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On the Evidence for Partial N-Movement in the Romance DP

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0. Introduction

In Cinque (1990a), I had proposed that the base position of A(djective) P(hrase)s in the noun phrase was, despite appearances, the same in Romance as in Germanic, namely to the left of the N, and that their different surface position was to be attributed to the raising of the N in Romance (but not in Germanic) to a functional head intermediate between N and D, across some of the APs, as shown in (1):[1]

(1) a. [D..[AP Y [AP N]]] (Rom.)

b. [D..[AP Y [AP N]]] (Germ.)
X

Here, after sketching the original arguments, and adding one more, I would like to discuss certain apparent problems (Lamarche 1991), and some of the proposals of more recent work which has taken up and further developed this idea (Crisma 1990, Valois 1991a,b, Bernstein 1991, 1992, Giusti 1992, 1993a, Zamparelli 1993).

1. Thematic APs

A first argument for (1) is provided by the distribution of 'thematic' APs (such as *Italian* in *The Italian invasion of Albania*), which express the external theta-role of a N (Kayne 1981a, 111; Giorgi and Longobardi 1991,125ff).

In Romance (here exemplified with Italian), the only order admitted is with the AP intervening between the N and its complement(s). See (2):

[1] Versions of Cinque (1990a) were presented at the XVII Incontro Annuale di Grammatica Generativa in Pisa and at a Eurotyp Meeting of the European Science Foundation in Tilburg, in February 1990, at the Johns Hopkins University in April 1990 and at a syntax workshop at the University of Venice in June 1990. I wish to thank those audiences for their comments and criticism. The present version is based on a presentation given at the XV Glow Colloquium in Lisbon, in April 1992.

(2) a.* L'italiana invasione dell'Albania
b. L'invasione italiana dell'Albania
c.* L'invasione dell'Albania italiana

If thematic APs are taken to occupy the same position of canonical subjects, outside of the X' constituent made up by the head and its complement(s), their distribution is unexpected.[2] In particular, (2b) could not reflect the base order. It could only be an order derived either from (3a), by raising the N leftward to a higher head, if the subject in Romance is generated in [Spec,NP], or from (3b), by 'heavy-NP-shifting' the complement around it, if the subject is generated to the right:[3]

(3) a. $[_{DP} \ldots [_{NP}$ AP $[_{N'}$ N compl.]]]
l'ital. invas. dell'Alb.
S N O

b. $[_{DP} \ldots [_{NP} [_{N'}$ N compl.] AP]]
l'invas. dell'Al. ital.
N O S

As the order '(D) N AP complement' is the only order permitted, the movement must be obligatory, which is rather natural for a head-to-head movement (cf. the obligatory raising of finite V in Romance), but not, in general, for apparent reorderings of maximal projections to the right (as in Heavy-NP-Shift).

The pattern in (2), thus, favors the hypothesis of a leftward head-to-head raising of the N from a SNO source over the alternative.[4]

[2] Their position is unexpected even if they should turn out not to occupy the very same position of nominal external arguments (cf. sect.3 below for some discussion). This is because they "break up" the constituent formed by the head and its complement(s).

[3] We exclude from consideration the only other possibility of obtaining (2b) from either (3a) or (3b), namely by lowering the AP into N'; an operation excluded by the ECP.

[4] Picallo (1991) has independently proposed that the N raises leftward to a functional head of Number in Catalan (from a category neutral head through a nominalizing head in the case of event nominals-for which also see Ouhalla 1988, 3.2.3.2); and that this provides an account for the NSO order of arguments in the Catalan DP (*El temor d'ell/d'en Pere als trons* 'The fear of him/Peter to thunderclaps'). For Italian too, it should in principle be possible to replicate the argument here based on thematic APs with other types of subjects (possessive APs and genitive PPs). That is indeed possible in many (*L'opinione mia di voi* 'the opinion my of you'; *L'odio di ognuno di loro per i propri simili* 'the hatred of each of them for his fellows'), though not all cases (**L'invasione degli italiani dell'Albania* 'The Italians' invasion of Albania'), due to a number of intervening factors, which will not be discussed here (see Cinque forthcoming a). Brito (1989) also proposed movement of N to a DP-internal Agr to account for agreement and the distribution of possessives in the Portuguese DP.

This hypothesis also has the advantage of minimizing the difference between Romance and Germanic. It assigns the same D-structure to the two language groups, and the very same rule which is needed to 'regularize' the unexpected word order of Romance (w.r.t. theta- and X-bar theory) suffices to express the specific word order difference between the two groups.

This is not the case with the rule reordering complements to the right in the alternative of (3b). Though needed to 'regularize' the word order of Romance, it does not suffice to characterize the difference between the two language groups. Another, unrelated, parameter is needed, such as the left vs. right location of the external argument.[5]

It is interesting to note that in the highly restrictive system proposed in Kayne (1993), alternative (3a), which we have seen to compare favorably with alternative (3b), is in fact the only possibility allowed, as base, or derived, adjunctions to the right are excluded there on general grounds.

The derivation of the NSO order that we see in (3a) from a SNO order via a rule of leftward head-to-head movement in Romance is reminiscent of the N-movement analysis proposed for various other language groups, from Semitic (Ritter 1988,1990, Ouhalla 1988, Siloni 1990, 1991, Fassi Fehri 1993), to Scandinavian (Taraldsen 1990) to Celtic (Guilfoyle 1988, Rouveret (1991), Duffield 1991, 1992), to Bantu languages (Carstens 1991); except that in the latter languages the common N can, or must, overtly move to D (adjoining to it), while in Romance it can only move to a head intermediate between N and D.

[5] In the alternative (3b), it is not only curious that the rule reordering a complement to the right of the subject is obligatory. There is a further puzzle. When more complements are present, all of them have to heavy-NP-shift obligatorily past the subject, and the putative double application of Heavy-NP-Shift gives rise to a neutral word order only when it reproduces a DO PP sequence (cf.(ia)), while it implies a contrast just on the DO when it gives rise to a PP DO sequence (cf. (ib)):

(i) a. La cessione italiana di Nizza alla Francia
The cession Italian of Nice to France
b. La cessione italiana alla Francia di Nizza
The cession Italian to France of Nice

In the alternative (3a), the facts in (i) are instead expected. Only (ib) is derived via Heavy-NP-Shift of the DO (or its equivalent in Kayne's (1993) system).

This is apparent from the fact that the N which raises over the subject (here the thematic AP) can be separated from D by other material (4a),and simply cannot continue its movement to D, as shown by (4b):[6]

(4) a. La sola grande invasione italiana dell'Albania
The single big invasion Italian of Albania
b. * L'invasione sola grande italiana dell'Albania

2. Attributive APs

A variant of the above argument is provided by the distribution of attributive APs. While they necessarily precede the N in Germanic, they are found either preceding or following the N in Romance (cf. (5) and (6)):

(5) Their brutal aggression against Albania
(6) a. La loro brutale aggressione all'Albania
b. La loro aggressione brutale all'Albania

Given the ungrammaticality of the order "N compl AP" under normal intonation (cf. (7), and sect.4 for a discussion of that order with an intonational break after the complement), this again suggests that the order in (6b) is derived via leftward raising of the N to a higher head past the AP (8a), rather than via rightward movement of the complement around it (8b):

[6] Within the Romance languages, Rumanian possesses the extra option of (overt) adjunction of (common) Ns to D. So alongside (ia), shared with the other Romance languages, Rumanian also has the option in (ib) (see Dobrovie-Sorin 1987, Grosu 1988 and Giusti 1992 for relevant discussion):

(i) a. Al meu portret mare (the my picture big)
b. Portretul meu mare (picture-the my big)

Movement of the N to D across all APs seems to parallel, in the same language, movement of the V past (most) adverbPs and the subject in [Spec,AgrSP] in non-V/2 clauses. Both Semitic and Celtic languages, as well as Rumanian, display instances of VSO order alongside SVO order (Ritter 1988, 926 and Ouhalla 1988,189 observe that VSO languages systematically display NSO order. Chamorro (Chung 1991) is another case in point).

The Scandinavian languages, where neither the N crosses over APs, nor the V may cross over adverbPs and the subject in non V/2 clauses, should, from this perspective, involve no movement of N to D at all, contrary to appearances. Interestingly, this is just what Giusti (1992, 1993a) argues for. Svenonius (1992a) and Longobardi (forthcoming) provide further arguments to the same effect.

For evidence that proper names (and few other nouns) overtly raise up to D in Romance, but not in Germanic, see Longobardi (1993). What remains to be seen is how best to express the apparent correlation that proper names raise overtly to D only in those languages where common nouns overtly raise to a functional head intermediate between N and D.

(7) * La loro aggressione all'Albania brutale
(8) a. [$_{DP}$ La loro [$_{YP}$ _ [$_{XP}$ brutale [$_{NP}$ aggressione all'Albania]]]]
b. [$_{DP}$ La loro [$_{NP}$ aggressione all'Albania] brutale]

The existence of both (6a) and (b) might suggest that raising of the N past the attributive AP position is optional, but there are grounds to reject this conclusion. The reason is that the pre-nominal and post-nominal positions of the attributive AP receive two different interpretations (although the difference may be hard to discern in some cases). The post-nominal position receives a strict manner interpretation, while the pre-nominal one has a "subject oriented" interpretation (Jackendoff 1972, chapter 3). (6a) can be paraphrased as: "It was brutal of them to attack Albania" (even though the way they did it could well have been non brutal). (6b) on the other hand is only compatible with a situation in which the manner of the aggression was brutal.[7] As a matter of fact, the pure manner interpretation of an attributive AP is possible only in post-nominal position, as is clearly shown by (9b), where the subject oriented reading is (perhaps for lack of a specific subject) unavailable:

(9) a. Le aggressioni brutali vanno severamente condannate
b. * Le brutali aggressioni vanno severamente condannate
'brutal aggressions must be severely condemned'

All this suggests that the N raises *obligatorily* to a head higher than the manner AP position (just as an active past participle raises obligatorily to a head higher than the manner adverbP position in the clause - cf. (iib) of fn.7).

[7] I thank Paola Benincà for pointing out to me this subtle difference in interpretation and the sharp contrast in (9) below. The difference between (6a) and b recalls the difference between (ia) and b in the domain of the clause:

(i) a. Hanno brutalmente aggredito l'Albania
They have brutally attacked Albania
b. Hanno aggredito brutalmente l'Albania
They have attacked Albania brutally

And the contrast in (9) is replicated by the contrast in (iia-b), which contain a verb (*trattare*, 'treat') that requires a manner adverbP:

(ii) a. Hanno trattato brutalmente i figli
They have treated their children brutally
b. * Hanno brutalmente trattato i figli
They have brutally treated their children

If thematic APs were in [Spec,NP], as assumed above, the sequence in (10) should be possible, but this expectation does not seem to be fulfilled. Cf. (11), read with no "comma intonation":[8]

(10) N [$_{XP}$ AP_{manner} t [$_{NP}$ $AP_{thematic}$ t YP]] ..

(11) a.*? L'aggressione brutale italiana all'Albania
The attack brutal Italian to Albania

b. *? La reazione ostile americana alle critiche
The reaction hostile American to criticism

This might suggest that thematic APs are not in [Spec,NP], as opposed to genitive PPs (cf. *La reazione ostile di Bush alle critiche* 'Bush's hostile reaction to criticism'), but compete with manner APs for one and the same position. Comparative evidence would seem to support this conjecture. N raises in Germanic past the base position of a DP subject (cf. (12)), but it can never cross over thematic (in fact, any) APs (which would follow if the latter were distinct from, and higher than, the former):

(12) a. Die Wut des Mannes auf sich (Haider 1992)
'The anger of J. against himself'

b. Beskrivelsen til Per av sine venner (Taraldsen 1990)
'The description of P. of his (refl.) friends'

c. The withdrawal of the liberals from the government

This conclusion, however, is not sure given the existence in Italian of limitations on the cooccurrence of adjectives of equal degree of 'absoluteness', comparable to those uncovered for Chinese by Sproat and Shih (1988, 1990). See fn.15 for a brief discussion. As Giuseppe Longobardi suggested (p.c.), the fact that DP, but not AP,

[8] Cf. Giorgi (1988, 309): "Adjectives which are obligatorily after the head cannot be preceded by another adjective"(our translation). One of her examples is **Un'invasione ben progettata tedesca* 'A well-designed German invasion'. Crisma (1990,137) reports an apparently acceptable case (*L'atteggiamento ostile americano nei confronti..*). This is good to my ears if pronounced with an intonation break after *americano*, which might indicate the presence of an altogether different structure. Cf. below the discussion on predicative XPs in sect. 4. Valois (1991b, 164) claims that examples corresponding to (11) are indeed impossible also in French (**L'invasion brutale martienne de Jupiter*), but appears to accept, like Lamarche (1991, 224), cases with the opposite order of APs (*L'invasion martienne brutale de Jupiter*), which are impossible in both English (Valois 1991b, 165) and Italian. Perhaps the French sentence is acceptable to the extent to which a compound reading of *invasion martienne* is possible in French. As for the possible *The brutal Martian invasion of Jupiter* in English, either *brutal* occupies the subject-oriented AP position of *brutale* in the Italian *La brutale invasione marziana di Giove*, or it simply cooccurs, as a manner AP, with the thematic AP, given the absence in English of combinatorial restrictions on APs of equal degree of "absoluteness" (Sproat and Shih 1988, 1990).

subjects are crossed over by the N in Germanic could be rendered compatible with their occupying the same structural position if raising of the N past DP subjects were required to Case-mark them under government (APs being instead Case-marked under Spec/Head agreement). I leave the question open.

Sequences of a subj(ect)-oriented AP followed by a manner or thematic AP are likewise impossible between the N and its complement(s) (cf.(13)), which indicates that the N cannot raise past the position of subj-oriented APs:[9]

(13) a.* L'aggressione stupida brutale/italiana all'Albania
The aggression stupid brutal/Italian against Albania
(cf. La stupida aggressione brutale/italiana all'Albania)

As the subj-oriented attributive AP preceding the N can be preceded by a sp(eaker)-oriented AP like *probabile, sicuro, etc.* 'probable, sure, etc.' (but see the second paragraph of fn.10), we arrive at the partial structure (14), which closely resembles the corresponding sentence structure with adverbPs in place of APs. Cf. (15a) with (15b):[10]

[9] In the possible *La loro aggressione stupida all'Albania* 'Their aggression stupid against Albania,' *stupid* must have a manner rather than a subj-oriented reading, which appears to be true. Valois (1991b, 150) notes that *intelligent* in (ia) "is not equivalent to *intelligently* in the sentential reading" (cf.(ib)):

(i) a. The intelligent response of the union to the government
b. The union intelligently responded to the attack by the government

This may be due to the necessary result interpretation of the nominal in (ia). With nominals admitting an event interpretation, the relevant reading does seem to be available:

(ii) Their intelligent withdrawal from the competition

[10] See Crisma (1990), Valois (1991a,b), Szabolcsi (1989) for discussion of the parallelism between the internal structure of CPs and DPs; the former two, in particular, for (partially different) analyses of the virtual point-by-point correspondence between APs in DPs and AdverbPs in CPs.

To my ears, the cooccurrence of a speaker-oriented and a subject-oriented AP is quite marginal (unless a comma intonation separates the two, as in asyndetic coordination-cf. the possibility of *la sua probabile e goffa reazione..* 'his probable and clumsy reaction..' This might again be related to the combinatorial restrictions on APs of equal degree of "absoluteness" uncovered by Sproat and Shih (1988,1990). Cf. fn. 15, below.

Potentially problematic is the acceptability of such cases as *Il rilascio probabile dei prigionieri* 'The release probable of the prisoners," with a speaker-oriented AP in the manner AP position. Indeed, the AP does not acquire a manner interpretation. However, one may note that the parallelism with the sentence remains, as the AdverbP *probabilmente* can also appear in the position otherwise open to manner AdverbPs in the presence of an object (*Hanno rilasciato probabilmente i prigionieri* 'They have released probably the prisoners').

(14) $[_{XP}$ APsp-or _ $[_{YP}$ APsubj-or _ $[_{ZP}$ APmanner/themat _ $[_{NP}$ N ..

(15) a. La probabile goffa reazione immediata alla tua lettera
The probable clumsy reaction immediate to your letter
b. Probabilmente avranno goffamente reagito subito alla tua lettera
They probably have clumsily reacted immediately to your letter

The structure must in fact be even more articulated, as other APs can precede speaker-oriented APs (cf. Crisma 1990, Giusti 1992,1993b):

(16) Le sue due altre probabili goffe reazioni immediate alla tua lettera
His two other probable clumsy reactions immediate to your letter

3. Predicative APs

As we have seen, attributive APs in Romance either precede the N or occur in between it and its complement, the order "N compl AP" being impossible (cf. (7) above). This same order, however, becomes possible if there is a sharp intonational break between the complement and the AP, with the AP bearing stress (17a). The intonation is less special if the AP is "heavy," i.e. either coordinated (17b), or modified by a specifier (17c) or a complement (17d):

(17) a. La loro aggressione all'Albania, BRUTALE
b. La loro aggressione all'Albania, improvvisa e brutale
c. La loro aggressione all'Albania, assai poco brutale
d. La loro aggressione all'Albania, brutale nei suoi effetti

In a different context, Valois (1991a,b), Lamarche (1991) suggest that (French) pre-nominal adjectives (in event nominals) are incorporated into the N. This, however, appears dubious. Pre-nominal adjectives can have a specifier (*Les très frequentes visites de Jean à sa mère* 'The very frequent visits of Jean to his mother,' or, in Italian, *Le assai poco probabili dimissioni di Carlo* 'The very hardly probable resignation of Carlo'), so that one would have to admit incorporation/adjunction of a maximal projection to a head, contrary to the spirit of the structure preserving hypothesis (cf. also Kayne 1993). "Liaison" facts cannot be construed as evidence for the X-zero status of the pre-nominal adjective either, as they are also triggered in the presence of a specifier (*Les tres frequentes ([z]) invasions de Jupiter*-the judgment is Michal Starke's). Lamarche (1991,228ff) takes the obligatory character of liaison between a pre-nominal adjective and a following N starting with a vowel as evidence that "pre-nominal adjectives are in a relation structurally distinct from Spec-Head." But this is unlikely, given the obligatory character of liaison in *très/plus [z] interessant*. On the impossibility of complements to pre-nominal adjectives, and the irrelevance of this property for the head status of the adjective, see the discussion in sect. 6 below.

This fact, however, should not be taken to suggest that APs in Romance can after all be freely generated both to the left and to the right of the N and its complement. For there is evidence that the AP cases in (17) constitute an entirely different type of modification: a *predicative* type, which is found to the right of the N and its complement(s) in Germanic too.

The position in question only allows for APs that can be predicated of a maximal projection (and can consequently also occur in post-copular position). This becomes evident if we pick adjectives that can never be used predicatively, as shown by their non occurrence in post-copular APs (cf.(18)).[11] Such adjectives appear not to be able to occur in the position to the right of the N and its complement either (see (19c)), although they can occur in the attributive positions to the left of the N, or between it and its complement (19a-b):[12]

(18) * Questo motivo è principale
This reason is main

[11] This class includes adjectives like *principale* 'main,' *scorso* 'last,' *prossimo* 'next,' *maggiore* 'elder,' *precedente* 'former,' *seguente* 'following,' *stesso* 'himself' , etc. Others (*semplice*, *solo*, etc.) have two meanings, one of which ('mere,' 'only,' in the specific case) admits of no predicative usage.

[12] The distinction between attributive (DP-internal) and predicative (post-copular) APs is a traditional one. What is suggested here is that DP-internal APs can be either attributive or predicative. Both in Germanic and Romance, attributive APs are generated to the left of the N while predicative APs are to its right (actually to the right of the N's complement): a position which I will identify here with that of a (reduced) relative clause, an AgrP containing the relevant AP in predicate position (whence the correlation noted with post-copular APs). Cf. Bernstein (1993) for a similar suggestion. Also see Cinque (forthcoming a) for cases of predicative XPs distinct from APs. The existence of many attributive APs to which corresponds no predicative usage argues against transformationally relating the former to the latter (cf. Bolinger 1967).

The notion of predicative AP utilized here appears to correspond to Sproat and Shih's (1988, 1990) notion of indirect (vs. direct) modification instantiated in the Chinese DP by APs preceded by the *de* particle also used to introduce relative clauses. Indeed, as they note, *de* APs do not manifest the ordering restrictions of *de*-less APs, and can contain only adjectives which can also occur after a copula. We differ from them here in not taking what they call direct modification (which appears to correspond to our attributive modification) to necessarily involve compounding.

Attributive APs in Italian can be embedded in AgrPs only at a more formal stylistic level, as (ia-b) show. In (i), the PP complement, and presumably the degree modifier, of the A are in some functional projection outside the AP, a marked option for attributive adjectives:

(i) a. % L' a noi più invisa sete di potere
b. % La sete a noi più invisa di potere
c. La sete di potere a noi più invisa
'the thirst of power to us more unpleasant'

(19) a. Questo è il principale motivo della sua partenza
This is the main reason of his departure
b. Questo è il motivo principale della sua partenza
This is the reason main of his departure
c.* Questo è il motivo della sua partenza, PRINCIPALE
This is the reason of his departure main

A parallel situation is found in Germanic, here exemplified with English and German. While APs appear as a norm to the left of the N, they can be found to the right of the N (and its complements) when coordinated or modified:[13]

(20) a.* A man proud
b. A man bruised and battered
c. A steak just right
d. A man proud of his son

(21) a. Roeslein rot (lit.)[14] 'the little red rose'
b. Diese Woche regnerisch und stürmisch 'this week, rainy and stormy'
c. Gewehrkugeln gross wie Taubeneier 'bullets big as pigeon eggs'
d. Eine Katze so gross 'a cat this big'

That the right peripheral position is a predicative one in Germanic too is shown by the fact that no AP can occur there which cannot also occur in post-copular position, exactly as in Romance:

[13] The examples in (20) are from Abney (1987, 327). The ungrammaticality of (20a), as opposed to the grammaticality of (17a) is perhaps related to the fact that in Italian, but not in English, stress is sufficient to render a constituent "heavy." Cf. contrasts in Heavy-NP-Shift between the two languages such as:

(i) a. Presenteranno a Gianni LEI/MARIA
b. *They will introduce to John HER/MARIA

Post-nominal bare adjectives are not entirely impossible in English, though. As noted by Bolinger (1967), they become acceptable under a "stage-level" reading (if available) (cf. *Who are the people guilty?, The materials ready will be shipped*). In Italian, the same "stage-level" reading appears to dispense with the need for a special stress on a bare predicative adjective: *La sola aggressione all'Albania imminente.*. 'the only aggression against Albania imminent'.

[14] (21a) and (c) are from Vater (1985). German provides a particularly clear indication that the right peripheral position of APs is a predicative one. Post-copular predicative adjectives are morphologically invariant, as opposed to pre-nominal attributive adjectives, which bear either a weak or strong declension (for which see, among others, Penner and Schönenberger 1992, Plank 1992, Longobardi forthcoming). The post-nominal adjectives in (21) are necessarily invariant.

Sursilvan, within Romance, also distinguishes morphologically predicative from attributive As (in the masc. sing.). Cf. Roberge (1989), Haiman and Benincà (1992, 141ff). Our expectation would be that masc. sing. adjectives found after the N's complement(s) have the predicative form.

(22) a. * The indignity, utter and simple
b. * The indignity was utter (Abney 1987,328)

(23) a. * Die Woche letzt oder nächst 'the week last or next'
b. * Diese Woche ist letzt 'this week is last'

4. Generation in [Spec,XP] vs. adjunction

Given the number of attributive APs possible in the DP (cf. (16) above), the question arises of what is the structure which they enter. A common assumption is that they are adjoined to a maximal projection (cf. Picallo 1991, Valois 1991a,b, Bernstein 1991, Carstens 1991, among others). According to this idea, (16) above would, for example, receive a representation like that in (24), where we leave the categorial nature of the various XPs undetermined now (the point would not change if one were to assume that one (or more) of the XPs of (24) is an independent functional projection as long as some of them are conceived of as adjunctions):

(24) [$_{DP}$ Le [$_{XP}$ sue [$_{XP}$ due [$_{XP}$ altre [$_{XP}$ probabili [$_{XP}$ goffe reazioni [$_{XP}$ immediate [$_{NP}$ t alla tua lettera]]]]

There are, however, both conceptual and empirical reasons to prefer the alternative of generating the APs in distinct specifier positions (even if this leads us to posit a higher number of functional projections between D and NP).

First, there exists a specific unmarked serialization of the different classes of APs. This is illustrated in (25a) for event nominals and in (25b) for object-denoting nominals:[15]

[15] These orders hold for sequences of attributive APs in which an outer AP modifies the constituent formed by the NP and the inner AP(s). Such ordering restrictions are apparently (and irrelevantly) violated whenever there is a series of asyndetically coordinated APs, or when a marked interpretation is intended. As Sproat and Shih (1990, fn2) note (cf. also Dixon 1982, 24), the sequence "*brown small dogs* (with heavy accent on *brown*) is fine on the interpretation that small dogs form a discourse-relevant class and that the speaker wishes to refer to the brown members of that class." Both of these apparent exceptions involve special intonational contours, and are felt to be marked. For further discussion, see Sproat and Shih (1988, 477ff; 1990, sect. 2.3).

Concerning (25b), Sproat and Shih (1988, 470ff; 1990,sect. 4) note that with Chinese *de*-less APs certain combinatorial restrictions exist among the different classes of APs which are not found in English (where they have only indirect reflexes). In particular, while quality>color, quality>shape, size>color and size>shape combinations are possible, combinations of APs from the contiguous classes quality>size and shape> color are impossible. Elaborating on suggestions by Kamp and Higginbotham, they attribute this limitation to a restriction operative in Chinese on sequences of APs belonging to the same (or comparable) degree of "absoluteness," where *shape/color/nationality* are high in a scale of absoluteness (their determination not depending on the speaker's subjective judgment) and *quality/size*

(25) a. poss> cardinal> ordinal> speaker-or.> subj-or.> manner> thematic (cf. (24))
b. poss.> cardinal> ordinal> quality> size> shape>color>nationality
(I) suoi due altri bei grandi quadri tondi grigi

The existence of such serializations is not easily accommodated within the adjunction hypothesis, as adjunctions are normally intended to be free (cf. Crisma 1990,60). It is, on the contrary, less unnatural in the generation-in-Spec hypothesis, especially if it could be made to follow from the hierarchical serialization of the functional projections in whose Specs the APs are generated.

A second motivation is provided by the existence of a clear limit on the number of non-coordinated attributive APs within DP (apparently not exceeding six or seven). While no principled reason exists for this limit in the adjunction hypothesis, there is an obvious reason for it in the generation-in-Spec hypothesis: namely, the limited number of functional projections independently available between D and NP.

Thirdly, under the generation-in-Spec hypothesis the fact that APs are *to the left of the head* does not need to be stipulated (as it must under the adjunction hypothesis). It simply follows from the location of specifiers, which are to the left of the head (in Romance and Germanic). If XPs in Spec position, but not those in adjoined position, induce Relativized Minimality violations (cf. Rizzi 1992), then there may be an additional reason for the generation of APs in Spec. Consider Rumanian, where APs can move to Spec of DP, as illustrated in (26):[16]

low. At a careful examination, Italian appears to pattern with Chinese. Compare (i) and (iia-d) with the Chinese cases discussed in Sproat and Shih (1988, 1990):

(i). Un [bellissimo / piccolo] vaso [rosso / ovale] di terracotta

(ii) a. *? Un bellissimo piccolo vaso di terracotta
b. * Un vaso bellissimo piccolo di terracotta
c. ?? Un bellissimo vaso piccolo di terracotta
d. * Un vaso rosso ovale di terracotta

As noted above, similar combinatorial restrictions appear to exist with the AP classes of event nominals in Italian (though not in English), to the effect that sequences of the contiguous classes of speaker-and subject-oriented APs , or manner and thematic APs, are quite marginal.

[16] Movement of APs appears to be limited to Spec of DP, much as movement of AdverbPs is limited to operator positions and cannot occur between two positions of base generation of AdverbPs (Pollock 1989).

(26) [$_{DP}$ [$_{AP}$(Extraordinar de) frumos]ul [t portret]]
Very beautiful-the picture

As observed in Giusti (1992, 204ff), to whom we refer for more careful discussion of these facts, demonstrative APs, which are higher than attributive APs (cf.(27a-b)), while not blocking movement of the N past them, as we see in (27a), do block the movement of APs crossing over them, an apparent Relativized Minimality effect. See (28):[17]

(27) a. [$_{DP}$ Portretul [acesta t [frumos [t]]]]
Picture-the this-agr beautiful
b. * [$_{DP}$ Portret-ul [frumos t [acest(a) [t]]]]
(28) * (Extraordinar de) frumosul [acest(a) [t portret]]
Very beautiful this picture

If these considerations in favor of the generation-in-Spec hypothesis are right, then we must envisage a structure as articulated as that shown in (30) (cf. Crisma 1990) where at least (perhaps at most) seven Spec positions are available for APs:

(30) [$_{DP}$ D [$_{XP}$poss X [$_{YP}$card Y [$_{WP}$ord W [$_{ZP}$sp-or Z [$_{HP}$subj-or H [$_{NP}$ [them / mann] N

[17] *Acest frumos baiat* is the form most closely reflecting the base order (with *acest* arguably moved string-vacuously to Spec of DP-cf. Giusti 1992, 211, for whom the form *acesta* in (27a) is nothing but an agreeing form of *acest*, with agreement activated by the N moving, on its way to D, through the head of the maximal projection containing the demonstrative. For evidence from Kiswahili that demonstratives are maximal projections generated lower than D and optionally moved to Spec of DP, see Carstens (1991, sect. 3.5).

Given the text analysis of (28), one might expect that no manner (or subject-oriented) AP could move to [Spec,DP] when a speaker-oriented AP is present, as the former would have to cross over the latter, generated in a higher Spec. The facts bear out the prediction only in part. (ia) and b conform to the expectation, but (ic) is less clearly ungrammatical than (28) (the judgments are Carmen Dobrovie-Sorin's, p.c.):

(i) a. Probabila brutala invazie a Bosniei
Probable-the brutal invasion of Bosnia
b. Probabila invazie brutala a Bosniei
c. ?? (Extraordinar de) brutala probabila invazie a Bosniei

Should (i) be grammatical, its grammaticality could perhaps be reconciled with the ungrammaticality of (28) by taking the A'-positions of attributive APs (not including demonstrative APs) to count as "non-distinct," hence invisible to Relativized Minimality, much as the various A-positions belonging to the same clause, in Rizzi's recent re-elaboration of his notion of Relativized Minimality.

In the next two sections, two more arguments will be given for the hypothesis that all *attributive* APs in Romance are generated on a left branch even when they appear to the right of the N.

5. A recursion restriction

Indeed, if post-nominal attributive APs in Romance are on a left branch, they should display whatever restrictions affect pre-nominal attributive APs (in both Germanic and Romance). A well-known restriction on maximal projections overtly found on a left branch is their inability to take complements to their right, as shown by (31a-b), which contrast with (32a-b), where the offending left branch phrases are "restored" to a right branch:[18]

(31) a. Lui non è [$_{AP}$ [$_{QP}$ tanto (*quanto voi)] alto]
He isn't so as you tall
b. Lui è stato [$_{VP}$ [$_{AdvP}$ diversamente (*da voi)] sistemato]
He has been differently from you put up

(32) a. Lui non è [$_{AP}$ alto [$_{QP}$ tanto (quanto voi)]]
b. Lui è stato [$_{VP}$ sistemato [$_{AdvP}$ diversamente (da voi)]]

The same restriction is clearly operative in the case of pre-nominal attributive APs in Italian. See (33):

(33) [$_{DP}$ I suoi [$_{AP}$ fedeli (*alla causa)] sostenitori]
His faithful (to the cause) supporters

Given the analysis presented above, it should also be operative on post-nominal attributive APs, at first sight, contrary to fact. Cf. (34):

[18] The recursion restriction, originally noted by Zwart (1974), is further discussed in Emonds (1976), Williams (1982), Longobardi (1989). As both Emonds and Longobardi note, the Specs of AgrSP, DP and CP are exempted from it:

(i) a. The endnotes of my paper are too long
b. The man from Philadelphia's hat
c. Which appeal to the Parliament was successful?

If the positions in which APs are base-generated are A-bar positions, like the positions of AdverbPs, it would then seem that the restriction holds for A-bar positions filled in the base (and not for A-positions, or A-bar positions filled in the syntactic derivation).

(34) I suoi sostenitori fedeli alla causa
His supporters faithful to the cause

However, to check this prediction we must ensure that we are dealing with structure (35a), in which the AP is on a left branch (and is attributive), rather than with structure (35b), in which the AP is predicative, and is in fact on a right branch:

(35) a. I suoi sostenitori$_i$ [$_{XP}$ [fedeli alla causa] [$_{NP}$ t$_i$]]
b. I suoi sostenitori$_i$ [$_{NP}$ t$_i$ [fedeli alla causa]]

A simple way to ensure this is to have a complement to the N, which we have seen is able to discriminate between attributive APs (which have to precede it) and predicative APs (which have to follow it). Once we do that, we see that post-nominal APs preceding the complement do show the restriction (cf. (36a)), while post-nominal APs following the complement do not (cf. (36b)):[19]

(36) a.* I sostenitori fedeli alla causa di Gianni sono pochi
The supporters faithful to the cause of G. are few
b. I sostenitori di Gianni fedeli alla causa sono pochi

6. Adjective ordering

Additional evidence for the generation of attributive APs to the left of N in Romance comes from the cross-linguistic regularities in the relative ordering of adjectives uncovered in Hetzron (1978) and Sproat and Shih (1988, 1990). What these authors note is that there is a relative ordering of the different classes of adjectives which is by and large the same across languages, apparently based on a scale of distance from the N, and that in "consistent" NA languages it is the mirror-image of that found in "consistent" AN languages. So, in AN languages, here exemplified with a subset of English and German APs, the relative ordering is with evaluating (or *quality*) APs preceding (more distant from the N than) *size* APs, in turn preceding *shape* APs, which precede *color* (and *nationality* or provenance) APs. See (37), from Hetzron (1978):

[19] Cf. Giorgi (1988, 304), who notes that "a complex adjective cannot appear between the nominal head and its complement" (our translation), reporting examples like:

(i) * Quell'amico più simpatico di te di Mario
That friend nicer than you of Mario's

(37)	AN order:	Evaluating	Size	Color	N
	a. English:	beautiful	big	red	ball
	b. German:	schoener	grosser	roter	Ball

Instead, in some of the languages where all APs follow the N, the relative order is the mirror-image of that in (37). See (38):[20]

(38)	NA order:	N	Color	Size	Evaluating
	a. Indonesian:	bola	merah	besar	tjantik
		'ball'	'red'	'big'	'beautiful'
	b. Thai:	ma	daam	may	
		'dog'	'black'	'big'	

This points to the conclusion that the different classes of APs are universally arranged on a hierarchy of relative closeness to the head N (cf. Sproat and Shih 1988,486), with, e.g., color APs generated in the Spec of a functional projection dominating the N more closely than the projection containing in its Spec quality APs; and that the different order manifested in (37) and (38) is a consequence of a different setting of a general head-modifier parameter.[21]

Particularly relevant in the present context is what emerges from Hetzron (1978) regarding ANA languages, like the Romance languages. See (39) (corresponding to his (8c)):

[20] (38a) is from Hetzron (1978); (38b) from Sproat and Shih (1988, 484). Not all NA languages display the mirror-image ordering of adjectives. But for many of those which do not (such as the Semitic and Celtic languages) there is independent evidence that N moves to D, thus crossing over the APs generated to the left of the N in the same order found in AN languages.

The mirror-image arrangement of APs in Indonesian and Thai seen in (38) would be spurious if the APs could be analyzed as predicative (hence order-free). Sproat and Shih (1988, 484), however, observe that although possible for polymorphemic adjectives (which display what they call indirect modification), this is not true for monosyllabic adjectives, which show a rigid order, which is the mirror-image order of that found in Chinese and English. They also claim that an analogous mirror-image order is found in Mokilese. Another case is apparently that of Selepet, a language of New Guineas, reported in Dixon (1982, 26,fn. 27).

[21] In his presentation of a previous version of Kayne (1993) at the Glow Colloquium in Lisbon in 1992, Kayne observed that the mirror-image order of APs in "consistent" NA languages like Indonesian would not be the result of a different setting of a modifier-head parameter, but of the successive adjunctions of lower XPs to higher ones, from a "base generated" structure shared with AN languages. It is significant, from this point of view, that in Mokilese, another "consistent" NA language, the determiner is the last element of the DP, suggesting the raising of its entire complement past it.

(39)	ANA order:	Evaluating		Size	N	Color
	French:	un	joli	gros	ballon	rouge
	Italian:	una	bella	grande	palla	rossa
	Ladin:	una	bella	granda	balla	cotchna
		'a	pretty	big	ball	red'

Although the relative distance of certain adjectives from the N (*size* and *color*) cannot at first sight be established, the unmarked relative ordering of APs among each other is exactly the same as that of AN languages rather than being a mixture of AN and NA languages.

This descriptive generalization follows directly from taking the base order (the level where such restrictions are imposed) to be exactly the same for both ANA and AN languages, with the observable ANA order derived by raising of the N past some of the lower APs.[22]

7. Some apparent counterevidence

Lamarche (1991) objects to the N-movement analysis of Romance precisely on the basis of certain adjective orderings which apparently are the mirror-image of English adjective orderings (an unexpected situation if the base order is the same and what varies is simply the raising of the N in Romance).

Indeed, he claims, one would expect (40) rather than what one apparently finds, namely (41):

(40)	a.	English (no N-movement):	Adj2	Adj1	N
	b.	Romance (N-movement) :	N	Adj2	Adj1
(41)	a.	English:	Adj2	Adj1	N
	b.	Romance:	N	Adj1	Adj2

As instances of (41), he reports the following cases taking them to argue against the N-movement hypothesis and in favor of an alternative in which (attributive) APs are generable to the right of N (in French):

(42) a. un fruit orange énorme
a huge orange fruit

[22] Bernstein's work in fact suggests that the scope of N-movement may be different in different Romance varieties, with N not moving (or moving past just nationality APs) in Walloon, and moving past all APs (except for a handful of quality adjectives) in Sardinian. Cf. Bernstein (1991, 1993).

b. un poulet froid delicieux
a delicious cold chicken

(43) a. une personne agée handicapée
b. a handicapped elderly person

Such cases, however, (and their analogues in other Romance varieties) do not warrant that conclusion, as they are open to a different interpretation, compatible with the N-movement hypothesis and with the generation of all attributive APs to the left of the N.

The existence of DP-internal predicative APs, allows one to take Adj2, or both Adj1 and Adj2 in (41b) not to be attributive, but predicative, as such outside of the ordering restrictions holding of attributive APs (Cf. Sproat and Shih 1988, 489). How can one chose between the two competing analyses?

There is a simple way. Given that post-nominal attributive APs precede the N's complement and post-nominal predicative APs follow it, the N-movement analysis predicts that in (41b) at least Adj2 has to follow the N's complement, while Adj1 may precede it or follow it depending on its nature. What is excluded under this hypothesis, but not under the alternative of free generation of APs to the right of N, is that both Adj1 and Adj2 precede the complement, as that is the wrong relative ordering for attributive APs.

This is precisely what one finds. Consider the apparent mirror-image adjective ordering in (44a-b):

(44) a. a beautiful red car
b. una macchina rossa bellissima

If the N has a PP complement, the order N Adj1 Adj2 PP is unacceptable with normal intonation (cf. (45a)), while either N Adj1 PP Adj2 (cf. (45b)) or N PP Adj1 Adj2 (cf. (45c)), or, for that matter, N PP Adj2 Adj1 (cf. (45d)) are possible:[23]

[23] (45a) becomes marginally acceptable with two intonation breaks, one after *rossa* and one after *bellissima*, typical of asyndetic coordination. Of course, the order (D) Adj2 N Adj1 PP, which corresponds to the English one, modulo the position of the N, is also possible (cf. (ia)), and is perhaps the most natural, contrasting with the order (D) adj1 N adj2 PP, which contains the two attributive APs in the wrong order, and which is totally out (cf. (ib)):

(i) a. Una bellissima macchina rossa da corsa
A beautiful car red for racing
b. *Una rossa macchina bellissima da corsa

(45) a.* Una macchina rossa bellissima da corsa
b. Una macchina rossa da corsa (,) bellissima
c. Una macchina da corsa (,) rossa (,) bellissima
d. Una macchina da corsa (,) bellissima (,) rossa

Another source of apparent mirror-image adjective ordering is represented by Adjective-Noun compounds, given that Romance differs from Germanic in the respective order of the head and modifier within the compound (Giorgi and Longobardi 1991, 129ff, Cinque 1993). Modifiers precede the head in Germanic but follow it in Romance (Common Market vs. Mercato Comune; European Common Market vs. Mercato Comune Europeo; etc.). Perhaps, the difference is amenable to a similar N-movement analysis (for the Romance compound) within a more abstract syntax of compounds.[24]

8. On the categorial status of pre-nominal adjectives

In a number of recent studies, it is suggested that pre-nominal adjectives in Romance (or a subclass of them) are categorially distinct from post-nominal adjectives in being heads rather than maximal projections.

We have already noted that some of the evidence adduced for this position is not cogent. (See fn.10 on the putative evidence from 'liaison' and sect. 6, where the recursion restriction taken in Lamarche (1991) and Valois (1991a,b) to follow from the head status of pre-nominal adjectives was shown to be shared by post-nominal attributive adjectives, which cannot be heads, as they allow N-movement past them).

A more articulated analysis is suggested in Bernstein (1992a,b) (and Zamparelli 1993, after her). According to this analysis, only some pre-nominal adjectives are heads: those (here exemplified with *mero* and *solo* in Italian) which necessarily appear pre-nominally, at least under a particular interpretation (cf. (46a-b)), and

Interestingly, Lamarche himself (1991, 222f, fn6) notes that the sequence *un fruit orange énorme* of (42a) "would sound more natural with *énorme* pre-nominally" (*un énorme fruit orange*, which has the same ordering of adjectives found in English: *a huge orange fruit*).

[24] For syntactic criteria distinguishing AN compounds from AN phrases, cf. Levi (1978). *One* and *Ne* pronominalization, for example, appear to apply to phrases but not compounds.

A further source of apparent mirror-image order may be provided by asyndetic coordination. Cf. Sproat and Shih (1990, 2.3), where normal cases like *she loves all those wonderful orange Oriental ivories* are compared with such special cases as *she loves Oriental, orange, wonderful ivories*, possible with a comma intonation typical of coordinated elements.

which have the additional properties listed in (47), apparently differentiating them from the adjectives that can appear both pre- and post-nominally (and which thus cannot be heads as they allow N-movement past them):

(46) a.* La presenza mera (cf. La mera presenza)
The presence mere
b. * La figlia sola di G. accettò (cf. La sola figlia di G...)
Only G.'s daughter
(ok = the lonely daughter of G...)

(47) a. They cannot be used predicatively
(*La presenza era mera 'the presence was mere')
b. They cannot be modified
(*L'assai mera presenza di G. 'The very mere presence of G.')
c. They cannot enter elliptical nominal constructions
(*Un(o) mero 'A mere one')[25]

It is however unclear whether even this weaker position can be maintained, as some of the adjectives that necessarily appear pre-nominally with common Ns (which we know raise only to an intermediate functional head) can be crossed over by proper Ns when these move to D, as is possible in Romance (cf. Longobardi 1993, from which the examples in (48) are drawn):

(48) a. La sola Maria si è presentata
b. * La Maria sola si è presentata
(marginally possible in the irrelevant reading: 'lonely Mary ..')
c.* Sola Maria si è presentata
d. Maria sola si è presentata
Only Maria showed up

(48a-b) show that when a lexical determiner is present the proper N behaves as a common N (cf. (46b)). When no determiner is present the only acceptable order is with the N preceding the "pre-nominal" adjective (an indication – as Longobardi notes – that the proper N has raised to D).

The fact that movement of a proper N to D is not possible with many such "pre-nominal" adjectives (e.g. with *mero*) should not be taken as evidence for their head status, as movement to D of a proper N is unavailable with most adjectives, even

[25] The necessarily pre-nominal position of *mero* would follow from its head status, and so would property (47c) under Bernstein's (1991b) head-raising analysis of the word-marker *-o*. Less clear is how properties (47a) and b follow from the head status of such adjectives, if they are able to project to a maximal projection.

post-nominal ones (which do not block movement of common Ns). See Longobardi (1993, fn18) for a characterization of the class of adjectives apparently allowing movement of proper Ns past them, apparently underlying this restriction.[26]

9. Some residual questions

A number of questions remain, for which the available evidence is not sufficiently clear to allow us to take a definite stand. Here, we simply limit ourselves to suggesting possible lines of approach.

One question relates to the trigger of N-movement in Romance vs. its absence in Germanic. A plausible line would consist in relating it to an independent morphological difference between Romance and Germanic words, namely the fact that number and gender features are expressed in Romance, but not in Germanic, through an uneliminable component of the morphological word: the word-marker (Harris 1991). By further assuming that, in relation to that, the corresponding

[26] The parallelism between adjectives like *mero* 'mere' and *semplice* 'simple' and adverbs like *meramente* and *semplicemente*, if real, weakens the hypothesis that these adjectives are heads. In French, for example, the corresponding adverbs necessarily precede past participles (*Il a <simplement> ignoré <*simplement> mes raisons* 'He has simply ignored my reasons'), but one would not conclude from that that they are heads as they can be crossed over by finite Vs, which we know move higher than past participles in French (Pollock 1989): *Il <*simplement> ignore <simplement> mes raisons.*

It should also be noted that the necessarily pre-nominal position of an adjective (with common Ns) and the properties of (47) do not always correlate. So, for example, as noted in Crisma (1990, 91ff, 154ff), two necessarily pre-nominal adjectives like *numerosi* and *diversi* with the meaning 'several/various' (*Le numerose/diverse famiglie che accettarono..* 'The several families that accepted..') can be used predicatively (with the same meaning): *Le famiglie che accettarono furono numerose/diverse* 'The families that accepted were several'. *Numeroso* (though not *diverso*) can even be modified (*Le assai* ('very') *numerose famiglie che accettarono..*). On the other hand, there are attributive adjectives (such as *principale* 'main,' *scorso* 'last,' etc.) which appear both pre- and post-nominally which, nonetheless, cannot be used predicatively (cf. (18)-(19) above).

It could still be that some adjectives (perhaps, the handful of attributive adjectives that cannot be crossed by N is Sardinian when they convey an affective attitude, ordinal adjectives, etc.-cf. Jones 1990, 2.1.4) are heads. For one of these (*biet* 'poor' (to be pitied)), as well as for some ordinal adjectives) suggestive evidence exists in Rumanian that it may be a head (cf. Giusti 1991,51f), as it appears to block the otherwise general N-movement to D:

(i) a. [bietul [t [baiat]]]
poor-the boy
b. *[baiatul [biet [t]]]
boy-the poor

Alternatively, they could be in the Spec of Head containing features that cannot be obliterated by (the trace of) the N.

functional heads of gender and number in Romance have strong features, which need to be checked already in the syntax (Chomsky 1993), one would force the Romance N to move two heads higher in overt syntax.

Closely related to this, is the question of the labels of the functional projections postulated above for DPs. The fact that for event nominals they appear to correspond rather closely to those of the sentence (cf. Crisma 1990 for a specific proposal) does not settle the question completely, as our current understanding of the internal structure of the clause is still rather vague (cf. Cinque forthcoming b for some inadequacies of widely held current analyses). The problem is even more acute for DPs, as for object-denoting noun phrases such functional projections as TenseP, AspectP or ModalP seem not to be entirely appropriate.[27] Further work is needed in this direction.

One last question that we mention here is the overt gender and number agreement with the N generally found on all attributive APs in Romance, even pre-nominal ones which fail to be in a Spec/Head relation to the N, in base or derived structure, due to the N's remaining in a lower head.[28] Our conjecture is that such Spec/Head agreement is checked, if not in overt syntax, at LF, under the not unreasonable assumption that the N raises to D at LF in those languages where it fails to do so in overt syntax.

Further questions remain. Our limited goal here was to defend the claim that in the DP domain Romance and Germanic are closer to each other than it may at first sight seem, and that N-movement leftward, across specifiers, is a significant parameter of the grammar of DPs; a conclusion in line with the restrictive system proposed in Kayne (1993).

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[27] For TP, this is not clear given the existence of such adjectives as *attuale* 'present,' *passato* 'past,' *futuro* 'future,' etc. (*l'attuale re di Spagna* 'the present King of Spain'-cf. Crisma 1990, 148ff), and the existence of languages with overt tense morphemes on the N (Hockett 1958, 238, Jacqueline Lecarme, p.c.).

[28] As originally pointed out to me by Paola Benincà, in a number of Lombard, Ladin and Friulian varieties of northern Italy, there is no such generalized N-adjective agreement, at least in feminine plural DPs. Cf. Elwert (1943, 113ff). One widespread pattern, which Haiman and Benincà (1992, 219) call "Ladin lazy agreement rule," has agreement only on post-nominal attributive adjectives (*nosta* (f.sing.) *bela* (f.sing.) *montes* (f.pl) *ladines* (f.pl.) 'our beautiful ladin mountains'), as if government by the trigger was required over and above the Spec/Head relation. The situation is in fact more complex, as other varieties seem to allow only for one realization of agreement, or for one realization of the number marker of agreement, on the rightmost element, whether this is the noun or the adjective.

Brazilian Portuguese, instead, (Brito 1992, fn.5 and reference cited there) appears to allow for realization of number agreement only in (the Spec of) the determiner (*Os homen* 'The (pl.) man(sing.),' *Minhas filha pequena* 'My (pl.) daughter (sing.) small (sing.)').

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On Certain Asymmetries between DOs and IOs[1]

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0. Introduction

A topic broadly studied in the generative literature has been that of the English dative alternation, the well-known problem of the relation between the sentences in (1), its empirical scope and its theoretical implications.

(1) a. John gave a book to Mary
b. John gave Mary a book

During the seventies, this was fertile territory for discussing the availability of deletion in front of insertion rules, no less than the nature of a putative "Dative shift" process (Oehrle 1975). Later it became, under the mastery of Richard Kayne, a fruitful area, firstly, to explore certain differences between Romance languages and English regarding their prepositions' Case assignment potential and, secondly, to crucially support the hypothesis of binary branching (Kayne 1981c, 1983c). Barss and Lasnik (1986) added new empirical qualifications to the problem by showing a significant c-command asymmetry between the objects of the two constructions. In the in-depth revision of the topic by Larson (1988b), the main theoretical insights elucidated in the history of this sort of *experimentum crucis* (properties of transformational operations, government and categorial branching) appeared to be integrated to a certain extent, through the valuable help of auxiliary hypotheses like those of the VP complex and the empty verb. However, many questions still remain to be answered and changes

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It is a pleasure to be able to dedicate this paper to Professor Kayne whose admirable work has inspired most of the development of generative grammar in Europe.