - like point, plus, guère, etc. - is not developed enough and leaves one doubtful on the fact that they should be treated in the same fashion as pas. And, consequently, on the fact that negative Italian adverbs should be treated as pas. In particular, example (123c) in Pollock (1989: 412):

(i) *per non più / niente / mica mangiare
   is composite, and should be analysed separately.
a) a standard form, though stylistically marked, with più:
(ii) per non più mangiare
     for to NEG anymore eat

b) a form which is illicit for the different treatment of niente (‘nothing’) in Italian wrt rien in French (see Pollock, 1989: 418);
c) a form with mica (a negative marker) which is illicit for the same semantic reasons which exclude, from infinitival purpose clauses, other "intensifiers" of assertion like pur, ben (see: *per pur mangiare; see, also: *per non mangiare mica, and, with auxiliary Verb Movement, *per non avere mica mangiato).
A sentence which is semantically possible but seems to be blocked in phonological form by the contiguity requirement with the complementizer di (Rizzi, 1982: 97), is:
(iii) a. *Ha dichiarato di (non) mica mangiare a casa sua
     pro has declared to NEG mica eat at home
b. ?Ha dichiarato di non mangiare mica, a casa sua
   a. d. ?Ha dichiarato di non aver mica mangiato, a casa sua

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