

WHICH ADVERBS IN SPEC, VP?*

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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 ...]
b. [TP NP [Ti [Agri [Vi] Agr] + -Past] ei [VP [Adv] ei]]

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 nodded
(5) *Meramente annui
pro merely nodded

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) *Annui 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 wellformedness 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
b. [Aff [Aux_i] Aff] [VP [Adv] t_i]
c. [Aff [V_i] Aff] [VP [Ø] t_i 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-O². 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) a. Aux (+finite) + Adv + PstPrt
 b. [Aff [Aux_i] Aff] [AuxP [Adv t_i] [VP [Ø] V]
 c. [Aff [Aux_i] Aff] [AuxP [Ø] t_i] [VP [Adv] V]
 d. [Aff [Aux_i] Aff] [AuxP [Ø] t_i] [AgrP-Ø [Adv] e_j] [VP [V [V-Aff_j]]]]

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. *completamente perdere 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-adjoined 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 node⁵.

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.

- (12) Meramente annuire è da bambinetti (= 8)
to merely nod is childish
(13) Avere meramente annuito è stato da bambinetti
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 ...

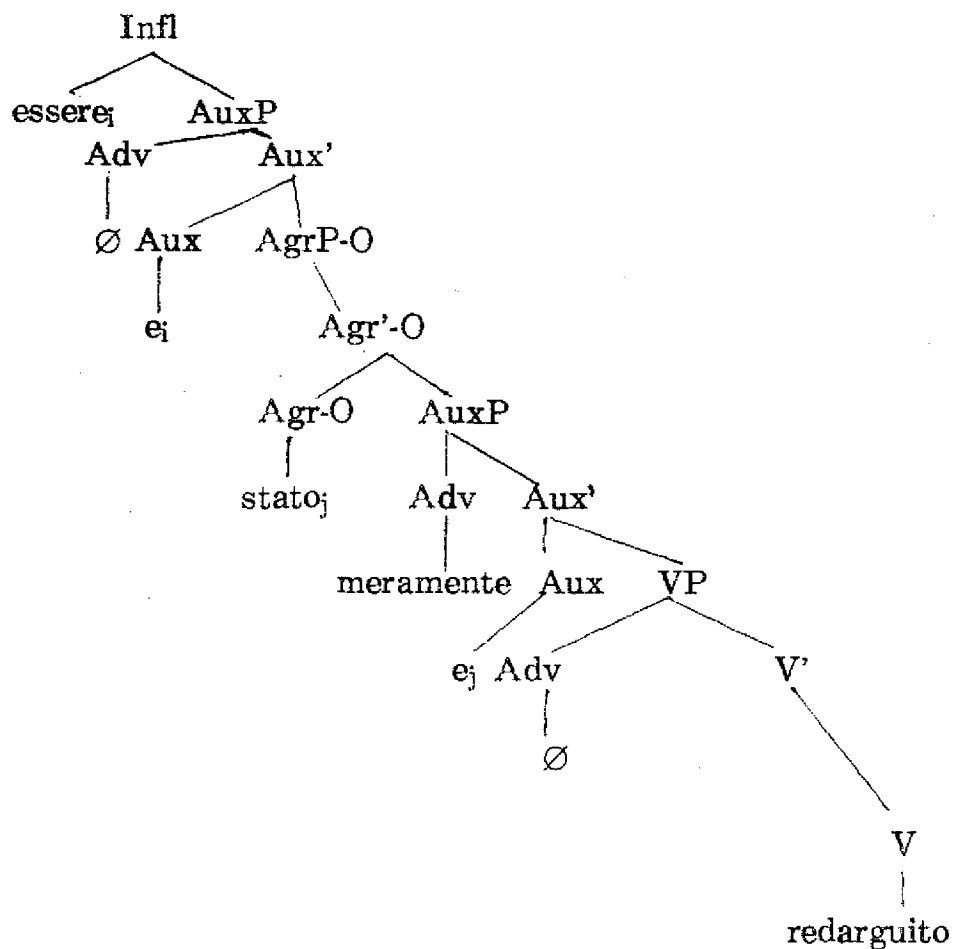
Also in this case, the identity of paradigm must not deceive us (see note 4). Paradigm (15)-(17) is not sufficient to identify an adverbial position, and can be explained both with a Spec, AuxP, and a Spec, VP position. More precisely, if Affix Movement is admitted, (15) may be explained with both positions; 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:

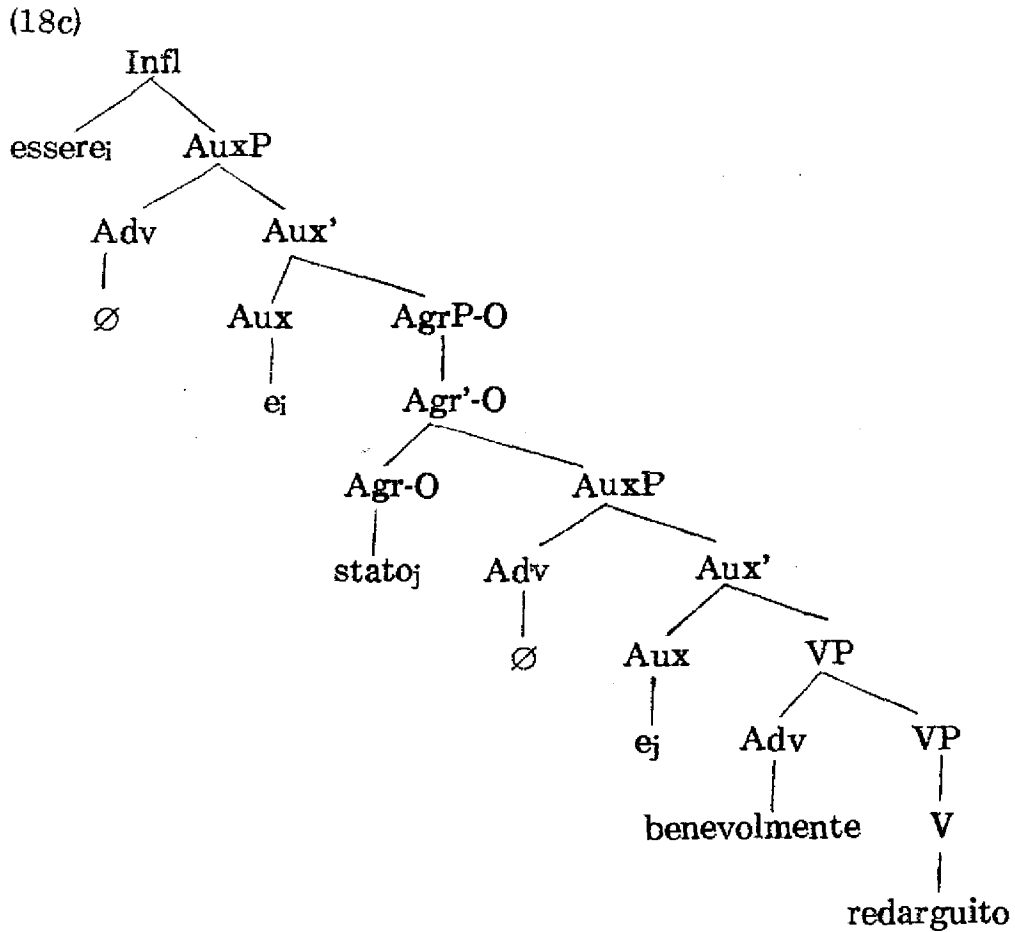
- (18) a. Essere stato meramente / benevolmente redarguito
to have (lit. be) been merely / benevolently blamed
(19) a. Essere meramente / *benevolmente stato redarguito

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 shake of simplicity, I omit the analogous

projection in the representation of the lexical past participle see (11d) and note 2):

(18b)

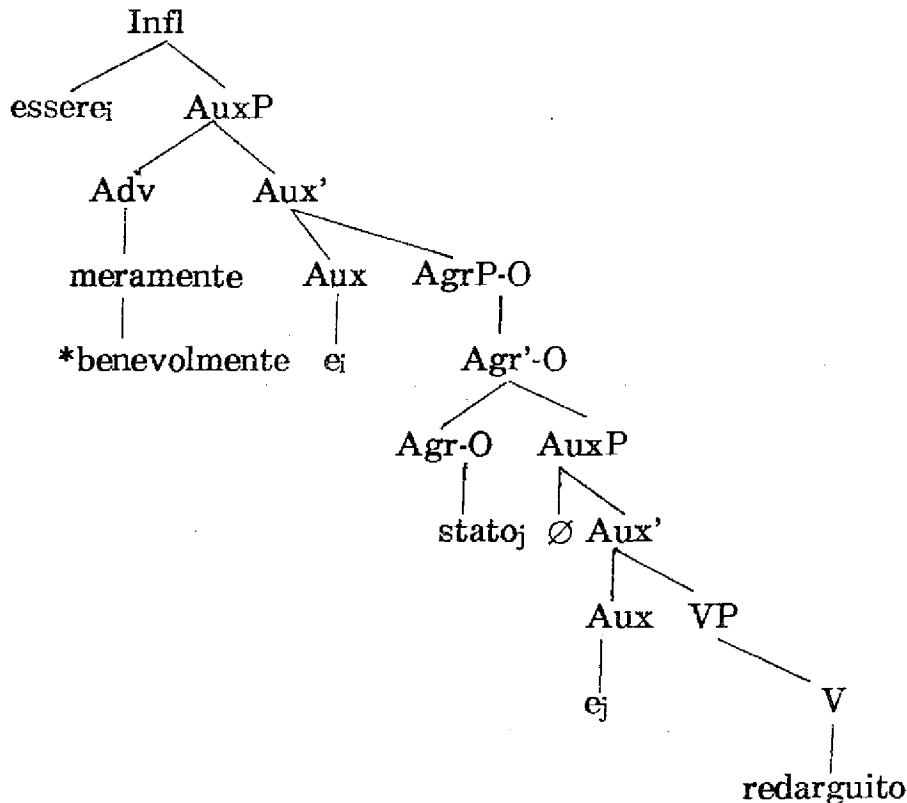




From (18c) we see that *meramente* is in the specifier position of the second auxiliary, and *benevolmente* is adjoined to VP (see note 4), but this difference has no impact on the surface sequence.

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.

(19b)



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 C⁰). Compare: **enormemente ingrandita la fotografia ...* ('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-adjoined 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):

- (20) a. Prendi bene i bicchieri
 Take well the glasses
 b. *Non aveva bene preso i bicchieri
 pro NEG had well taken the glass

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, cliticized 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 adverbs⁷, all resultative adverbs can be topicalized (not, however, clefted), and extracted, observing subjacency (Lonzi, 1988; Cinque, 1990):

- (23) a.i. COMPLETAMENTE hanno svaligiato t l'appartamento!
completely pro have burgled the apartment
a.ii. COMPLETAMENTE mi risulta che abbiamo svaligiato t
l'appartamento!
completely I have been told that pro have burgled ...
(24) a.i. 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 (Ist 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 annoiarsi 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[[Vi] Aff] [VP [Adv] ti]

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 preinfinitival 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

*This work has been presented to the "XVI Incontro informale di Grammatica Generativa", February 1990 (University of Pisa). I am indebted to Luigi Rizzi for encouraging me to attempt this "experiment"; to Paola Benincà, Giorgio Graffi, Andrea Moro, Alessandra Tomaselli, Raffaella Zanuttini, for comments during that and/or other meetings; and to Guglielmo Cinque for criticisms and suggestions on an earlier version of this paper.

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:

- (i) Ha sempre meramente equivocado
pro has always merely misunderstood
(ii) ??Ha meramente sempre equivocado

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

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

4. Agentive adverbs are "transferrable" - differently from resultative adverbs - and I tentatively assume that they can be left-adjoined 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 equivocado
b. *MERAMENTE so che Giovanni ha equivocado

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" agentive 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, parenthetical 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 Pos(itive)P. 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
c. ?Ha dichiarato di non aver mica mangiato, a casa sua

REFERENCES

- Belletti, A. (1989a) "Agreement and Case in Past-Participial Clauses in Italian", ms Université de Genève.
- Belletti, A. (1989b) "On the morphosyntactic nature of the sequence 'Aux + Past Participle' in Italian", in: J. Mascarò e M. Nespò (a cura di), *Grammar in Progress*, Foris, Dordrecht.
- Belletti, A. (1990) "Generalized Verb Movement", ms Université de Genève.
- Chomsky, N. (1989) "Some notes on Economy of Derivation and Representation", *MIT Working Papers in Linguistics*, 10, 43-74.
- Emonds, J. (1976) *A Transformational Approach to English Syntax*, Academic Press, New York San Francisco London, ch.V.
- Jackendoff, R. (1972) *Semantic Interpretation in Generative Grammar*, MIT Press, Cambridge, Mass., ch.III.
- Kayne, R. (1989a) "Facets of Romance Past Participle Agreement", in: P. Benincà (a cura di), *Dialect Variation and the Theory of Grammar*, Foris, Dordrecht, 85-103.
- Kayne, R. (1989b) "Notes on English Agreement", ms CUNY
- Kayne, R. (to appear) "Romance Clitics and PRO", *Proceedings of NELS*, 20.

- Lonzi, L. (1988) "Tipi di gerundio", *Rivista di Grammatica Generativa*, 13, 59-80.
- Lonzi, L. (to appear), "Il sintagma avverbiale", in L. Renzi e G. Salvi (eds) *Grande grammatica italiana di consultazione*, il Mulino, Bologna.
- Pollock, J.Y. (1989), "Verb Movement, Universal Grammar and the Structure of IP", *Linguistic Inquiry*, 20, 365-424.
- Rizzi, L. (1982), *Issues in Italian Syntax*, Foris, Dordrecht, cap. III.
- Roberts, J. (1987), *The Representation of Implicit and Dethematized Subjects*, Foris, Dordrecht.
- Sportiche, D. (1988), "A Theory of Floating Quantifiers and its Corollaries for Constituent Structure", *Linguistic Inquiry*, 19, 425-449.