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ON THE INTERNAL STRUCTURE OF PRONOMINAL DPs*

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Natural languages have two categories of pronouns: some essentially behave like full DPs, the others display special syntactic properties, in particular they must appear at S-structure in a derived position. A very common situation is that pronouns belonging to the two classes have a different lexical form: this is found for example in Romance languages, which display the two morphologically distinct series of strong and clitic pronouns, and in some Germanic languages. In other cases, however, pronouns belong to two different classes displaying one and the same morphological form. This is the case of weak pronouns, which occur in derived positions like clitic pronouns, but are very often homophonous with strong pronouns: thus, apparently the same pronoun can be found either in a derived position or in the base position.

In this paper, an approach to the syntax of pronouns is outlined by exploring the hypothesis that different types of pronouns have a different internal structure.¹ Strong pronouns are full DPs and contain the lexical category NP embedded under DP; N-to-D movement along the lines of Longobardi (1991) is argued to apply. Clitic pronouns consist of purely functional projection(s). As for the internal structure of weak pronouns, we will observe that they differ from clitics in that they contain a further functional projection, containing what we call a morpheme of "support": It is the presence of this morpheme which is responsible for their ambiguous status and may lead to their analysis as strong pronouns.

These simple hypotheses allow a principled account of apparently unrelated phenomena, which concern both the morphological shape and the syntactic behavior of pronouns:

- 1) we account for the morphological reduction that very often characterizes clitic pronouns with respect to strong pronouns: it is nothing else than the consequence of the reduced syntactic tree attributed to them;
- 2) we derive the particular syntactic behavior of clitic and weak pronouns on one side and strong pronouns on the other, namely the properties known as Kayne's tests for cliticness. A reinterpretation of these tests will also be necessary;
- 3) the proposed analysis also provides a possible explanation of why weak and clitic pronouns, contrary to strong pronouns, obligatorily undergo syntactic movement.²

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¹ For proposals concerning the internal structure of pronouns, see Hestvik (1990) for English and Norwegian, Ritter (1991) for Hebrew, and Rouveret (1991) for Welsh.

² Our discussion deals with 3rd person object pronouns, but it can be easily extended to object pronouns of other persons and

1. STRONG VS. CLITIC PRONOUNS

Romance languages have two morphologically distinct series of pronouns (cf. Kayne 1975). The two classes differ with regard to their distribution: Strong pronouns only occur in postverbal position, thus displaying the same distribution as full DPs; they never undergo syntactic movement, which is instead obligatory for clitic pronouns. We illustrate the contrast for Italian:

- (1) a. Conosco lui/*lo.
 [I] know him
 b. *Lui/Lo conosco __.

The same contrast is found in all canonical DP-positions. For instance, a strong but not a clitic pronoun can appear in an A', left-dislocated position, or in isolation:

- (2) a. Lui/*Lo, Gianni lo conosce da tempo.
 him, Gianni him knows since long
 b. Chi conosci? Lui/*Lo.
 whom know [you] him

The following definition based on the distribution of pronouns can be adopted:

- (3) a. strong pronouns only occur in canonical DP positions
 b. clitic pronouns only occur in ("special") derived positions

The pattern in (1)-(2) is not typologically related to Romance languages. Germanic languages also display strong and clitic pronouns.³ In order to abstract away from the effects of the scrambling operation, which also affects full DPs in Germanic languages, consider the contrast in the specCP position: a strong pronoun can occur in this position, which is unavailable instead for clitics. We provide examples from spoken and Southern German (cf. Abraham 1991) and West Flemish (cf. Haegeman 1992), respectively:

to subject pronouns (cf. Cardinaletti and Starke 1993).

³ The fact that a pronoun is cliticized on the functional head which also contains the verb (i.e. the derived position in (3) is a position adjacent to the verb), does not enter into the definition of "clitic". In this respect, consider French negation, which is analysed as a clitic also in infinitival contexts, where it does not incorporate with the verb (cf. Pollock 1989):

- (i) a. Jean ne parle pas allemand.
 Jean not speaks not German
 b. Jean regrette de ne pas parler allemand.
 Jean regrets to not not speak German

The fact of being cliticized on the verb or not must depend on the way verb movement takes place in the language. See Zwart (1992) for a possible account of why, in Germanic languages, those pronouns which qualify as clitic according to the definition in (3) are not cliticized on the verb, but on an empty functional head, as shown in the following sentences from Dutch (Zwart 1992), spoken and dialectal (Southern) varieties of German (Abraham 1991) and West Flemish (Haegeman 1992):

- (ii) a. dat Jan t gisteren gelezen heeft.
 that Jan it yesterday read has
 b. daß die Mutter m was gegeben hat
 that the mother to-him something given has
 c. dan-k ik ze die boeken gegeven een.
 that I to-her the books given have

- (8) a. La conosco.
[I] her know
b. la ragazza
the girl
- (9) a. Ich hab's gelesen.
I have it read
b. weil du s Auto übersehen hast (Abraham 1991)
because you the car overseen have
- (10) a. da Marie d'joengers t nie gegeben eet
that Marie to-the boys it not given has
b. tgeld (Haegeman 1992)
the money

On the other hand, strong pronouns never pattern with determiners, which supports our proposal that they are not generated in D°:

- (11) a. Conosco lei.
[I] know her
b. *lei ragazza
her girl

Notice that for the sake of the argument, it is sufficient to propose that clitics are D°s. There are however good reasons to believe that the highest head of the extended projection of the noun is better characterized in terms of the K(ase)° of Giusti (1992, 1993): the determiner is nothing else than the realization of Case in languages with no morphological case. Under Giusti's proposal, it is possible to understand why in languages with morphological case such as German, clitics are homophonous with case endings (cf. m, s, etc. in Abraham 1991). We thus conclude that clitics, on a par with case morphemes and determiners, must be regarded as realizations of the K° category.⁶

2.1. N-TO-D MOVEMENT IN PRONOMINAL DPS

Notice that at S-structure, strong pronouns do not appear in N°, but in D°: on a par with clitics, strong pronouns do not co-occur with determiners, (12), and modified strong pronouns always precede the modifier, (13) (cf. Longobardi 1991):⁷

⁶ Since clitics and determiners are not necessarily one and the same lexical entry, we expect that they may undergo different diachronic processes. Depending on the phonetic environment, standard Italian developed the masculine determiner il, which does not have a clitic counterpart (though it does in dialects):

- (i) a. Lo conosco.
[I] him know
b. lo zio/il ragazzo
the uncle/the boy

⁷ Phrases like (i) are not counterexamples to the claim made in the text. They are only possible with the 3rd person singular pronouns lui and lei in a meaning roughly equivalent to "partner":

- (i) il mio lui/la mia lei
the my him/the my her

With the same meaning, the pronouns lui and lei can marginally appear in a position which precedes the possessive (lui; mio t), giving rise to a configuration which is possible with proper names (see (17) in the text), but ungrammatical with other pronouns:

- (ii) *io tuo/*noi vostri
I yours/we yours

- (12) a. *i noi/*i ricchi noi (cf. i ricchi amici di Maria
the we/the rich we the rich friends of Maria)
b. *il lui
the him
- (13) a. noi due (cf. due amici
we two two friends)
b. *due noi

The strong pronoun generated in N° undergoes head-to-head movement, thus appearing in D° at S-structure. Following Chomsky's (1992) approach, we assume that the pronoun is generated as a fully inflected form and moves (DP-internally) to the functional head(s) in order to check its inflectional features. (14) is the S-structure representation of a strong pronoun:

- (14) $[_{DP} \text{ lui } [_{NP} t]]$

Further empirical support for (14) comes from the observation, due to Guglielmo Cinque, that strong pronouns can be preceded by adjectives in exclamatory contexts, (15). Notice that in the same context, determiners are excluded, (16):

- (15) a. Povero lui!
poor him
b. Poveri noi!
poor us
- (16) Povero (*il) professore!
poor the professor

These facts are only compatible with the hypothesis that strong pronouns are generated in N° , combined with the hypothesis that nominals in non-argument function, e.g. in exclamatory contexts, are not necessarily introduced by the category D (cf. Longobardi 1991).

The question now arises as to why the movement of strong pronouns to D° must apply in the syntax and cannot be postponed to LF, as can be the case with proper names, and common nouns such as casa and camera in Italian: these can be moved to D° either at LF or in the syntax, thus giving rise to the following pairs of sentences (cf. Longobardi 1991 and 1992, respectively):

- (17) a. Il mio Gianni ha finalmente telefonato.
the my Gianni has finally called up
b. Gianni_i mio t_j ha finalmente telefonato.
- (18) a. La mia casa/camera è più bella della tua.
the my home/room is more beautiful than the yours
b. [Casa_i/Camera_i mia t_j] è più bella della tua.

The ungrammaticality of a strong pronoun remaining in N° can be understood either in syntactic or in semantic terms. As for the former solution, the pronominal head can be said to display "strong" features in the sense of Chomsky (1992) and obligatorily undergo feature checking in the syntax (DP-internally). The fact that in languages with no morphological case, pronouns are the only DPs which show morphological case suggests that the strong

A similar lexicalization applies in English with the 3rd person singular pronouns he and she: they are used for little children, in the meaning of "boy" and "girl", respectively:

- (iii) Is it a he or a she?

Notice that such reanalysis processes are only possible if the pronoun is in N° at some stage of the derivation, which independently supports the proposal made in (6a).

feature which distinguishes nouns from pronouns is the Case feature. Alternatively, as pointed out by Longobardi (1991), pronouns can never appear in the N° position at S-structure because they are never "used to refer to a kind" and never "provide a range to a (lexical or overt) determiner understood as an operator" (contrary to proper names, which occasionally do). Pronouns directly designate the entity they refer to. Under either analysis, N-to-D movement in pronominal DPs is forced to apply in the syntax. This is also true of those languages such as English, in which no syntactic N-to-D movement is otherwise attested: contrary to Italian, in English proper names never move to D° (cf. Old John came in vs. *John old came in, as discussed in Longobardi 1991).

2.2. THE "LEXICALIZED N" HYPOTHESIS

The structure we have proposed in (14), repeated here as (19), differs minimally from (20), which entails that (strong) pronouns are base-generated in D° and embed an empty NP:

(19) [DP lui [NP t]]

(20) [DP lui [NP e]]

Notice that the two analyses are neutral with respect to paradigms (12)-(13), but (20) fails to explain the contrast in (15)-(16) concerning exclamatory contexts.⁸

However, there is one main argument in favour of (20): the existence of sentences such as (21a), which are analysed as in (21b), with the pronoun in D° and the lexical noun in N° (cf., among many others, Postal 1969 and Abney 1987 for English, and Longobardi 1991 for Italian):

- (21) a. noi/voi linguisti
we/you linguists
b. [DP noi/voi [NP linguisti]]

It is evident that the "lexicalized N" hypothesis illustrated in (21) speaks against an analysis like the one depicted in

⁸ Other non-argumental contexts are compatible with both analyses. In vocative, (i), and predicative, (ii)-(iii) constructions N-to-D movement of a proper name can apply, as in (ib) and (iib), and a determiner can be present, as in (iii) (cf. Longobardi 1991, from which the examples are taken):

- (i) a. Mio caro Gianni, vieni qui!
my dear Gianni, come here
b. Gianni_i mio caro t_j, vieni qui!
(ii) a. Si è mascherato da vecchio Camerese.
[he] himself is disguised as old Camerese
b. Si è mascherato da Camerese_i vecchio t_j.
(iii) a. Vorrebbe essere figlio di Maria.
[he] would like to be son of Maria
b. Vorrebbe essere il figlio di Maria.

Therefore, it is not possible to establish the exact categorial status of strong pronouns (whether N or D) when they occur alone in the following examples:-

- (iv) a. Lei, venga qui!
you, come here
b. Tu, vieni qui!
you, come here
(v) a. Gianni è sempre lui.
Gianni is always him
b. Tu sei sempre tu, non cambi proprio mai.
you are always you, [you] not change really never

(19). However, it can be shown that sentences of this kind must be attributed a different structure, which makes them neutral between (19) and (20). Notice that only 1st and 2nd person pronouns can embed a lexically realized NP, whereas 3rd person pronouns give rise to ungrammaticality, (22b):

- (22) a. noi/voi linguisti
we/you linguists
b. *[DP loro [NP linguisti]]
they linguists

However, the same constraint operates in (23) and (24), where the pronoun is followed by a PP in an adjoined position and by a relative clause, respectively:

- (23) a. noi/voi [con i capelli rossi]
we/you with the hair red
b. *loro [con i capelli rossi]
(24) a. noi/voi [che amiamo/amate il rock]
we/you who love the rock
b. *loro [che amano il rock]

It is difficult to see how one and the same constraint operates on two so different syntactic configurations. Suppose, on the other hand, that (22) and (23)-(24) have the same structure: linguisti in noi linguisti is not analysed as in (21b), but occupies an adjoined position on a par with the PP in (23a) and the relative clause in (24a). That linguisti can appear in an adjoined position is supported by the following example, where the head noun is realized by amici:⁹

- (25) i miei amici [linguisti]
the my friends linguists

The fact that with adjectival modifiers, we obtain the same pattern as in (23)-(24) suggests that in (26a), the adjective is not "internal" to the pronominal DP (in the spec of some Agr projection between D° and NP, cf. Cinque 1990, 1992 and fn. 4), but occurs in a postnominal adjoined position, on a par with the PP in (23) and the relative clause in (24):

- (26) a. noi/voi ricchi
we/you rich
b. *loro ricchi

⁹ This adjunction structure is also possible in the singular:

- (i) a. il mio amico [linguista]
the my friend linguist
b. mio zio [dottore]
my uncle doctor

There is an interesting German fact which seems to support the hypothesis (20): the noun following the pronoun manifests case morphology in the dative plural, as is usually the case for the head noun:

- (ii) a. mit uns Kindern
with us children
b. mit (den) Kindern
with the children

This fact is not incompatible with our proposal in (19), since in German, all material adjoined postnominally displays case:

- (iii) a. Er antwortete Herrn Schulz, dem Direktor der Schule.
he answered Mr. Schulz, the_{DAT} director of the school
b. die Aufgaben des Kollegen Abteilungsleiters
the tasks of the colleague head_{GEN} of the department

The only elements which can occur in post-pronominal position with pronouns of all persons are quantifiers:

- (27) a. noi/voi/loro due
we/you/they two
b. noi/voi/loro tutti
we/you/they all
- (28) a. noi/voi/loro soli
we/you/they only_{masc.pl.}
b. io/tu/lei sola
I/you/she only_{femm.sing.}

The analysis of the contrast between (26) and (27)-(28) is straightforward: The quantifier in (27)-(28), contrary to the adjective in (26), is external to the pronominal DP in the sense that the pronoun occupies the complement position to the head Q (cf. Cardinaletti and Giusti 1991); the pronominal DP is moved to specQP, thus landing in a position which precedes the quantifier (cf. Giusti 1992, Shlonsky 1991). The agreement on the quantifier *solo*, which is ungrammatical if it precedes the pronoun, becomes possible if it follows the pronoun; it can be interpreted, as usual, as a signal of syntactic movement and consequent spec-head agreement:¹⁰

- (29) a. [_{QP} solo/*soli [_{DP} noi/voi/loro]]
only/only_{masc.pl.} we/you/they
b. [_{QP} noi/voi/loro [_{Q'} soli [_{DP} t]]]

We conclude that the possibility of sentences such as (21a) cannot be taken to be evidence for the "lexicalized N" hypothesis, and are therefore neutral between the two analyses (19) and (20). Since only (19) can account for i) the fact that strong pronouns are never homophonous with determiner (see (11)), ii) the occurrence of pronouns in exclamatory contexts (see (15)-(16)), and iii) the reanalysis processes mentioned in fn. 7, we consider it to be the correct one.

2.3. MOTIVATING PRONOUN MOVEMENT

If our proposal concerning the internal structure of pronouns is correct, we can hypothesize that the property responsible for the different syntactic distribution of clitic and strong pronouns (as seen in Section 1) is the presence or absence of the lexical projection NP in their X-bar theoretic representation. Following a suggestion by Luigi Rizzi, the lack of the NP projection must be regarded as the factor responsible for the obligatory movement of clitic pronouns to the derived position.

In order to derive the fact that the movement of auxiliaries is not subject to parametric variation, but always takes place in overt syntax, Chomsky (1992) assumes that elements without semantically-relevant features are not visible to LF-rules.¹¹ Suppose that in an analogous way, DPs without a semantic content cannot be moved at

¹⁰ Here, we ignore cross-linguistic variation in the movement of the pronoun to specQP in the case of universal quantifiers, which is obligatory in e.g. English and French, but optional in Italian:

- (i) a. we/you/they all vs. *all we/you/they
b. nous/vous/eux tous vs. *tous nous/vous/eux
c. noi/voi/loro tutti vs. tutti noi/voi/loro

¹¹ This claim is valid for English and Romance. In languages such as German, Dutch and Scandinavian, auxiliaries and main verbs display the same movement possibilities: neither move in embedded contexts, and both must move to the 2nd position in matrix clauses. Although a full discussion of this point would lead us too far, the possibility could be envisaged that languages may choose not to categorise auxiliary verbs as such. Thus, Chomsky's proposal would hold for those languages which have

LF; if they do not move in the syntax, a violation of the checking procedure (as far as the Case feature is concerned) would be produced. This means that clitic pronouns, which do not contain the lexical projection NP, must undergo syntactic movement; on the other hand, strong pronouns, which contain the NP projection, do not need to move, hence, according to the minimalist program, they cannot move.¹²

If this is correct, the "different structure" hypothesis derives the different movement possibilities of strong and clitic pronouns. In other words, there exists a close connection between the internal structure of a pronominal DP and its syntactic distribution.

3. ON AMBIGUOUS PRONOUNS

We have seen so far that pronouns with a different syntactic behavior, such as clitic and strong pronouns, can be also characterized by a different lexical form. In other cases, one and the same pronoun seems to be able to occur either in the base position or in a derived position, without a difference in its lexical form. We interpret this by proposing that the pronoun belongs to two different pronominal classes. We will refer to the pronouns in derived position as "weak" pronouns; when they occur in the base position, we are dealing with the "strong" counterpart of a weak pronoun.

Examples from Swedish, German and Italian are given below (we will come back later, Section 5.1., to the question of why the pronoun must be stressed when it remains in the base position):¹³

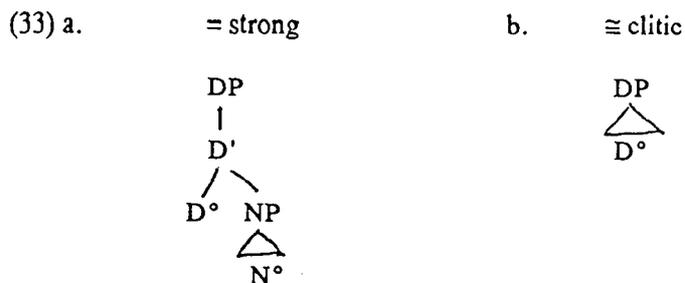
- (30) a. Anna såg kanske inte *den/DEN.
Anna saw maybe not it
b. Anna såg den kanske inte __. (Holmberg 1991)
- (31) a. daß ich gestern *ihn/IHN gesehen habe.
that I yesterday him seen have
b. daß ich ihn gestern __ gesehen habe. (Cardinaletti 1992)
- (32) a. Il professore diede l'autorizzazione *loro/a loro.
the professor gave the authorisation to them
b. Il professore diede loro l'autorizzazione __. (Cardinaletti 1991)

Under the "different structure" hypothesis we are arguing for in this paper, the distribution of these pronouns can be accounted for by making the simple hypothesis that they are ambiguous, i.e. they are listed in the lexicon with two different specifications: in the "strong" analysis, they are categorised as nominal, in the "weak" analysis, they are functional elements. Accordingly, either one of the structures in (33) can be projected (these structures will be partially revised in Section 6):

the category "auxiliary" in their grammar.

¹² We are assuming that clitic movement is two-stepped: XP movement followed by X°-movement. Only the first step is accounted for here. Different reasons motivate clitic movement further up to the host head (cf. Cardinaletti and Starke 1993). We thus reject the view that clitic placement is driven by only one requirement, as proposed, among others, by Sportiche (1992) and Uriagereka (1992).

¹³ The "derived" position is different for clitic and weak pronouns: there are reasons to believe that clitics are heads and attach to functional heads (cf. Kayne 1991), whereas weak pronouns are maximal projections, which need to move to the specifier position of some Agr projection in order to be "licensed" (cf. Cardinaletti and Starke 1993 for discussion). This difference is not relevant for the present concerns, and will not be further discussed in this paper.



In the analysis (33b), weak pronouns represent the functional projection of the DP, on a par with clitics. When structure (33a) is projected, the pronoun is generated as N° and moves DP-internally to D°, on a par with strong pronouns. This explains why weak pronouns, like clitic and strong pronouns, never co-occur with determiners, as shown in (34) for German:

- (34) *den ihn
 the_{ACC} him_{ACC}

The analysis argued for in Section 2.3., combined with the structures in (33), derives the fact that these pronouns may either remain in the base position or be moved. When analysed as in (33a), they cannot move, when analysed as in (33b), they must undergo overt movement.

4. MOTIVATING DIFFERENT LEXICAL ENTRIES

In the following two Sections, we provide independent evidence in favour of the hypothesis that weak and strong pronouns are differentiated by their lexical entry.

4.1. DIACHRONIC CHANGE

Under the hypothesis that diachronic change consists in the change of lexical specifications, we predict that it may concern the syntactic category of the lexical entry of pronouns. Thus, a possible change is for a pronoun with two lexical entries to lose one of them. An example of this change is provided by the history of Italian. The singular pronouns lui and lei could be used in Old Italian as dative weak pronouns, without the Case-assigning preposition a, on a par with the dative plural pronoun loro (examples taken from Rohlfs 1968:137,163-164):¹⁴

- (35) a. mostrato ho lui tutta la gente ria (Dante, Div. Comm., Purg. 1, 64)
 shown have [I] to-him all the people guilty
 b. ond'io risposi lei (Dante, Div. Comm., Purg. 33, 91)
 then I answered to-her
 c. quel che loro i'volea dire (Jacopone)
 what to-them he wanted say

Whereas loro is still a weak pronoun in Modern Italian, lui and lei are nowadays only analysed as strong pronouns:

- (36) a. *Ho consegnato lui/lei un pacco.
 [I] have delivered to-him/to-her a packet
 b. Ho consegnato un pacco a lui/a lei.
 [I] have delivered a packet to him/to her
 c. Ho consegnato loro un pacco.
 [I] have delivered to-them a packet

¹⁴ Both lui/ lei/ loro in Old Italian and loro in Modern Italian are not cliticised on the verb (cf. Cardinaletti 1991). This confirms the claim made in fn. 13 that the derived position is not necessarily the same for weak and clitic pronouns.

The proposal that there are pronouns which are ambiguous between two lexical entries allows us to account for the above paradigms in very simple terms. In Old Italian, lui and lei were ambiguous pronouns, i.e. they had two lexical entries: D or N, whereas they are unambiguously analysed as N in Modern Italian. The diachronic change can be understood as the loss of the lexical specification "D":

(37) lui/lei: D, N ---> lui/lei: N

4.2. GERMAN GENITIVE PRONOUNS

Consider now the way genitive Case is marked on pronouns in a language with morphological case such as German. Depending on the status of pronouns, two different forms are attested. Strong pronouns have a corresponding genitive form, weak pronouns do not have a regular genitive form, but display a suppletive form, taken from the paradigm of possessives:

(38)	a.	strong	NOM	der	die	das
			GEN	dessen	deren	dessen
	b.	weak	NOM	er	sie	es
			GEN	seiner	ihrer	(seiner)

Notice that German nouns have the genitive ending s in the strong declension and n in the weak declension, (39); the pronouns in (38a) thus display the weak declension:

(39)	a.	des Buch- <u>es</u>
		of the book
	b.	des Abgeordnet- <u>en</u>
		of the delegate

The fact that unambiguous strong pronouns, contrary to weak pronouns, have a regular genitive form in their paradigm, confirms the hypothesis that they must be assigned a nominal status.

5. ON THE DISAMBIGUATION OF AMBIGUOUS PRONOUNS

The question arises as to how to distinguish between the strong and the weak use of ambiguous pronouns. The choice between the two is not free. Although they display the same morphological form, further conditions govern their distribution. As noted above in (30)-(31), weak pronouns must be moved; they can stay in the base position only if they are analysed as strong pronouns, e.g. if they are stressed. The idea we would like to pursue is that ambiguous pronouns will always be analysed as in (33b), if there is no evidence to the contrary. This can be formulated as in (40):¹⁵

(40) Minimize structure (applied to pronouns):
 Analyse a pronoun as lacking the NP projection, unless there is evidence to the contrary.

In the following Sections, we will discuss some pieces of evidence which force either one of the analyses of ambiguous pronouns.

5.1. KAYNE'S TESTS FOR CLITICHOOD

Kayne (1975) elaborates some syntactic tests which draw a distinction in the syntactic behavior of strong and clitic pronouns. He concludes that among other properties, only the former can be focussed, modified and

¹⁵ This principle does not only apply to pronouns, but represents a general economy strategy. See Safir (1992) for a similar proposal applied in the clausal domain.

conjoined. We illustrate the relevant contrasts on the basis of Italian (similar facts obtain in other languages; we refer the reader to the specific works: Kayne 1975 for French, Haegeman 1992 for West Flemish, Zwart 1992 for Dutch, etc.):

- (41) a. Conosco LUI, non Maria.
[I] know him, not Maria
b. *Lo conosco, non Maria.
- (42) a. Conosco [voi due].
[I] know you two
b. *[Vi due] conosco.
- (43) a. Conosco [lui e lei].
[I] know him and her
b. *[Lo e la] conosco.

Kayne did not analyse weak pronouns. Recent analyses have shown that weak pronouns display the same properties as clitics (cf. Holmberg 1991 for Swedish, Cardinaletti 1991 for Italian *loro*, Cardinaletti 1992 for German). Some examples for Swedish and for Italian *loro* are provided below; all examples are grammatical if the pronoun is strong and appears in the base position:

- (44) a. *Anna såg DEN kanske inte __.
Anna saw it maybe not
b. *Anna såg [dem båda] inte __.
Anna saw them both not
c. *Anna såg [mej och dej] inte __.
Anna saw me and you not
- (45) a. *Il professore non diede LORO l'autorizzazione __, ma a Gianni.
the professor not gave to-them the authorisation, but to G.
b. *Il professore diede [loro due] l'autorizzazione __.
the professor gave to-them two the authorisation
c. *Il professore diede [loro e loro] l'autorizzazione __.

Thus, these properties do not correlate with the fact that a pronoun is cliticized onto the verb, as in Kayne's original proposal. The correct generalization should be phrased in the following terms: pronouns occurring in (special) derived positions manifest the above properties. This correlation can be visualized in the following table:¹⁶

(46)	CLITIC	WEAK	STRONG
<u>distribution</u> : DP positions	-	-	+
<u>properties</u> : focalization	-	-	+
modification	-	-	+
coordination	-	-	+

The proposals made in the preceding Sections allow us to give a natural explanation of the correlation illustrated in (46). Suppose that focalization and/or modification and/or coordination force the analysis (33a), i.e. the analysis in which the pronoun contains the NP projection.¹⁷ Under the hypothesis made in Section 2.3.,

¹⁶ Since weak pronouns are not heads (see fn. 13 and fn. 14), these properties cannot be simply attributed to a phonological constraint, requiring that a clitic must be "light" in order to be attached to the host. A purely syntactic reason is at work here.

¹⁷ As a matter of fact, only a category with a lexical content can be focussed, modified and conjoined. Focussing of a functional head, such as a complementizer, an article or a preposition, is impossible, (i). In the same way, it seems semantically odd to modify a functional head. Finally, notice that conjunction cannot apply to functional categories, (ii):

according to which only pronouns lacking the NP projection are moved in the syntax, we obtain the desired result: Focalizing and/or modifying and/or coordinating a pronoun has the consequence that it cannot undergo syntactic movement. On the other hand, if a pronoun is not stressed nor modified nor conjoined, the principle "Minimize structure" will lead to its interpretation as lacking the NP projection, which makes its movement in overt syntax necessary.

5.2. INTERACTION WITH VERB MOVEMENT

The phenomenon of object shift found in Scandinavian languages has the following restriction: It cannot apply if verb movement has not also applied:

- (47) a. *Anna har den inte sett __.
Anna has it not seen
b. Anna har inte sett den. (Holmberg 1991)

Without trying here to formulate an explanation of the correlation between verb movement and pronoun movement (see Chomsky 1992 for a possible motivation), we only notice that no focalization on the pronoun is now necessary, in contrast to (30a). The possibility of sentences like (47b) challenges our proposals and raises the question of the status of the pronoun in this case. Two solutions come to mind:

- (48) a. Since it is not stressed, the pronoun lacks the NP projection.
b. Stress is not necessary for a pronoun to remain in the base position.

Notice that (48a) implies that the correlation between the lack of the lexical projection and the obligatory syntactic movement argued for in Section 2.3. should be abandoned: a pronoun lacking the nominal projection seems to occur in the same position as full DPs. Since the above proposal has enough generality not to be rejected, we opt for the alternative solution in (48b).

In (30), stress is taken to be phonological evidence for the presence of the NP projection: if the pronoun is not stressed, principle (40) forces its analysis without the NP projection, which in turn forces the syntactic movement of the pronoun. Stress becomes unnecessary when the speaker can draw the same conclusion in a different way. In (47), where the verb has not moved, an ambiguous pronoun such as den can be analysed as a strong pronoun, i.e. as containing the NP projection. Therefore, it is allowed to occur in the same position as full

-
- (i) a. *So CHE ho ragione.
[I] know that [I] have reason
b. *Conosco IL ragazzo
[I] know the boy
c. *Ho parlato DI Gianni.
[I] have spoken of Gianni
(ii) a. *Ho invitato [il e la] docente.
[I] have invited the_{MASC} and the_{FEM} teacher
b. *Ho parlato [di e con] Gianni.
[I] have spoken of and with Gianni

Interestingly, "lexical" prepositions (in the sense of van Riemsdijk 1990) can be conjoined:

- (iii) Ho guardato [sotto e dietro] l'armadio.
[I] have looked under and behind the wardrobe

As a possible counterexample to the above considerations, we should mention the possibility of focalizing the auxiliary do in English, as in: I DID go. This possibility should not count as a counterexample, since it can be analysed as involving the sigma projection of Laka (1990).

DPs.¹⁸

A similar paradigm obtains in Italian: a strong pronoun has to be focussed in order to occur in the complement position to a verb (because a clitic is a possible alternative in that context), but no stress is necessary in the complement position to a preposition (where a clitic is independently barred):

- (49) a. Ho visto LUI/L'ho visto.
 [I] have seen him
 b. Ho parlato con lui/*Ho parlato con lo.
 [I] have spoken with him

6. ON THE LEXICAL COMPLEXITY OF WEAK PRONOUNS

Let us consider now the way of expressing the distinction between clitic and weak pronouns. The question is: why can a weak pronoun such as Swedish den be analysed as a strong pronoun and consequently occur in the base position (as in (30a)), whereas a clitic pronoun such as Italian lo cannot, being always excluded from the base position (as in (1a))? The answer, we believe, must again be searched for in the internal structure of pronouns. Weak pronouns, like strong pronouns, are morphologically complex forms: they contain a morpheme, which we call a "morpheme of support", which is absent in clitic pronouns.

Look at the respective form of weak and clitic pronouns in the languages considered. In German, the morpheme ih, [i:], distinguishes weak from clitic pronouns, which only consist of the case morpheme; ih represents the support:¹⁹

(50)	WEAK	CLITIC	
	<u>ih</u> m	m	"him _{DAT} "
	<u>ih</u> n	n	"him _{ACC} "

A similar distinction is found in Dutch: clitics only consist of the agreement morpheme marking phi-features, whereas weak pronouns are morphologically more complex:

(51)	WEAK	CLITIC	
	<u>haar</u>	r	"her"
	<u>hem</u>	m	"him"
	<u>het</u>	t	"it"

In Scandinavian languages, the relevant contrast is provided by the difference between enclitic articles and pronouns. The enclitic determiners only consist of the morphemes realizing phi-features and lack the d- or the h-

¹⁸ A concurrent analysis of (47b) is that den is a weak pronoun which has undergone vacuous movement, under the additional hypothesis that the past participle has been moved to the functional projection containing participle morphology. This could also explain why a clitic pronoun such as n (lacking the support, see Section 6. below) can sometimes be found in post-participle position (as pointed out by an anonymous reviewer):

- (i) Vir har ikke sett n.
 we have not seen him

¹⁹ As for German es, the question arises as to whether e should also be regarded as a morpheme of support. At least for those speakers who can marginally coordinate es if stressed and pronounced with a long [e], it seems possible to consider the e of es as a support on a par with the ih of ihm. The question remains open as to whether the different phonological form of the support is a hint for a different syntactic status.

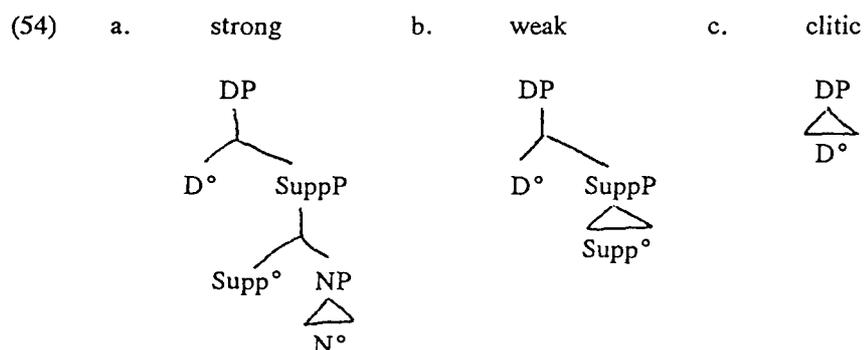
morpheme which appears on weak pronouns (see also fn. 16):²⁰

(52)	WEAK	CLITIC (determiner)	
	<u>d</u> en	stol-en	"chair-the"
	<u>h</u> an		
	<u>d</u> et	hus-et	"house-the"

In Italian, the form loro is a complex form containing the support morpheme l, which is never found on clitic pronouns:²¹

(53)	WEAK	CLITIC
	lo- <u>l</u> -o	gli/le; lo/la/etc.

The question arises as to whether the support is an independent syntactic head which projects an XP according to X'-theory, or is not present in the syntactic tree, being inserted by rules of the morphological component (Word Synthesis rules in the framework proposed by Halle 1991). Suppose that the support is the realization of a syntactic head and projects an XP. This means that weak pronouns have a more complex internal structure than clitics. The structures in (6) and (33) must be reformulated as in (54) (according to the Mirror Principle of Baker (1985), SuppP must be lower in the structure than D°, since the support appears first in the linear morpheme order):



Notice that no "syntactic" support must be assumed for Romance clitics, although they appear to be bi-morphemic: 3rd person clitics can be analysed into the l morpheme and the agreement morpheme marking phi-features: l-o, l-a,

²⁰ The comparison between pronouns and determiners is legitimate also in the case of weak pronouns (see Section 2. for clitics). Notice that Germanic languages also display supported determiners:

- | | | | |
|------|----|-----------------------------|-----------|
| (i) | a. | hus-et | |
| | | house-the | |
| | b. | <u>d</u> et stora huset | (Swedish) |
| | | the big house | |
| (ii) | a. | vom Kind | |
| | | of-the _{DAT} child | |
| | b. | von <u>d</u> em Kind | (German) |
| | | of the _{DAT} child | |

The syntactic status of the d morpheme and the distribution of supported determiners will not be discussed here.

²¹ The final o in loro can be viewed as a word marker in the sense of Harris (1991); o is the unmarked word marker, which occurs in adverbs and non-agreeing past participles and makes no reference to gender. As a matter of fact, loro is not inflected for gender, not as a pronoun, nor as a possessive (la loro casa "the_{FEM} their house_{FEM}", vs. la sua casa "the_{FEM} his_{FEM} house_{FEM}").

etc. There are reasons to believe that the \downarrow morpheme, which for the ease of exposition will be called L-support, has a different status from the support found in weak pronouns:

a) no support appears in Germanic clitic pronouns, which only consist of the case morpheme, as in German, or of the agreement morpheme, as in Dutch (see (50)-(51) above). In Romance languages, on the other hand, the agreement morpheme is usually not sufficient to characterize a clitic pronoun:²²

- | | | | | |
|------|----|---------|-----|---------------------------|
| (55) | a. | German | m | (instead of <u>ihm</u>) |
| | | | him | him |
| | b. | Dutch | r | (instead of <u>haar</u>) |
| | | | her | her |
| (56) | a. | Italian | *a | (instead of <u>la</u>) |
| | | | her | her |
| | b. | French | *a | (instead of <u>la</u>) |
| | | | her | her |

b) the support found in weak pronouns disappears in demonstratives, whereas the L-support is still found in demonstratives:

- | | | | |
|------|---------|---------------------|-------------------------|
| (57) | German | diesen | (cf. *dies <u>ih</u> n) |
| | | this _{ACC} | |
| (58) | Italian | quell <u>o</u> | (cf. *que-o) |
| | | that | |

c) in the Italian weak pronoun loro, the L-support co-occurs with the syntactic support.

We can thus conclude that the two supports have a different status, in particular there is no equivalent of the L-support in Germanic languages. Differently from the support found in weak pronouns, it is reasonable to propose that the L-support is introduced by the Word Synthesis rules of the morphological component (cf. Halle 1991) and is therefore not present in the syntactic tree.

The morphological complexity of weak pronouns, in our terms the fact that they display a support, is thus the cause of the fact that they can be analysed as strong pronouns, which are also morphologically complex words. Consequently, it is possible to find the homophonous strong counterpart of a weak pronoun in syntactic positions open to full DPs. On the other hand, clitics do not display a support, and therefore can never be analysed as strong pronouns: this has the consequence that they must always undergo syntactic movement.

CONCLUSIONS

In this paper, some aspects of the syntax of pronouns have been discussed. In particular, we have proposed that different pronouns have a different internal structure, and a close connection has been established between the internal structure of pronouns and their syntactic distribution.

Strong pronouns are generated as N°s, project the full nominal structure, and move DP-internally to D°. They behave like full DPs in that they do not undergo syntactic movement.

²² The paradigm found in Galician (cf. Uriagereka 1992) can be accounted for in morphophonological terms and cannot count as a counterexample to the claim made in the text:

- | | | |
|-----|----|----------------------------|
| (i) | a. | Todo o mundo <u>o</u> veu. |
| | | everyone it saw |
| | b. | Moita xente veu <u>o</u> . |
| | | many people saw it |
| | c. | Ouvimo- <u>lo</u> . |
| | | heard [we] it |

Clitic pronouns are D°s and lack the lexical NP projection. This explains 1) why both in Romance and Germanic languages, they are homophonous either with determiners or with case morphemes, and 2) under the hypothesis that elements without lexical content are not visible to LF-rules, why they must be moved in the syntax to a derived position.

Weak pronouns share with clitics the property of lacking the lexical projection, with the consequence of obligatorily undergoing syntactic movement; however, weak pronouns are more complex than clitics since they contain a morpheme of support, which is represented in the syntactic tree as a further functional projection. Since this morpheme is displayed by strong pronouns as well, it is very often the case that weak pronouns are homophonous with strong pronouns.

The evidence discussed in favour of the different categorization of pronouns comes from both syntactic and morphological considerations, as well as from diachronic data.

APPENDIX: THE GERMAN DATIVE PLURAL PRONOUN IHNEN

The proposed analysis makes the prediction that a pronoun which displays the nominal part of the DP cannot be analysed as a weak pronoun, but will qualify unambiguously as a strong pronoun. This prediction seems to be incorrect for one pronoun. The German dative plural pronoun ihnen is the only pronoun of the language which has a case ending different from that of the corresponding definite article. It displays a n morpheme which is not present in the article:

- | | | | | |
|------|----|-------------------|-----|------------------|
| (59) | a. | mit dem Kind | vs. | mit ihm |
| | | with the child | | with him |
| | b. | mit den Kindern | vs. | mit <u>ihnen</u> |
| | | with the children | | with them |

This additional morpheme is the same as the n morpheme appearing on the noun in the dative plural, (60a), which, following Giusti (1992, this volume), can be analysed as a case agreement morpheme. Suppose that the agreement procedure which applies when N° is a noun also applies when N° is a pronoun. It follows that ihnen can be considered a morphologically complex form and analysed as in (60b) (where the vowel [e] is presumably inserted for phonetic reasons):²³

- | | | |
|------|----|--------------------------|
| (60) | a. | mit den Kinder- <u>n</u> |
| | b. | mit ihn-e- <u>n</u> |

If this analysis is correct, the morphological difference between pronouns and articles found in (59b) receives a principled account. Furthermore, it implies that ihnen must be categorised as N°.²⁴

The presence of the case morpheme n, which appears on nouns, forces the analysis of ihnen as containing

²³ The same holds for the strong pronoun denen "to-them", as expected.

²⁴ In German, relative wh-words display the same morphological forms as articles. Since they occur in specCP, they are full DPs. Given our analysis of ihnen, we expect that relative wh-words differ from articles in the dative plural. The expectation is borne out, thus confirming the correctness of our hypothesis:

(i)	die Kinder, <u>denen</u> ich geholfen habe, ...
	the children, to-whom I helped have

the NP projection. Thus, it should only qualify as a strong pronoun and never be used as a weak pronoun. This prediction is however incorrect: ihnen can have non-human referents, a possibility not available to strong pronouns (as originally observed by Kayne 1975). Compare (61a) with (61b,c), containing the strong counterpart of the same pronoun, and (61) with (62), containing a pronoun with human reference:

- (61) a. Ich habe ihnen zwei Seiten herausgerissen. (ihnen = den Büchern)
 I have to-them two pages torn out (to-them = to-the books)
 b. *Ich habe IHNEN zwei Seiten herausgerissen.
 c. *Ich habe [ihnen und ihnen] zwei Seiten herausgerissen.
- (62) a. Ich habe ihnen die Hände geschüttelt.
 I have to-them the hands shaken
 b. Ich habe IHNEN die Hände geschüttelt.
 c. Ich habe [ihnen und ihnen] die Hände geschüttelt.

If this discussion is correct, it appears that the internal structure of a weak pronoun can include the NP projection. This means that under the "different structure" hypothesis, the difference between strong and weak pronouns should be seen not only in the presence or absence of the NP-projection, but in the presence or absence of some other projection. Without trying here to address this question, it is worth while to notice that ihnen has a special behavior with respect to other weak pronouns:

a) contrary to other dative pronouns, it cannot represent the host for the cliticized form s of the 3rd person neuter pronoun es:²⁵

- (63) a. daß ihm's Hans gegeben hat.
 that to-him-it Hans given has
 b. *daß ihnen's Hans gegeben hat.

b) ihnen does not have a clitic counterpart nen in those spoken and dialectal (Southern) varieties of German which have clitics (see Section 1.). In other terms, the analysis of this pronoun as being simply D° is not available:²⁶

- (64) a. daß die Mutter m was gegeben hat.
 that the mother to-him something given has
 b. *daß die Mutter nen was gegeben hat.
 that the mother to-them something given has

²⁵ The oddness of (63b) cannot be attributed to a phonological constraint on the sequence [ns], as suggested by A. Tomaselli (p.c.). Consider the possibility of the sequence in words such as Hans, uns "us", and the fact that cliticization of es is grammatical with a verb, which ends in [n] in the 3rd person plural:

- (i) Sie haben's gelesen.
 they have it read ✓

²⁶ There could be an independent reason for the ungrammaticality of the form nen, as suggested by L. Rizzi (p.c.): Truncation could be impossible in bisyllabic words. Since in German a long vowel only occurs in open syllables, syllabification must be: [i:-nen]. Thus, the phonological constraint would prevent truncation of the first syllable. Notice that this should be stated as a language-specific constraint, since in the similar truncation found in Italian, sto [sto] from questo [que-sto], truncation can apply to the first syllable.

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ON THE EVIDENCE FOR PARTIAL N-MOVEMENT IN THE ROMANCE DP

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1. Introduction

In Cinque (1990), 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)

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).

2. 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 1981, 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):

- (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 unexpected² In particular, (2b) could not reflect the base order. It could only be an order derived either from (3)a, by raising the N leftward to a higher head, if the subject in Romance is generated in [Spec,NP], or from (3)b, by 'heavy-NP-shifting' the complement around it, if the subject is generated to the right:³

- (3) a [DP..[_{NP}AP [_{N'} N compl.]]] b [DP..[_{NP} [_{N'} N compl.] AP]]
 l'italiana invasione dell'Alb. l'invasione dell'Alb. italiana
 ↑ S N O 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

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.

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 ((4)a), and simply cannot continue its movement to D, as shown by (4)b: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

3. 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 ((8)a), rather than via rightward movement of the complement around it ((8)b):

- (7) *La loro aggressione all'Albania brutale

- (8) a [DP La loro [YP $\overbrace{[XP \text{ brutale } [NP \text{ aggressione all'Albania}]]}$]]
 b [DP La loro [NP aggressione all'Albania] brutale]

The existence of both (6)a 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 prenominal and post-nominal positions of the attributive AP receive two different interpretations (although the difference may be hard to discern in some cases). The postnominal position receives a strict manner interpretation, while the prenominal 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 postnominal 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).

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, 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. (15)a with (15)b:¹⁰

- (14) .. [XPAPsp-or _ [YPAPsubj-or _ [ZPAPmanner/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

4. 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

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 postcopular position). This becomes evident if we pick adjectives that can never be used predicatively, as shown by their non occurrence in postcopular 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
- (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 Gewehrkgeln gross wie Taubeneier 'bullets big as pidgeon 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 postcopular position, exactly as in Romance:

- (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'

5. 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

- (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

- (26) [_{DP} [_{AP}(Extraordinar de) frumos]u] [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

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.

6. A recursion restriction

Indeed, if postnominal attributive APs in Romance are on a left branch, they should display whatever restrictions affect prenominal 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 (31)a-b, which contrast with (32)a-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 prenominal 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 postnominal attributive APs, at first sight, contrary to fact. Cf. (34):

- (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 postnominal APs preceding the complement do show the restriction (cf. (36a), while postnominal 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

7. Adjective ordering

Additional evidence for the generation of attributive APs to the left of N in Romance comes from the crosslinguistic 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):

(37) AN order:	Evaluating	Size	Color	N
English:	beautiful	big	red	ball
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)):

(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

8. 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	b	a huge orange fruit
	un poulet froid délicieux		a delicious cold chicken
(43) a	une personne âgée 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 choose between the two competing analyses?

There is a simple way. Given that postnominal attributive APs precede the N's complement and postnominal 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 (44)a-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

- (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

9. On the categorial status of prenominal adjectives

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

We have already noted that some of the evidence adduced for this position is not cogent (cf. fn.10 on the putative evidence from 'liason' and sect.6, where the recursion restriction taken in Lamarche (1991) and Valois (1991a,b) to follow from the head status of prenominal adjectives was shown to be shared by postnominal 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 prenominal adjectives are heads: those (here exemplified with mero and solo in Italian) which necessarily appear prenominal, at least under a particular interpretation (cf. (46)a-b), and which have the additional properties listed in (47), apparently differentiating them from the adjectives that can appear both pre- and postnominally (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 prenominal 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

(48)a-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 "prenominal" 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 "prenominal" 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 postnominal 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

10. 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 ineliminable component of the morphological word: the word-marker (Harris 1991). By further assuming that, in relation to that, the corresponding functional heads of gender and number in Romance have strong features, which need to be checked already in the syntax (Chomsky 1992), 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 prenominal 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).

Footnotes

1. Versions of Cinque (1990) 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. 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.
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 con-trast 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 (i)b is derived via Heavy NP Shift of the DO (or its equivalent in Kayne's (1993) system).

6. Within the Romance languages, Rumanian possesses the extra option of (overt) adjunction of (common) Ns to D. So alongside (i)a, shared with the other Romance languages, Rumanian also has the option in (i)b (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,AGRP] 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 (1992) 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. I thank Paola Benincà for pointing out to me this subtle difference in interpretation and the sharp contrast in (9) below. The difference between (6)a and b recalls the difference between (i)a 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 (ii)a-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

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).
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').

In a different context, Valois (1991a,b), Lamarche (1991) suggest that (French) prenominal adjectives (in event nominals) are incorporated into the N. This, however, appears dubious. Prenominal adjectives can have a specifier (Les tres 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). "Liason" facts cannot be construed as evidence for the X-zero status of the prenominal adjective either, as they are also triggered in the presence of a specifier (Les tres frequentes ([z]) invasions de Jupiter - the judgement is Michal Starke's). Lamarche (1991,228ff) takes the obligatory character of liason between a prenominal adjective and a following N starting with a vowel as evidence that "prenominal adjectives are in a relation structurally distinct from Spec-Head". But this is unlikely, given the obligatory character of liason in tres/plus [z] interessant. On the impossibility of complements to prenominal adjectives, and the irrelevance of this property for the head status of the adjective, see the discussion in sect. 6 below.

11. This class includes adjectives like principale 'main', scorso 'last', prossimo 'next', maggiore 'elder', precedente 'former', segunte '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 (postcopular) 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 postcopular 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 (i)a-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'

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

Postnominal 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. (21)a and c are from Vater (1985). German provides a particularly clear indication that the right peripheral position of APs is a predicative one. Postcopular predicative adjectives are morphologically invariant, as opposed to prenominal attributive adjectives, which bear either a weak or strong declension (for which see, among others, Penner and Schönenberger 1992, Plank 1992, Longobardi forthcoming). The postnominal adjectives in (21) are necessarily invariant. Sursilvan, within Romance, also distinguishes morphologically pre-dicative 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.

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

- (i) Un { bellissimo } vaso { rosso } di terracotta
 piccolo } ovale }
- (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).
17. Acest frumos băiat 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. (i)a and b conform to the expectation, but (i)c is less clearly ungrammatical than (28) (the judgements are Carmen Dobrovie-Sorin's, p.c.):

- (i) a Probabila brutală invazie a Bosniei
 Probable-the brutal invasion of Bosnia
 b Probabila invazie brutală a Bosniei
 c ??(Extraordinar de) brutala probabilă 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 reelaboration of his notion of Relativized Minimality.

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).

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

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 analysed 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.

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

Interestingly, Lamarche himself (1991,222f,fn6) notes that the sequence un fruit orange énorme of (42a) "would sound more natural with énorme preminally" (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.
25. The necessarily pronominal 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 (47)a and b follow from the head status of such adjectives, if they are able to project to a maximal projection.
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 V's, 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 pronominal 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 pronominal 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') numeroso famiglie che accettarono..). On the other hand, there are attributive adjectives (such as principale 'main', scorso 'last', etc.) which appear both pre- and postnominally 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 [băiat]]]
poor-the boy
b *[băiatul [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.

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 postnominal attributive adjectives (nostra (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 homem 'The (pl) man(sing)', Minhas filha pequena 'My (pl) daughter (sing) small (sing)').

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On Negation in German and Bavarian

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1. Introduction

In this paper we intend to analyze the position of the sentential negative marker in Standard German and in some Bavarian varieties. In section 2, we will try to determine the position of the negative marker with respect to nominal arguments, prepositional phrases and some classes of adverbs. We will formulate our hypothesis on the basis of some recent proposals regarding the position of nominal expressions which receive structural case (cf. Chomsky (1992) among others). We will propose that all nominal arguments move to agreement positions at S-structure, which precede the position of sentential negation. Furthermore it will be shown that there are two non thematic subject positions, and that the lower one is only open to indefinite elements. We will compare our analysis with Sportiche's (1992) account showing that in German there is no special position for indefinite objects, but only AGROP, where both definite and indefinite objects move to. Movement to AGRO is different from scrambling, as it is obligatory and it targets a position which is lower than scrambling in the functional structure of the sentence. Further movement of [-focus] elements is interpreted as scrambling to a higher position. In section 3 we examine Bavarian negative concord. We will show that standard German 'nicht' and Bavarian 'nit' occupy the same position in the structure and that the analysis put forth for standard German can be applied to Bavarian too. We will then try to determine what the syntactic space of negative concord is, or else where negative elements such as 'nobody', 'nothing', 'no girl' surface at S-structure. We will then consider Zanuttini's (1991) hypothesis that negative concord is an instance of a Spec-head relation inside the negative projection. We will see that this analysis is not tenable for Bavarian. We will propose a different analysis for Bavarian negative concord, which is not instantiated by a Spec-head relation of the negative quantifier with the negative head, but which is possible in a very limited structural space. Section 4 contains a very sketchy comparison of what we have found in Bavarian with West Flemish and Romance negative concord. We will see that the X'-status of the negative marker is irrelevant for our analysis. Bavarian negative concord shows at SS what happens at LF in Romance.

2. Negation between NPs and PPs

2.1 Negation and direct objects

2.1.1 Scrambling

German sentential negation has often been analyzed as an adverb which is adjoined to VP (Webelhut 1989, Moltmann 1990,...). Within this hypothesis, we would expect (internal) arguments of the verb to follow the negative marker 'nicht'. But, contrary to this, 'nicht' must follow nominal arguments. The unmarked position of 'nicht' in (1a) is at the right of definite NPs. If it precedes a NP, it functions as contrastive negation (1b).

- (1) a. daß Hans das Auto nicht verkauft hat
 that H. the car not sold has
 H. did not sell the car
 b. #daß Hans nicht das Auto verkauft hat

Webelhut (1989:377) proposes that arguments which precede negation at S-structure have been scrambled out of the VP and adjoined to positions to the left of 'nicht'. This approach, however, has some shortcomings. First, while scrambling in itself is optional, it becomes obligatory in the presence of sentential negation. The internal argument in (2) can either scramble to a position preceding adverbs like 'wohl' and 'wahrscheinlich' (probably) (2a), or follow it (2b). But as shown by the contrast in (1) the internal argument has to precede 'nicht'.

- (2) a. daß Hans das Auto wohl verkauft hat
 that H. the car probably sold has
 H. probably sold the car
 b. daß Hans wohl das Auto verkauft hat
 that H. probably the car sold has

Second, an argument preceding sentential negation does not behave as a scrambled element with respect to focus. Lenerz (1977) notices that the unmarked order of nominal internal arguments is: indirect object - direct object. In this order both arguments can be focused (3a). In the reversed order (3b), only the indirect object can be focused, while the direct one can not. While both sentences in (3) are acceptable answers to the question 'Who did Hans give the money to?', only (3a) is acceptable as an answer to 'What did Hans give to the cashier?'. According to Lenerz (1977), this is evidence that the direct object in (3b) undergoes the requirement of being defocused.

- (3) a. daß Hans dem Kassierer das Geld gegeben hat
 that H. the cashier(dat) the money(acc) given has
 H. gave the money to the cashier
 b. daß Hans das Geld dem Kassierer gegeben hat
 that H. the money(acc) the cashier(dat) given has

Webelhut (1989) characterizes scrambling positions precisely as [-focus] positions. The direct object in (3b) has scrambled to a position in front of the indirect object, where it cannot be focused.

Crucially, the presence of negation does not affect this asymmetry. If nominal arguments which precede sentential negation occupy scrambling positions, we would expect that both sentences in (4) require their direct objects to be defocused. However, this is not the case. Just as (3a), (4a) is an acceptable answer to the question 'What did Hans not give to the cashier?'; (4b) is not:

- (4) a. daß Hans dem Kassierer das Geld nicht gegeben hat
 that H. the cashier(dat) the money(acc) not given has
 H. didn't give the money to the cashier
 b. daß Hans das Geld dem Kassierer nicht gegeben hat

With respect to focus, the direct object in (4a) does not display the behavior of an

element in a scrambling position. The same argument can be construed for the examples in (1) and (2). A direct object which precedes sentential negation, as the one in (1a), can be focused, while, it must be defocused, if it precedes 'wohl', as in (2a). (2b), where the direct object is not scrambled, is an acceptable answer to the question 'What did Hans buy?', but not (2a). (1a), where the direct object precedes 'nicht', is acceptable as an answer to 'What did Hans not buy?'. Thus, we conclude that nominal expressions preceding sentential negation are not necessarily scrambled.

2.1.2 A-movement

One of the basic problems of the account discussed in 2.1.1. lies in the fact that adverbs like 'wohl' and sentential negation are analyzed as being adjoined to VP. But these elements occupy quite different positions. First, 'wohl' can only precede (5a) but not follow (5b) sentential negation.

- (5) a. daß Hans wohl nicht gekommen ist
 that H. probably not come is
 H. probably did not come
 b. *daß Hans nicht wohl gekommen ist

Second, nominal arguments can intervene between 'wohl' and 'nicht' (6). A direct object has to precede sentential negation, but it can either follow (6a) or precede (6b) the adverb 'wohl'.

- (6) a. daß Hans wohl das Auto nicht verkauft hat
 that H. probably the car not sold has
 H. probably did not sell the car
 b. weil Hans das Auto wohl nicht verkauft hat

Munaro (1991), in the spirit of Mahajan (1990), analyzes German scrambling as a complex movement composed by: (a) obligatory A-movement at S-structure to the specifier of the appropriate agreement projection, where case is assigned/checked, and (b) subsequent (optional) A'-movement. If the agreement projections dominate the negative projection, the contrast in (1) is predicted: the direct object has to raise to a position which precedes 'nicht'. Since subsequent movements are optional, the fact that objects can either precede or follow 'wohl' (2,6) can be accounted for, assuming that such adverbs are generated in a position higher than this agreement projection but lower than the landing site for scrambling.

The trigger for the first step is supposed to be 'Case Assignment'. The direct object raises to the specifier of AGRO, in order to be assigned accusative case. This assumption has two welcome consequences. First, we expect constituents which are not assigned (structural) case, such as PPs, to be able to follow 'nicht'. We will discuss the distribution of PPs with respect to sentential negation in the following section. Second, since the movement to the specifier of AGRO is related to case rather than to focus, the contrast in (4) can be accounted for. A focused constituent can precede sentential negation.

According to Webelhut (1989), existential indefinites are marked [+focus], therefore they cannot undergo scrambling. Under the scrambling hypothesis we would expect them to follow sentential negation. But this is not the case. Just as definite ones, indefinite nominal arguments must precede sentential negation (7a). If negation precedes an indefinite object (7b), it is interpreted as contrastive negation. Munaro's

'short-step' hypothesis, on the other hand, can account for the distribution of indefinite direct objects.

- (7) a. daß Hans ein Buch nicht gekauft hat
 that H. a book not bought has
 H. did not buy a book
 b. #daß Hans nicht ein Buch gekauft hat

Notice that the indefinite argument in (7a) is interpreted with wide scope with respect to the negative element. This fact straightforwardly follows from its syntactic position: the indefinite c-commands the negative element.⁰

2.2. Negation and PPs

2.2.1 Definite PPs

In contrast to nominal arguments, PPs can follow sentential negation. PPs differ whether they can or must follow sentential negation. While selected PPs can either follow (8a) or precede (8b) sentential negation, directional PPs have to follow it (9).

- (8) a. daß Hans auf seinen Freund nicht gewartet hat
 that H. for his friend not waited has
 H. did not wait for his friend
 b. daß Hans nicht auf seinen Freund gewartet hat
- (9) a. #daß Hans auf den Berg nicht gestiegen ist
 that H. on the mountain not climbed has
 H. did not climb on the mountain
 b. daß Hans nicht auf den Berg gestiegen ist

While the negative element in (8a) can function either as sentential negation or as constituent negation with scope over the constituent which contains the past participle, the one in (9a) can only function as contrastive negation of the past participle (10).

- (10) daß Hans auf den Berg nicht gestiegen, sondern geflogen, ist
 that H. on the mountain not climbed, but flown, has
 H. did not climb but flew on the mountain

The short step hypothesis as formulated in the preceding section accounts for this fact: since PPs are not assigned structural case, they can follow the negative marker. Furthermore, this hypothesis correctly derives that those PPs which have to follow 'nicht', such as directional PPs, also have to follow nominal arguments (11).

- (11) a. Hans hat den Stein auf den Berg getragen
 H. has the stone on the mountain carried
 H. carried the stone on the mountain
 b. *Hans hat auf den Berg den Stein getragen

Let's now consider the position of some types of PPs with respect to the negative marker. Bodypart PPs, PPs which are complements of spray-load verbs and modal PPs

⁰ The 'short-step' hypothesis can account for these facts, only if we assume that the position relevant for the interpretation of the indefinite is the S-structure one (cf. section 3.7).

behave like directional PPs. They cannot precede 'nicht', as exemplified in (12), (14) and (16). Moreover the negative marker always follow nominal arguments as in (13) and (15).

- (12) a. Hans hat den Schrank nicht auf den Schultern (*nicht) getragen
H. has the wardrobe not on the shoulders not carried
H. did not carry the wardrobe on his shoulders
b. Hans hat Maria nicht auf den Mund (*nicht) geküßt
H. has M. not on the mouth not kissed
H. did not kiss Mary on the mouth
- (13) a. *Hans hat auf den Schultern den Schrank getragen
H. has on the shoulders the wardrobe carried
H. carried the wardrobe on the shoulders
b. *Hans hat auf den Mund Maria geküßt
H. has on the mouth M. kissed
H. kissed M. on the mouth
- (14) a. Hans hat die Wand nicht mit grüner Farbe (*nicht) bemalt
H. has the wall not with green color not painted
H. did not paint the wall with green color
b. Hans hat die Kisten nicht auf den Lastwagen (*nicht) geladen
H. has the boxes not on the truck not loaded
H. did not load the boxes on the truck
- (15) a. *Hans hat mit grüner Farbe die Wand bemalt
H. has with green color the wall painted
H. painted the wall with green color
b. *Hans hat auf den Lastwagen die Kisten geladen
H. has on the truck the boxes loaded
H. loaded the boxes on the truck
- (16) Hans hat nicht mit guter Aussprache (*nicht) vorgetragen
H. has not with good pronunciation not declaimed
H. did not declaim with good pronunciation

Selected PPs (17), as already mentioned in (10), complex directional PPs (18) and local PPs (19) can precede and follow sentential negation.

- (17) a. Hans kann sich (nicht) an seine Frau (nicht) erinnern
H. can himself not to his wife not remember
H. cannot remember his wife
b. Hans hat (nicht) an seiner Aussage (nicht) gezweifelt
H. has not about his declaration not doubted
H. was not in doubt about his declaration
- (18) daß Hans (nicht) auf den Berg (nicht) hinauf (*nicht) gegangen ist
that H. not on the mountain not thereon not climbed has
H. did not climb on the mountain
- (19) Hans hat (nicht) in Wien/auf dem Fest (nicht) getanzt
H. has not in Vienna/at the party not danced
H. did not dance in Vienna/at the party

Causative PPs, in (21), as well as temporal PPs (22) can only precede the negative marker.

- (21) a. daß Hans wegen des Essens nicht erschienen ist
 that H. because of the meal not appeared is
 H. did not appear because of the meal
 b. #daß Hans nicht wegen des Essens erschienen ist
- (22) a. Hans hat vor zwei Tagen nicht getanzt
 H. has ago two days not danced
 H. did not dance two days ago
 b. #Hans hat nicht vor zwei Tagen getanzt

If the PP follows the negative element, the latter does not have scope over the VP but only over the PP. As such it can be considered as an instance of contrastive negation.

3.2.2. Indefinite PPs

Like definite PPs, also indefinite PPs can follow sentential negation. According to their syntactic position, they take different scopes. While the indefinite PP in (23a) has scope over the negative element, the one in (23b), which follows 'nicht', can be interpreted with narrow scope. (23b) can be paraphrased with: 'there is no x, such that John waited for x'.

- (23) a. daß Hans auf einen Freund nicht gewartet hat
 that H. for a friend not waited has
 H. did not wait for a friend
 b. daß Hans nicht auf einen Freund gewartet hat

As exemplified in (24), indefinite directional PPs have to follow 'nicht'.

- (24) a. #daß Hans auf einen Berg nicht gestiegen ist
 b. daß Hans nicht auf einen Berg gestiegen ist
 that H. not on a mountain climbed is
 H. did not climb on a mountain

2.3 Summary

The hypothesis discussed in section 2.1.2. easily accounts for the distribution of nominal arguments and prepositional phrases with respect to sentential negation. A direct object precedes sentential negation because it has to raise to an agreement position preceding 'nicht' for case reasons (25a). Prepositional phrases, which do not take structural case can follow the negative element at S-structure (25b).

- (25) a. daß Hans [AGROP das Auto_i [NEGP nicht [VP t_i verkauft hat]]]
 b. daß Hans [AGROP [NEGP nicht [VP auf den Berg gestiegen ist]]]

2.4 Subjects and Datives

Indirect objects behave like direct objects with respect to sentential negation. They have to precede 'nicht' (26a). The negation preceding the indirect object in (26b) is interpreted as contrastive negation.

- (26) a. daß Hans dem Präsidenten nicht geholfen hat
 that H. the president(dat) not helped has
 H. did not help the president

b. #daß Hans nicht dem Präsidenten geholfen hat

The assumption of an AGRO-position for direct objects imposes an analogous position 'AGRIO' for indirect objects. As we have already discussed (cf: section 2.1.1.), the unmarked order of indirect objects and direct objects is the first preceding the second. Therefore we assume that AGRIO precedes AGRO. Sentential adverbs such as 'wohl', precede AGRIO (27a). In (27b), the indirect object has been scrambled further to a position preceding the adverb. The observations regarding scrambling that we made for the direct object in section 2.1.2. are also valid for the indirect object: AGRIO, like AGRO, is not a [-focus] position.

- (27) a. daß Hans wohl dem Präsidenten nicht geholfen hat
 that H. probably the president(dat) not helped has
 H. probably did not help the president
 b. daß Hans dem Präsidenten wohl nicht geholfen hat

Subjects, like indirect objects and direct objects precede sentential negation (28). Since they can follow sentential adverbs (29a), we assume a subject agreement projection 'AGRSi' between the position occupied by class I adverbs and the agreement projections of the objects, which is distinct from AGRS, the position of English preverbal subjects.

- (28) a. daß Hans nicht getanzt hat
 that H. not danced has
 b. #daß nicht Hans getanzt hat
 (29) a. daß da wohl ein Mann getanzt hat
 that there probably a man danced has
 a man probably danced there
 b. *daß da wohl der Präsident getanzt hat
 that there probably the president danced has
 the president probably danced there

Note that the specifier of AGRSi is subject to the so called 'definiteness restriction': it can not be occupied by definite subjects (29b).

The question arises whether all arguments with inherent case behave like datives. In addition to dative, arguments can be inherently case marked by genitive and, in some cases, by accusative. Let's first consider certain German verbs which assign genitive case. These genitive arguments have to precede sentential negation. If they follow, as in the (b)-examples, the negation is interpreted as contrastive.

- (30) a. daß wir dieses Mannes nicht gedachten
 that we this man(gen) not commemorated
 we did not commemorate this man
 b. #daß wir nicht dieses Mannes gedachten
 (31) a. daß Maria sich des Mannes nicht erinnerte
 that M. herself the man(gen) not remembered
 M. did not remember the man
 b. #daß Maria sich nicht des Mannes erinnerte
 (32) a. daß Hans sich seines Vaters nicht schämte
 that H. himself his father(gen) ashamed was

- H. was not ashamed of his father
 b. #daß Hans sich nicht seines Vaters schämte

These examples are taken from Moltmann (1990). Note, however, that her judgements differ from ours. According to Moltmann, genitive arguments can both precede and follow sentential negation. Since it is rarely instructive simply to announce one's contradictory intuitions, we will embed the sentences above in contexts which are incompatible with contrastive negation.

The verb 'brauchen' (need) can select a clausal complement and have a modal meaning only in contexts with negation. Hence, if the negative marker is omitted, (33) becomes ungrammatical.

- (33) daß Hans *(nicht) zu kommen braucht
 that H. not to come need
 H. need not come

As we saw in section 2.1.1, if negation is followed by a direct object, it is contrastive. As shown by the contrast in (34), modal 'brauchen' cannot be licensed by contrastive negation. Modal 'brauchen' is possible only if the direct object precedes the negative marker (34a), but not if it follows it (34b). Note that a PP following 'nicht' is compatible with modal 'brauchen, since this configuration does not give rise to contrastive negation (34c).

- (34) a. daß Hans das Auto nicht zu verkaufen braucht
 that H. the car not to sell need
 H. need not sell the car
 b. *daß Hans nicht das Auto zu verkaufen braucht
 c. daß Hans nicht auf den Berg zu steigen braucht
 that H. not on the mountain to climb need
 H. need not climb on the mountain

There is a striking similarity between accusative arguments and genitive arguments with respect to modal 'brauchen': Only if the genitive argument precedes negation, as in the (a)-examples, but not if it follows, as in (b), modal 'brauchen' is possible.

- (35) a. Du brauchst dieses Mannes nicht zu gedenken
 You need this man not to commemorate
 You need not commemorate this man
 b. *Du brauchst nicht dieses Mannes zu gedenken
 (36) a. Maria braucht sich dieses Mannes nicht zu erinnern
 M. need herself this man not to remember
 M. need not remember this man
 b. *Maria braucht sich nicht dieses Mannes zu erinnern
 (37) a. Hans braucht sich seines Vaters nicht zu schämen
 H. need himself his father not to be ashamed of
 H. need not be ashamed of his father
 b. *Hans braucht sich nicht seines Vaters zu schämen

If modal 'brauchen' is incompatible with contrastive negation, these contrasts constitute an argument in favor of our assumption, that genitive arguments have to precede

sentential negation.

Let's now consider inherent accusatives. There are a few verbs that take two accusative objects in standard German: 'lehren' (teach) (38), 'abhören' (question) and 'abfragen' (question) (39). Both accusative objects have to precede 'nicht'.

- (38) a. daß der Mann den Jungen diese Sprache nicht gelehrt hat
 that the man(nom) the boy(acc) this language(acc) not taught has
 the man did not teach the boy the language
 b. #daß der Mann den Jungen nicht diese Sprache gelehrt hat
- (39) a. daß Maria ihren Sohn diese Vokabeln nicht abgefragt/abgehört hat
 that M. her son(acc) these words(acc) not questioned has
 M. did not question her son these words
 b. #daß Maria ihren Sohn nicht diese Vokabeln abgefragt/abgehört hat

Moltmann's (1990, p.27) judgements differ from our's. According to her, the second accusative object can follow the negative marker. But again, as the following contrasts show, the second accusative object behaves just like direct objects and genitive arguments with respect to modal 'brauchen'. Modal 'brauchen' is possible only if both accusative objects precede the negative marker.

- (40) a. Hans braucht den Jungen diese Sprache nicht zu lehren
 H. need the boy(acc) this language(acc) not to teach
 H. need not teach the boy the language
 b. *Hans braucht den Jungen nicht diese Sprache zu lehren
 c. *Hans braucht diese Sprache nicht den Jungen zu lehren
- (41) a. Maria braucht ihren Sohn diese Vokabeln nicht abzufragen
 M. need her son(acc) these words(acc) not to question
 M. need not question her son these words
 b. *Maria braucht ihren Sohn nicht diese Vokabeln abzufragen
 c. *Maria braucht diese Vokabeln nicht ihren Sohn abzufragen

If these observations are correct, nominal expressions with inherent genitive or accusative case surface in positions to the left of sentential negation. Hence they behave like datives rather than like PPs. Hence additional assumptions have to be made regarding the surface position of these expressions.

2.5. *Argument positions between NEGP and VP*

2.5.1. *Specific and non specific direct objects*

Considering the distribution of nominal arguments and prepositional phrases with respect to sentential negation and sentential adverbs we assumed a German Mittelfeld of the kind in (42).

- (42) [AGRS...[XP wohl [AGRS_i [AGRIO [AGRO [NEGP [VP PP]]]]]]...]

In section 2.1.2. we assumed that the short step from the VP internal base positions to the agreement positions is triggered by case assignment in S-structure. Therefore nominal arguments precede sentential negation, while prepositional phrases can follow it. Even when NEGP is not realized, nominal arguments cannot surface in positions which are lower than NEGP, e.g. positions internal to VP, because of case checking. Under this view, specific and non specific direct objects can surface in the same

position, i.e. the specifier of AGRO.¹

Sportiche (1992) proposes a structure different from (42) for the Dutch Mittelfeld. He assumes that specific and non specific direct objects surface in different positions. Non specific direct objects move to the specifier of AGROP (43), where accusative case is checked. Specific direct objects, on the other hand, move further to the specifier of Accusative Voice 'ACCVP', where the specificity feature is checked.

(43) [AGRS... [ACCVP (adverbs) [AGROP [VP]]]]

Sportiche (1992) notes that, in Dutch, specific and non specific direct objects differ in their distribution with respect to certain adverbs. Specific objects must occur higher than the negative marker 'niet' and may occur higher or lower than adverbs such as 'waarschijnlijk' (probably) (44a, his (84)). Non specific objects, on the other hand, must follow, sentential adverbs such as 'waarschijnlijk' (probably) or particles such as 'maar' (but) (44b, his (85c)).

- (44) a. Hij heeft (Jan) waarschijnlijk (Jan) niet (*Jan) gezien
 he has Jan probably Jan not Jan seen
 b. Pak maar een boekje/(**een boekje* maar)
 take 'maar' a book

Sportiche (1992:65) proposes that these adverbs can intervene between ACCVP and AGRO. In this way the fact that non specific direct objects surface to the right of these adverbs is accounted for.

Before we discuss the problems of this approach, note that German shows the same contrasts. While specific direct objects can precede and follow sentential adverbs such as 'wohl', they cannot follow sentential negation (45), as we have already seen in section 2.2. Non specific direct objects (46) must follow sentential adverbs.

- (45) daß Hans (das Auto) wohl (das Auto) nicht *(das Auto) verkauft hat
 that H. the car probably the car not the car sold has
 H. probably did not sell the car
 (46) a. daß Hans wohl ein Auto verkauft hat
 that H. probably a car sold has
 H. probably sold a car
 b. #daß Hans ein Auto wohl verkauft hat
 that H. a car probably sold has

Sportiche's approach, however, displays a number of problems. First, he assumes that sentential negation is generated between ACCVP and AGRO. This assumption correctly predicts that specific direct objects, which surface in ACCVP, precede sentential negation, but it wrongly predicts that non-specific direct objects, which are realized in AGRO, surface to the right of sentential negation. As we have already discussed in section 2.1.2, this is not the case in German.²

¹ Structure (42) is not complete, since it ignores potential positions for PPs preceding NEGP and the scrambling positions, which are higher than the sentential adverbs.

² This generalization that German nonspecific nominal arguments cannot follow sentential negation is not undisputed. According to Moltmann (1990, p.27), for instance, nonspecific indefinite direct objects can follow sentential negation. Note, however, that her examples do not involve the marker for sentential negation 'nicht', but the negative adverbial quantifier 'nie' (never). As we will see in section 3.5.2, these elements behave very differently

- (47) a. daß Hans das Buch nicht gekauft hat
that H. the book not bought has
H. did not buy the book
b. #daß Hans nicht ein Buch gekauft hat
that H. not a book bought has
H. did not buy a book

Second, indirect objects can precede specific direct objects, even if they are non-specific, as in (48a). For this reason, Sportiche (1992) assumes that AGRIO not only precedes AGRO but also ACCVP (48b).

- (48) a. daß er jemandem das Buch gegeben hat
that he someone(dat) the book(acc) given has
he gave someone the book
b. [AGRS... [AGRIO [ACCVP (neg) [AGROP [VP]]]]]

This structure predicts a distinct distribution of non specific indirect objects and non specific direct objects with respect to negation. The former, which surface in AGRIO, should precede sentential negation, while the latter should follow it. Therefore the sentences in (26) are expected to contrast. But they don't.

- (49) a. #daß Hans nicht jemanden gesehen hat
that H. not somebody(acc) seen has
b. #daß Hans nicht jemandem geholfen hat
that H. not somebody(dat) helped has

Third, Sportiche (1992) assumes that sentential adverbs such as 'waarschijnlijk' (probably) and particles such as 'maar' (but) can be generated between ACCVP and AGRO (43). Although this hypothesis correctly predicts that non specific direct objects cannot precede these elements, it wrongly predicts that non specific indirect objects have to precede them. The latter follow the sentential adverb 'wohl' (50) and the particle 'doch' (51).³

- (50) a. daß Hans wohl jemandem geholfen hat

and occupy very different positions in the syntactic structure. Moltmann further assumes that also some nonspecific definite nominal expressions can follow sentential negation. We will discuss these expressions and their syntactic position in footnote 9.

³ Sportiche (1992:66) illustrates his claim with the following contrast in Dutch. According to him the dative indefinite 'jemand' must precede the particle 'maar'.

- i) a. Verzoek iemand maar uit te strappen
b. ?*Verzoek maar iemand om uit te strappen
ask someone to get off

German does not show this contrast in an analogous construction. The unmarked order of 'doch' and the indefinite dative is the order shown in (iib).

- ii) a. *Bitte jemanden doch aufzustehen
ask someone prt to get off
b. Bitte doch jemandem aufzustehen
ask prt someone to get off

The reversed order of 'doch' and 'jemand', as in (iia), could be marginally possible, but the meaning differs: the adverb is focalized and seems to be interpreted as modifying the embedded verb. Note, however, that (iib) is perfectly possible, in contrast to (ib).

- that H. probably someone(dat) helped has
 H. probably helped someone
- (51) a. *daß Hans jemandem wohl geholfen hat
 daß es Hans doch jemandem geschenkt hat
 that it H. prt. someone(dat) given has
 H. gave it to someone
- b. *daß es Hans jemandem doch geschenkt hat

Contrary to Sportiche (1992), sentential adverbs and particles therefore cannot be generated between ACCVP and AGRO. Rather, it has to be assumed that they occupy positions which precede AGRIO⁴. Sportiche's structure (43) has to be substituted by a structure like the one in (52), which correctly predicts that nonspecific direct and indirect objects can surface after sentential adverbs and particles.

- (52) [AGRS...(adverb)...[AGRIO [ACCVP [AGRO [VP]]]]...]

Therefore, sentential adverbs and particles do not constitute an empirical test for the hypothesis that there are two distinct syntactic positions for specific and nonspecific direct objects. In addition, we saw that sentential negation is not a test either, since it follows neither specific nor nonspecific direct objects. In principle there are two possibilities to account for this fact. Either, as we proposed in section 2.1.2, sentential negation is generated in a position that follows AGRO. Or, if sentential negation is generated between ACCVP and AGRO, an independent stipulation has to be formulated to account for the absence of nonspecific direct objects after negation.

In the following section we will see whether there are any other elements distinct from negation which can appear between specific and nonspecific direct objects. As we will see, there is no such elements which may constitute empirical evidence for the second option in German. Hence we will reject the second option and assume that sentential negation follows AGRO.

2.5.2 *Low adverbs*

In this section, we will consider adverbs which occupy structurally low positions, and see whether those distinguish between specific and nonspecific direct objects. Let's consider manner adverbs, such as 'gut' (well), 'richtig' (correctly), 'schlecht' (badly), 'schnell' (quickly), 'gerne' (with pleasure). As shown in (53), they follow sentential adverbs and particles as well as sentential negation

- (53) a. daß Hans es wohl/doch nicht gut/richtig/schlecht/schnell/gerne gemacht hat
 that H. it probably/prt. not well/correctly/badly/quickly/with pleasure done has
 H. probably did it well/correctly/badly/quickly/with pleasure
- b. *daß Hans es wohl/doch gut/richtig/schlecht/schnell/gerne nicht gemacht hat
- c. *daß Hans es gut/richtig/schlecht/schnell/gerne wohl/doch nicht gemacht hat

Under the assumption that sentential negation intervenes between ACCVP and AGRO, one could assume that they are generated below sentential negation but still higher than

⁴ More precisely, as we saw in section 2.4, sentential adverbs and particles precede also AGRSi, the position of nonspecific subjects.

Sportiche's AGRO for nonspecific direct objects.

(54) [AGRS...[AGRIO [ACCV (neg) (low adverbs) [AGRO [VP]]]]...]

In absence of sentential negation, according to (54), we expect that low adverbs follow specific direct objects but precede nonspecific ones. As shown in the following examples, they do not. The direct object in (55) has to precede the manner adverb, independently of specificity.

- (55) a. *daß Hans gut/schlecht das/ein Auto gewaschen hat
 b. daß Hans das/ein Auto gut/schlecht gewaschen hat
 that H. the/a car well/badly washed has
 H. washed well/badly the/a car

The indefinite pronouns like 'was' is typically nonspecific. For instance, it cannot undergo scrambling: the direct object 'was' cannot precede an indirect object (56). As shown in (57), it cannot follow manner adverbs.

- (56) a. daß Hans jemandem was gesagt hat
 that H. somebody something said has
 H. said something to somebody
 b. *daß Hans was jemandem gesagt hat
 (57) a. daß Hans endlich einmal was gut/richtig machen soll
 that H. finally for one time something well/correctly do should
 H. should finally do something well/correctly
 b. *daß Hans endlich einmal gut/richtig was machen soll

These contrasts show that, contrary to (54), nonspecific direct objects precede manner adverbs^{5, 6, 7}.

⁵ 'Alles' (all) behaves in a parallel way:

- i) a. *daß Hans immer schlecht alles macht
 b. daß Hans immer alles schlecht macht
 that H. always everything badly does
 H. does always everything badly

⁶ Note that also the remainder of 'was für split' and 'quantifier split' precedes manner adverbs. We will discuss this construction in section 3.3.2 in more detail.

- i) a. *Was hat er richtig für Aufgaben gelöst
 b. Was hat er für Aufgaben richtig gelöst
 What has he for tasks correctly solved
 Which tasks did he correctly solve
 ii) a. *Aufgaben hat er richtig viele gelöst
 b. Aufgaben hat er viele richtig gelöst
 tasks has he many correctly solved
 He solved correctly many tasks
 iii) a. *Die Aufgaben hat Hans gut alle gelöst
 b. Die Aufgaben hat Hans alle gut gelöst
 the tasks has H. all correctly solved
 H. solved all the tasks correctly

⁷ Further examples of manner adverbs that behave in this way are 'vorsichtig' (carefully), 'aufmerksam' (attentively), 'umständlich' (circumstantially), etc. Analogously, adverbs like 'vollständig', 'komplett', 'ganz', 'gänzlich', 'völlig' (completely). They follow sentential negation (i), and specific and nonspecific direct objects (ii).

- i) a. daß Franz die Stromleitung nicht vollständig zerstört hat

Some of the manner adverbs in (55) can precede and follow direct objects. Consider the examples in (58). The adverb 'schnell' can be followed and preceded by the indefinite direct object. The meaning of 'schnell' differs whether it precedes or follows the direct object. (58a) means that the manner in which John solved the problem was quick. (58b) means that the act of John's solving the problem as well as his decision of solving the problem was quick (cf Moltmann 1990, p.9). Let's call 'schnell' with the second interpretation 'schnell2'.

- (58) a. daß Hans ein Problem schnell gelöst hat
that H. a problem quickly solved has
H. solved a problem quickly
b. daß Hans schnell ein Problem gelöst hat
that H. quickly a problem solved has
H. quickly solved a problem

As shown in (59), the negative marker 'nicht' has to precede 'schnell2'.

- (59) a. *wenn du schnell nicht ein Problem löst, dann...
b. wenn du nicht schnell ein Problem löst, dann...
if you not quickly a problem solve, then
if you do not quickly solve a problem, then...

This contrast, however, cannot be taken as an argument for the structure in (54), because 'schnell2' can also precede specific direct objects (60a), as well as indirect objects (+47b) and indefinite subjects (+47c).

- (60) a. Jetzt muß ich noch schnell das Problem lösen
now must I yet quickly the problem solve
Now I must quickly solve the problem
b. nachdem er das Problem schnell jemandem erklärt hat
after that he the problem quickly somebody(dat) explained has
after that he quickly explained the problem to somebody
c. Es ist dann noch schnell wer abgefahren
it is afterwards yet quickly who left

-
- that F. the circuit line completely destroyed has
F. destroyed the circuit line completely
b. *daß Franz die Stromleitung vollständig nicht zerstört hat
ii) a. daß Hans die/eine Zeitung ganz gelesen hat
that H. the/a newspaper completely read has
H. read the/a newspaper completely
b. *daß Hans ganz die/eine Zeitung gelesen hat

A certain class of temporal adverbs differ from temporal adverbs such as 'gestern', 'morgen' etc. in that they must follow sentential negation: 'spät' (late), 'früh' (early), 'zeitig' (early), etc (iii). Also these adverbs cannot be followed by direct objects, independently of specificity (iv).

- iii) a. daß Hans nicht spät angekommen ist
that H. not late arrived has
H. did not arrive late
b. *daß Hans spät nicht angekommen ist
iv) a. daß Hans den/einen Brief spät lesen wird
that H. the/a letter late read will
H. will read the/a letter late
b. *daß Hans spät den/einen Brief lesen wird

Afterwards somebody quickly left

We conclude that 'schnell₂' differs from the other use of 'schnell' in that it is a high adverb⁸

In this section we saw that low adverbs do not distinguish specific from nonspecific direct objects.⁹ Neither specific nor nonspecific direct objects can be preceded by a low adverb. Assuming that low adverbs are generated to the right of AGRO, this fact follows in a natural way. If this is correct, there is no empirical evidence for the hypothesis that specific and nonspecific direct objects surface in distinct syntactic positions to the right of indirect objects. Hence, we assume that structure (42), section 2.5.1, is correct and that there is only one position for direct objects (AGRO) to the right of AGRIO.

3. Bavarian double negation

⁸ A similar ambiguity is shown by the adverb 'gerne' (with pleasure). Although it cannot precede the negative marker (55), it can precede specific and nonspecific direct objects in (ia) and indirect objects (ib). However, this option is restricted to specific contexts such as conditionals and generic contexts. As shown in (ii), specific and nonspecific direct objects and indirect objects cannot follow 'gerne', when indicative mood is used.

- i) a. daß ich gerne das/ein Buch lesen würde
that I with pleasure the/a book read would
I would like to read the/a book
- b. daß ich gerne jemandem helfen würde
that I with pleasure somebody help would
I would like to help somebody
- ii) a. daß ich gestern gerne das/ein Buch gelesen hätte/*habe
that I yesterday with pleasure the/a book read had(subj)/have(ind)
- b. daß ich gestern gerne jemandem geholfen hätte/*habe
that I yesterday with pleasure somebody helped had(subj)/have(ind)

⁹ As we have already mentioned in footnote 3, Moltmann (1990) assumes that nonspecific nominal expressions can follow sentential negation. According to her, definite NPs which are headed by nouns like 'Ende' (end), 'Wohnsitz' (residence), or 'Lösung' (solution) are typically nonspecific and can both follow and precede sentential negation. But also in this case, our intuitions differ from Moltmann's. We think that, if these nominal expressions follow the negative marker, the negation is contrastive. As shown by the following contrasts, modal 'brauchen' is licensed only if 'nicht' follows them.

- i) a. Hans brauchte das Ende des Buches nicht zu kennen
H. needed the end of the book not to know
H. did not need to know the book
- b. *Hans brauchte nicht das Ende des Buches zu kennen
- ii) a. Hans brauchte die Lösung dieser Aufgabe nicht herauszubekommen
H. needed the solution of the problem not to get
H. did not need to get the solution of the problem
- b. *Hans brauchte nicht die Lösung dieser Aufgabe herauszubekommen

If we assume, contrary to Moltmann, that these nominal expressions have to precede sentential negation at surface structure we correctly predict that they, just as indefinite direct objects, cannot follow low adverbs.

- iii) a. daß Hans das Ende des Buches gut kannte
that H. the end of the book well knew
H. knew the end of the book well
- b. *daß Hans gut das Ende des Buches kannte
- iv) a. daß Hans die Lösung dieser Aufgabe richtig herausbekam
that H. the solution of this problem correctly got
H. got the solution of this problem correctly
- b. *daß Hans richtig die Lösung dieser Aufgabe herausbekam

3.1. *The position of 'nit'*

In this section it will be shown that Bavarian 'nit' and Standard German 'nicht' occupy the same position. Bavarian sentential negation follows sentential adverbs and particles (61) and precedes low adverbs (62).

- (61) a. daß da Hons woi/do nit angruafn hot
that the H. probably/prt. not called has
H. probably did not call
b. *daß da Hons nit woi/do angruafn hot
- (62) a. daß da Hons nit schnö gschriebm hot
that the H. not quickly written has
H. did not write quickly
b. *daß da Hons schnö nit gschriebm hot

Specific direct (63) and indirect (64) objects precede 'nit', while prepositional arguments (65) follow it.

- (63) a. daß da Hons in Traktor nit kaputtgmacht hot
that the H. the tractor not destroyed has
H. did not destroy the tractor
b. *daß da Hons nit in Traktor kaputtgmacht hot
- (64) a. daß da Hons sein Freind nit ghoifn hot
that the H. his friend(dat) not helped has
H. did not help his friend
b. *daß da Hons nit sein Freind ghoifn hot
- (65) a. daß da Hons nit aufm Untersberg gstiegn is
that the H. not on the Untersberg climbed is
H. did not climb on the Untersberg
b. *daß da Hons aufm Untersberg nit gstiegn is

Just as specific ones, also non specific nominal arguments can not follow 'nit' (66b), if they precede (66a), they have a specific, wide scope interpretation. Non specific prepositional arguments can follow 'nit' (67).

- (66) a. #daß da Hons an Trekka nit kaputtgmacht hot
that the H. a tractor not destroyed has
H. did not destroy a tractor
b. *daß da Hons nit an Trekka kaputtgmacht hot
- (67) a. daß da Hons nit auf an Berg gstiegn is
that the H. not on a mountain climbed is
H. did not climb on a mountain
b. *daß da Hons auf an Berg nit gstiegn is

So we will assume that standard German 'nicht' and Bavarian 'nit' occupy the same position.

3.2. *The position of k-words*

In section 2.1.2 we have seen that indefinites cannot have narrow scope with respect to negation, since they have to shift to the respective agreement position to check case

before spellout. In this position they have scope over negation. The narrow scope reading is obtained by using a k-word, such as 'kein' in (68) or 'niemand' in (69).

- (68) a. *daß Hans nicht ein Auto gekauft hat
that H. not a car bought has
b. daß Hans kein Auto gekauft hat
that H. no car bought has
H. did not buy any car
- (69) a. *daß Hans nicht jemanden gesehen hat
that H. not somebody seen has
b. daß Hans niemanden gesehen hat
that H. nobody seen has
H. did not see anybody

In standard German a k-word and the negative marker 'nicht' cannot cooccur.

- (70) a. daß Hans (*nicht) kein Auto (*nicht) gekauft hat
that H. not no car not bought has
H. did not buy any car
b. daß Hans (*nicht) niemanden (*nicht) gesehen hat
that H. not nobody not seen has
H. did not see anybody

In Bavarian, differently from standard German, negative concord is possible, i.e. k-words and the negative marker 'nit' can cooccur. Note that negative concord is optional.

- (71) a. daß da Hons koa Buach (nit) glesn hot
that the H. no book(acc) not read has
H. did not read any book
b. daß da Hons koan Freind (nit) ghoifn hot
that the H. no friend(dat) not helped has
H. did not help any friend
c. daß eam koa Mensch (nit) gseng hot
that him no man(nom) not seen has
nobody saw him

Furthermore, k-words only precede 'nit'

- (72) a. *daß da Hons nit koa Buach glesn hot
that the H. not no book(acc) read has
b. *daß da Hons nit koan Freind ghoifn hot
that the H. not no freind(dat) helped has
c. *daß eam nit koa Mensch gseng hot
that him not no man(nom) seen has

The distribution of k-words with respect to 'nit' can directly be derived by structure (42). The k-word moves to the appropriate AGR position in order to check case. However, this hypothesis faces a problem: it would predict that PPs containing k-words surface to the right of 'nit', but, as shown in (16), this is not the case.

- (73) a. daß da Hons auf koan Freind nit gwoat hot
 that the H. for no friend not waited has
 H. did not wait for any friend
 b. *daß da Hons nit auf koan Freind gwoat hot

Remember that certain kinds of PPs, e.g. directional PPs, only surface to the right of the negative marker, as discussed in section 2.2 (9), repeated below. As shown in (75), even those PPs precede 'nit' when they contain a k-word, in contexts of negative concord.

- (74) a. daß Hans nicht auf den Berg gestiegen ist
 that H. not on the mountain climbed is
 H did not climb on the mountain
 b. *daß Hans auf den Berg nicht gestiegen ist
- (75) a. daß da Hons auf koan Berg nit gstiagn is
 that the H. on no mountain not climbed is
 H. did not climb on any mountain
 b. *daß da Hons nit auf koan Berg gstiagn is

Therefore, the relative order of k-words with respect to 'nit' can not be accounted for by case. A further assumption is necessary. A possible solution to account for the distribution of Bavarian k-words might be the hypothesis put forth by Zanuttini (1991). She assumes that negative elements occupy the specifier of NEGP in logical form in Romance, to check the negative feature (Zanuttini 1993). In Bavarian, checking of the negative feature has to take place in S-structure.

- (76) k-words move to the specifier of NEGP
 a. in LF in Romance
 b. in SS in German

What we said so far is compatible with two possibilities: 'nicht' could be treated as a medial head, as a specifier or as an adjunct. However, if we assume the analysis in (76) 'nicht' must be considered the head of the negative projection.

In section 2.2, we saw that selected PPs can either follow or precede sentence negation. The question arises as to in which positions PPs can surface with respect to low adverbs. As shown in (77) and (78), they can follow and precede low adverbs.

- (77) a. daß ich mich an seine Freundin gut erinnern kann
 that I myself to his girlfriend well remember can
 I can remember his girlfriend well
 b. daß ich mich gut an seine Freundin erinnern kann
- (78) a. daß Hans auf seine Frau lange gewartet hat
 that H. for his wife for a long time waited has
 H. waited for a long time for his wife
 b. daß Hans lange auf seine Frau gewartet hat

Selected PP may either precede (79a) or follow (79c) both the negative marker and low adverbs elements. But they cannot intervene between them (79b). Hence we assume that there is no position available for PPs between negation and low adverbs:

- (79) a. daß ich mich an seine Freundin nicht gut erinnern kann
that I myself to his girlfriend not well remember can
I cannot remember his girlfriend well
b. *daß ich mich nicht an seine Freundin gut erinnern kann
c. daß ich mich nicht gut an seine Freundin erinnern kann
- (80) a. daß Hans auf seine Frau nicht lange gewartet hat
that H. for his wife not for a long time waited has
H. did not wait for his wife for a long time
b. *daß Hans nicht auf seine Frau lange gewartet hat
c. daß Hans nicht lange auf seine Frau gewartet hat

Crucially, as shown in (81) and (82), if the PP contains a k-word, it has to precede the low adverb. (77b) and (78b), in which the PPs do not contain any k-word, contrast with (81b) and (82b), respectively.

- (81) a. daß Hans sich an niemanden gut erinnern kann
that H. himself to nobody well remember can
H. cannot remember anybody well
b. *daß sich Hans gut an niemanden erinnern kann
- (82) a. daß Hans auf niemanden lange gewartet hat
that H. for nobody for a long time waited has
H. did not wait for anybody for a long time
b. *daß Hans lange auf niemanden gewartet hat

These contrasts show that PPs containing k-words move in S-structure also in standard German. Hence we assume that (76b) applies to standard German as well.

In the following sections we will discuss some problems for Hyp (76).

3.3. *Extraction from nominal expressions*

There are three different types of extraction from nominal expressions that have been taken as a diagnostics of whether an argument is in a VP-internal position or whether it has scrambled out: quantifier split, 'was für' split, and extraction of relative clauses.

3.3.1. *'Was für' split*

'Was für' split is discussed for German and Dutch in den Besten (1984). It consists in the extraction of the wh element 'was' of a nominal expression of the form 'was für NP'. Den Besten assumes that 'was für' split is possible only from VP-internal positions, as shown by the contrast in (83). In (83), the wh-element *was* is extracted from the direct object *was für Frauen*, and moved to the specifier of CP. If the remainder, consisting of the trace of the wh-element and *für Frauen*, follows the subject at S-structure (83a), extraction is allowed. If it is scrambled to a position in front of the subject (83b), extraction is disallowed. (Example from Kratzer 1989)

- (83) a. Was haben die Ameisen [t fuer Frauen] gebissen
what have the ants(nom) for women(acc) bitten
Which women did the ants bite
b. *Was haben [t für Frauen] die Ameisen gebissen
what have for women(acc) the ants(nom) bitten

According to den Besten (1984), 'was für' split can apply only to accusative objects and nominative NPs that are subjects of unaccusative predicates. But as shown by Kratzer (1989) and Moltmann (1990) also indirect objects (84) and subjects of unergative predicates (85) can undergo 'was für' split under certain conditions.¹⁰

- (84) a. Was hat Hans für Leuten geholfen
 what has H. for people(dat) helped
 Which people did H. help
 b. Was hast du deinen Aufsatz für Leuten geschickt
 what have you your essay for people(dat) sent
 To which people did you send your essay
- (85) a. Was haben den Leuten für Studenten geholfen
 what have the people(acc) for students(nom) helped
 Which students helped the people
 b. Was haben die Mutter für Ameisen gebissen
 what have the mother(acc) for ants(nom) bitten
 Which ants bit the mother

In section 2.5.2, we assumed that low adverbs are adjoined to VP. Nominal arguments have to shift to their appropriate agreement positions, which precede these adverbs. The following contrasts show that also the remainder of 'was für' split precedes these adverbs.

- (86) a. Was hast du für einen Turm vorsichtig aufgebaut
 what have you for a tower carefully built up
 Which tower did you build up carefully
 b. *Was hast du vorsichtig für einen Turm aufgebaut
- (87) a. Was hast du für ein Buch aufmerksam/ganz gelesen
 what have you for a book attentively/completely read
 Which book did you read attentively
 b. *Was hast du aufmerksam/ganz für ein Buch gelesen

¹⁰ The constituent which undergoes extraction can not be followed by an accusative or dative NP. In (84b) and (85b), the direct object, in (85a) the indirect object, has scrambled to a position preceding the remainder of 'was für' split. If scrambling does not take place, 'was für' split is less acceptable (i) (Moltmann 1990, Brugger 1993, Kratzer 1989). As shown in (id), this restriction does not apply to PPs.

- i) a. ??Was hast du für Leuten deinen Aufsatz geschickt
 what have you for people(dat) your essay(acc) sent
 c. ??Was haben für Studenten den Leuten geholfen
 what have for students(nom) the people(dat) helped
 b. ??Was haben für Ameisen die Mutter gebissen
 what have for ants(nom) the mother(acc) bitten
 d. Was hast du für Steine auf den Berg getragen
 what have you for stones on the mountain carried
 Which stones did you carry on the mountain

Since the order of the constituents in the examples above mirror the unmarked order 'unergative subject - indirect object - direct object', the generalization that scrambled nominal expressions cannot undergo 'was für' split does not account for these contrasts. Note, however, that the sentences in (i) are still much more acceptable than the (83b) and (ii) where scrambled nominal expressions underwent 'was für' split.

- ii) *Was hat für Leuten Hans geholfen
 what has for people H. helped

On the other hand, 'was für' split is not allowed from positions preceding sentential adverbs (89) and particles (88).

- (88) a. Was hast du denn für einen Turm aufgebaut
 what have you prt. for a tower built up
 Which tower did you build up
 b. *Was hast du für einen Turm denn aufgebaut
- (89) a. Was hat er wohl für ein Buch gelesen
 what has he probably for a book read
 Which book did he probably read
 b. *Was hat er für ein Buch wohl gelesen

There are two slightly different possibilities to explain the distribution of the remainder constituent of 'was für split'. The remainder surfaces in its appropriate agreement projection. Either the agreement projection itself is a governed position (90a); the constituent 'was für NP' shifts to an appropriate agreement projection, where extraction is licensed. Or the VP-internal base position is a governed position (90b); 'was für' split takes place inside the VP, but the remainder has to shift to an appropriate agreement position at S-structure where case is checked.

- (90) a. Agreement positions are governed positions.
 b. VP-internal positions are governed positions.

Note that it is commonly assumed that a constituent which undergoes 'was für' split has to surface in a governed position (traditionally its base position inside VP). Therefore it cannot undergo further movement such as scrambling or raising to the specifier of IP. (90b), however, allows movement of the remainder to an ungoverned position, i.e. an agreement position. Further movement has to be excluded by an additional condition (perhaps specificity and/or focus).

3.3.2. *Quantifier split*

Quantifier split can be considered as movement of a subpart of a nominal expression, leaving a weak determiner behind, to a topic position (e.g. the specifier of CP) (with subsequent regeneration and relexification of the determiner position Riemsdijk (1989)). Alternatively it can be viewed as basegeneration of N' in topic position with empty operator movement (Fanselow 1987) (cf. also Giusti's (1993) account without regeneration and assumptions of operations on the N' level). Quantifier split exhibits the same syntactic restrictions as 'was für split'.

The remainder can not surface in a scrambled position. It can neither precede the subject (91), nor particles (92) or sentential adverbs (93).¹¹

- (91) a. Frauen hat mein Freund viele/wenige geküßt
 woman has my friend many/few kissed

¹¹ Also indirect objects (ia) and subjects of unergative predicates (ib) can undergo quantifier split.

- i) a. ?Frauen hat Hans vielen/wenigen geholfen
 women has H. many/few(dat) helped
 H. helped many/few women
 b. Frauen haben meinen Freund viele/wenige geküßt
 women have my friend many/few(nom) kissed
 Many/few women kissed my friend

- (92) b. *Frauen hat viele/wenige mein Freund geküßt
 a. Türme hat Hans doch viele/wenige aufgebaut
 towers has H. prt. many/few built up
 H. built up many/few towers
- (93) b. *Türme hat Hans viele/wenige doch aufgebaut
 a. Bücher hat Hans wohl viele/wenige gelesen
 books has H. probably many/few read
 H. probably read many/few books
 b. *Bücher hat Hans viele/wenige wohl gelesen

Low adverbs, on the other hand, follow the remainder (94,95).¹²

- (94) a. Türme hat Hans viele/wenige vorsichtig aufgebaut
 towers has H. many/few carefully built up
 H. built up many/few towers carefully
 b. *Türme hat Hans vorsichtig viele/wenige aufgebaut
- (95) a. Bücher hat Hans viele/wenige aufmerksam/ganz gelesen
 books has H. many/few attentively/completely read
 H. read many/few books attentively/completely
 b. *Bücher hat Hans aufmerksam/ganz viele/wenige gelesen

Also k-words can undergo quantifier split in exactly the same way as nominal expressions introduced by other weak quantifiers such as 'viele' or 'wenige'. In (96) a direct object introduced by a k-word underwent quantifier split. The remainder follows the subject (96a), sentential adverbs and particles (96b) and precedes low adverbs (96c).

- (96) a. Frauen hat (*keine) mein Freund keine geküßt
 women has no my friend no kissed
 My friend did not kiss any woman
 b. Türme hat Hans (*keine) doch/wohl keine aufgebaut
 c. Türme hat Hans keine vorsichtig (*keine) aufgebaut

Further, stranded k-words precede sentential negation in contexts of double negation in Bavarian.

- (97) a. Biacha hot a koane nit glesn
 books has he no not read
 He did not read any books
 b. *Biacha hot a nit koane glesn

A problem arises regarding the position of the split k-word in (97a). (90a) and (90b), which account for the surface position of nominal expressions which underwent 'was für' split or quantifier split are incompatible with (76). According to (76), k-words surface in the specifier of NEGP (76), but according to (90a) and (90b), the k-word in (97a) surfaces in the specifier of AGRO. Note, that this contradiction cannot be

¹² Note that the adverb 'ganz' in (95b) can be interpreted as modifying the direct object, forming a constituent with it. In this case it means 'very' rather than 'completely'. The crucial fact is that in (95b), in contrast to (95a), 'ganz' cannot be interpreted as meaning 'completely'.

resolved assuming that the k-word in (96a) first moves to the specifier of NEGP for negative concord and subsequently to the specifier of AGRO, since the specifier of NEGP is an A'-position.

If either (90a) or (90b) is correct, we have to give up the assumption that k-words surface in the specifier of NEGP. We therefore substitute (76) with (98).

(98) k-words shift to AGR-positions, but not through the specifier of NEGP.

On the basis of this argument we conclude that negative concord can not be defined as SPEC/HEAD agreement, at least for German. A different syntactic notion of negative concord has to be developed.¹³ Let's now discuss further arguments against (76) and in favor of (98).

3.4. *More problems of (76)*

As (100) shows it is possible to have more than one k-word preceding the negative marker. Multiple k-words respect the unmarked word order, just as positive nominal arguments. In (101), the nominative k-word has to precede the accusative one; in (102), the dative k-word has to precede the accusative one. (103) shows that multiple k-words asymmetrically c-command each other.

- (100) a. daß woi neamt koa Buch nit glesn hot
that probably nobody no book not read has
nobody probably read any book
b. daß neamt koan Madl koa Bussl nit gem not
that nobody no girl(dat) no kiss(acc) given has
nobody gave any girl a kiss
- (101) a. #daß koa Buch neamt nit glesn hot
that no book(acc) nobody(nom) not read has
b. daß neamt koa Buach nit glesn hot
that nobody(nom) no book(acc) not read has
nobody read any book
- (102) a. daß da Hons neamt koa Bussl nit gem hot
that the H. nobody(dat) no kiss(acc) not given has
H. did not give a kiss to anybody
b. *daß da Hons koan Bussl neamt nit gem hot
- (103) a. daß koa Madl koan Freind von si nit busslt hot
that no girl no friend of herself not kissed has
no girl kissed any friend of herself

¹³ PPs containing a k-word could still be analyzed as occupying the specifier of NEGP at surface structure, since they follow direct object k-words (ia).

- i) a. daß da Hons koa Buach auf koan Berg nit tragn hot
that the H. no book on no mountain not carried has
H. did not carry any book on any mountain
b. *daß da Hons auf koan Berg koa Buach nit tragn hot

But this assumption cannot account for multiple PPs with k-words, which appear in fixed order (ia,ii).

- ii) a. daß da Hons mit koana Frau auf koan Berg nit gstiegn is
that the H. with no woman on no mountain not climbed has
H. did not climb with any woman on any mountain
b. *daß da Hons auf koan Berg mit koana Frau nit gstiegn is

Hence, additional assumptions have to be made regarding the surface position of PPs which contain k-words.

- b. *daß koan Freind von si koa Madl nit busslt hot
 that no friend of herself no girl not kissed has
 no friend of herself kissed any girl

Assuming that k-words check their negative feature in the specifier of NEGP does not explain (100), where more than one k-word surfaces at the left of 'nit'. Moreover since k-words respect the unmarked of nominal expressions and because of asymmetric c-command, it is not possible to assume that the specifier of NEGP can be filled by more than one constituent. One could suppose that there is more than one specifier of NEGP. However, the following example shows that it is possible to interrupt the sequence of k-words and 'nit'.

- (104) a. daß neamt sei Frau nit mitgnumma hot
 that nobody his wife not took along has
 nobody took along his wife
 b. daß neamt sei Madl nit busslt hot
 that nobody his girlfriend not kissed has
 nobody kissed his girlfriend

This clearly shows that k-words do not occupy the specifier of NEGP.

Summarizing, we have seen that the hypothesis (76) of spec-head relation between the negative head and k-words is not tenable for German. On the contrary, if we assume that k-words do not surface in a specifier of NEG, but in the respective agreement positions (cf 98), the data discussed above follows straightforwardly.

3.5. *Inverse licensing*

The question we will now deal with concerns the syntactic relation between k-words and the negative head.

3.5.1. *Individual level predicates*

In German, the external argument of a predicate can surface in at least two positions inside IP. The specifier of AGRS (105a), and the specifier of AGRSi (105b).

- (105) a. daß Hans wohl angerufen hat
 that H. probably called has
 H. probably called
 b. daß wohl ein Mann angerufen hat
 that probably a man called has
 A man probably called

Diesing (1992) and Kratzer (1989) argue that whether an external argument can surface in the lower position depends on whether the predicate is a stage level predicate or an individual level predicate, following a distinction introduced by Carlson (1977). Stage level predicates, such as 'available', 'present', etc., describe properties which are perceived as holding of entities only temporarily; individual level predicates, such as 'intelligent', 'altruistic', 'tall', etc., on the other hand, describe properties which are perceived as holding of entities permanently. Diesing and Kratzer note, that the subjects of these predicates differ with respect to extraction. While subjects of stage level predicates allow quantifier split (106a) and 'was für' split (107a), subjects of individual level predicates do not (106b,107b).

- (106) a. Texaner sind viele anwesend
Texans are many present
Many Texans are present
b. *Texaner sind viele groß
Texans are many tall
Many Texans are tall
- (107) a. Was sind für Texaner anwesend
What are for Texans present
Which Texans are present
b. *Was sind für Texaner groß
What are for Texans tall
Which Texans are tall

From this data it appears that the subject of a stage level predicate may be realized in a governed position, whereas the subject of an individual level predicate must be realized in an ungoverned position.¹⁴

Now consider the following contrast. The stage level context (108a) allows double negation, but the individual level context in (108b) does not. (108b) is ungrammatical, if 'nit' is realized.

- (108) a. daß koa Texana (nit) do is, is schod
that no Texan not here is, is a pity
it is a pity that no Texan is here
b. daß koa Texana (*nit) groß is, woäß ajeda
that no Texan not tall is, knows everybody
Everybody knows that no Texan is tall

This contrast suggests that there is an upper boundary for negative concord below the specifier of AGRSP. Hence, the subject of the individual level predicate in (108b) which is realized in the specifier of AGRSP, is outside the domain of negative concord. The subject of the stage level predicate in (108a), on the other hand, may surface in the specifier of AGRSi and is therefore in the domain of negative concord. Negative concord applies to AGRO, AGRIO, AGRSi, but not to the specifier of AGRS.

An important remark is necessary. Note that in (108b) is grammatical without 'nit'. This means that k-words can move to the specifier of AGRS only if the head of the negative projections is missing. The relation between the negative marker and the k-word is syntactically limited by a locality restriction, only when 'nit' is present.

But remember that the syntactic distribution of k-words is not completely free if 'nit' is absent. As we have shown in section 3.2, k-words always precede the negative marker at S-structure.

We conclude that negative concord is syntactically limited within the space between NEGP and a position below AGRSP, while k-words which do not undergo negative concord are only submitted to the lower limit: they stay to the left of NEGP. In the following we try to define the upper boundary of negative concord more precisely.

¹⁴ Diesing (1992) and Kratzer (1989) suggest that subjects of individual level predicates are generated in the specifier of IP, i.e. AGRS, an ungoverned position. Subjects of individual level predicates, on the other hand, are generated inside VP.

3.5.2. *High adverbs*

In this section we will set the upper limit of negative concord with respect to high adverbs. K-words can precede temporal (109a) and sentential adverbs (109b). But in this case negative concord is blocked, as shown in (110): the k-word has to follow the adverb.

- (109) a. daß kein Texaner gestern angerufen hat
that no Texan yesterday called has
No Texan called yesterday
- b. daß kein Texaner wohl seinen Bohrturm sprengen wird
that no Texan probably his drilling derrick blast will
No Texan probably will blast his drilling derrick
- (110) a. *daß koa Schauspiela gestan nit auftredn is
that no actor yesterday not performed has
- b. daß gestan koa Schauspiela nit auftredn is
that yesterday no actor not performed has
No actor performed yesterday

Therefore the upper boundary of negative concord has to be set below the position of these adverbs.

Weak pronouns precede sentential and temporal adverbs (111). Therefore they cannot intervene between 'nit' and k-words (112).

- (111) a. daß Hans ihn wohl/gestern gesehen hat
that H. him probably/yesterday seen has
H. probably saw him yesterday
- b. *daß Hans wohl/gestern ihn gesehen hat
- (112) a. daß da Hons eam nit gseng hot
that the H. him not seen has
H. did not see him
- b. *daß koa Mensch nit eam gseng hot
that no man not him seen has
- c. daß eam koa Mensch nit gsegn hot
that him no man not seen has
Nobody saw him

Another interesting clue can be given by the adverb 'nie' (never), which follows sentential adverbs (113), but precedes indefinite and definite objects and indefinite subjects (114).

- (113) a. daß Hans wohl nie auf das Matterhorn steigen wird
that H. probably never on the Matterhorn climb will
H. probably will never climb on the Matterhorn
- b. *daß Hans nie wohl auf das Matterhorn steigen wird
- (114) a. daß Hans nie eine Frau küssen wird
that H. never a woman kiss will
H. will never kiss a woman
- b. daß Hans nie den Präsidenten gesehen hat
that H. never the president seen has
H. never saw the president

- c. daß mich nie ein Marokkaner angerufen hat
that me never a moroccan called has
No moroccan ever called me

We suppose that the position of this adverb is the one indicated in (115).

(115) [AGRS...[XP wohl [YP nie [AGRSi [AGRIO [AGRO [NEGP [VP PP]]]]]]...]

If k-words occupy AGR positions we expect them to follow the negative adverb and precede 'nit'.

- (116) a. daß da Hons nia koa Madl nit busslt hot
that the H. never no girl not kissed has
H. never kissed any girl
b. daß mi nia neamt nit angruafn hot
that me never nobody called has
Nobody ever called me
(117) a. #daß da Hons koa Madl nia nit busslt hot
that the H. no girl never not kissed has
b. #daß mi koa Mensch nia nit angruafn hot
that me no man never not called has
Nobody ever called me

(118), as (116), illustrates that negative concord is possible also between 'nie' and 'nit'.

- (118) daß da Hons nia nit gsunga hot
that the H. never not sang has
H. never sang

Now we are in a position to define exactly the syntactic domain of negative concord: first, k-words surface in their respective agreement positions and second the domain extends from NEGP to YP.

3.6. Adverbial quantifiers

Adverbial quantifiers can be classified into three groups regarding their syntactic position relative to negation. First, adverbial quantifiers like 'meistens' (mostly), 'manchmal' (sometimes), 'mehrmals' (several times), 'für gewöhnlich' (usually), etc. (119), and numeral adverbials such as 'dreimal' (three times) (120) only precede 'nicht'. If the negation precedes 'dreimal' (120b), it is contrastive. Second, 'oft' (often) and 'selten' (seldom) can both precede and follow 'nicht' (121). Third, the adverbial quantifier 'immer' (always) only follow the negation (122).

- (119) a. daß Hans meistens/manchmal/mehrmals/für gewöhnlich nicht singt
that H. mostly/sometimes/several times/usually not sings
H. mostly/sometimes/several times/usually do not sing
b. *daß Hans nicht meistens/manchmal/mehrmals/für gewöhnlich singt
(120) a. daß Hans dreimal nicht gesungen hat
that H. three times not sang has
H. did not sing for three times

- b. daß Hans nicht dreimal gesungen hat *(sondern viermal)
 that H. not three times sang has but four times
 H. did not sing for three times but for four times
- (121) a. daß Hans oft/selten nicht singt
 that H. often/seldom not sings
 H. often/seldom does not sing
- b. daß Hans nicht oft/selten singt
- (122) a. *daß Hans immer nicht singt
 that H. always not sings
- b. daß Hans nicht immer singt
 that H. not always sings
 H. does not sing always

Apparently, there seem to be two syntactic positions for adverbial quantifiers: A position which precedes sentential negation and which can be filled by 'meistens', 'oft', etc., but not by 'immer', and a second one, which follows sentential negation and which can be filled by 'oft' and 'immer', but not by 'meistens', etc.

(123) [oft/meistens [AGRSi...[AGRO [neg [oft/immer...]]]]]

The structure in (123) correctly predicts that adverbs which can occupy the higher position, such as 'oft', 'meistens', 'manchmal', etc. can also precede nominal arguments. In (124) they precede the direct object in the specifier of AGRO, in (125) the subject in the specifier of AGRSi. In addition, the surface order 'quantificational adverb -negation - nominal argument' is excluded (126).

- (124) a. daß Hans meistens/manchmal ein gutes Buch liest
 that H. mostly/sometimes a good book reads
 H. mostly/sometimes reads a good book
- b. daß Hans oft ein gutes Buch liest
 that H. often a good book reads
 H. often reads a good book
- (125) a. daß gestern meistens/manchmal ein Marokkaner angerufen hat
 that yesterday mostly/sometimes a moroccan called has
 mostly/sometimes a moroccan called yesterday
- b. daß gestern oft ein Marokkaner angerufen hat
 that yesterday often a moroccan called has
 often a moroccan called yesterday
- (126) a. *daß Hans meistens nicht ein gutes Buch liest
 that H. mostly not a good book reads
- b. *daß gestern oft nicht ein Marokkaner angerufen hat
 that yesterday often not a moroccan called has

The structure (123), however, is not correct. In the following, we will see evidence that there is only one syntactic position for adverbial quantifiers.

According to (123) 'immer' in (127a) occupies the lower adverb position. Quantificational adverbs such as 'oft', on the other hand, which can surface in both positions, occupy the lower position, if they are preceded by negation, as in (127b). But, nevertheless, as shown in (127), they can be followed by nominal arguments. This fact is not predicted by (123).

- (127) a. daß Hans immer ein gutes Buch liest
 that H. always a good book reads
 H. always reads a good book
 b. daß Hans nicht oft ein gutes Buch liest
 that H. not often a good book reads
 H. does not often read a good book

Note that the string 'nicht - adverbial quantifier' can form a constituent. As shown in (128), it can be topicalized.

- (128) a. Nicht oft hat Hans gesungen
 not often has H. sang
 H. did not sing often
 b. Nicht immer hat Hans gesungen
 Not always has H. sang
 H. did not sing always

The string 'nicht oft' in (127b) can occupy, as a constituent the higher adverb position. In this way, the grammaticality of (127b) can be accounted for. A string of the form 'nicht -adverbial quantifier' can therefore be analyzed in two different ways. Either the adverbial quantifier occupies the lower adverb position and the negative element occupies the position of sentential negation, or the adverb modified by the negation occupies the higher adverb position.

Bavarian double negation shows that for a string of the form 'nicht -adverbial quantifier' only the second option is available. Let's consider the example in (129). The k-word correctly precedes 'nit'. The adverbial quantifier follows 'nit', according to (123) they occupy the lower adverb position. Although the surface order respects the structure in (123), the sentence is ungrammatical (no negative concord):

- (129) #daß koa Schauspiela nit oft auftredn is
 that no actor not often performed has
 No actor often performed

If we assume that there is only one syntactic position for adverbial quantifiers, i.e. the higher one, 'nit oft' in (129) must occupy this position as a constituent. Hence, the k-word is outside the domain of negative concord, and negative concord cannot take place. Hence, we substitute (123) with (130).

- (130) [adverbial quantifiers [AGRSi...[AGRO [neg [VP...]]]]]

If there is no position for adverbial quantifiers to the right of sentential negation, a string of the form 'nicht - adverbial quantifier' always forms a constituent. In the following we will discuss a further argument for this corollary.

According to Berman (1989), Diesing (1992), Heim (1982), a.o., adverbial quantifiers undergo QR and adjoin to IP in logical form. In this position they can bind free variables inside their scope. Heim (1982) analyzes indefinite nominal expressions in the singular as free variables, which can be bound by adverbial quantifiers. The adverbial quantifier 'oft' in (131a) adjoins to IP and binds the indefinite subject (131b). This interpretation of (131a) can be paraphrased with (131c).

- (131) a. daß ein Texaner oft groß ist
 that a texan often tall is
 A Texan is often tall
 b. [oft(x) [Texaner(x)] [groß(x)]]
 c. Many Texans are tall

In the terminology of Heim (1982), 'groß(x)' constitutes the nuclear scope of (131b). In (132), the negative marker takes scope over the nuclear scope.

- (132) a. daß ein Texaner oft nicht groß ist
 that a Texan often not tall is
 b. [oft(x) [Texaner(x) \neg [groß(x)]]]

In (133a), differently to (132a), the adverbial quantifier follows the negation in S-structure.

- (133) a. daß ein Texaner nicht oft groß ist
 that a Texan not often tall is
 A Texan is not often tall
 b. [\neg oft (x) [Texaner(x) [groß(x)]]]
 c. *[oft (x) [Texaner(x) \neg [groß(x)]]]

(133a) can be paraphrased with 'not many Texans are tall', but not with 'many texans are not tall'. Therefore (133b), but not (133c) is an adequate logical representation for (133a). The negative element undergoes QR with the adverbial quantifier. Crucially, it must be excluded that the adverbial quantifier undergoes QR alone and that the negation takes scope only over the nuclear scope. The assumption on the position of adverbial quantifiers in (130) excludes this possibility. According to (130), the string 'nicht oft' in (133a) must be analyzed as a constituent and the interpretation (133c) cannot be derived.

Let's now go back to the observations we made at the beginning of this section regarding the distribution of several classes of adverbial quantifiers and negation. First, let's consider the adverbial quantifiers 'meistens', 'manchmal', 'mehrmals', 'für gewöhnlich', etc., which only precede 'nicht'. This fact can be accounted for by assuming that they differ from adverbs like 'oft' and 'immer', in that they cannot form a constituent with 'nicht' (134a).

- (134) a. *Nicht meistens/manchmal/mehrmals/für gewöhnlich singt Hans
 not mostly/sometimes/several times/usually sings H.
 b. #Nicht dreimal hat Hans gesungen
 not three times has H. sang

Second, we saw in (120b), that numeral adverbials differ from adverbial quantifiers like 'meistens' in that they can be preceded by 'nicht'. Hence, numeral adverbs can form a constituent with 'nicht' (134b), just like 'oft' and 'immer'. But numeral adverbs differ from the latter in that a string 'nicht - numeral adverb' is necessarily contrastive. At this moment we do not have an explanation for this.

Third, the adverbial quantifier 'immer' can only be preceded but not followed by 'nicht'. This means, according to (130), that 'immer' can only be modified by 'nicht', but it is incompatible with sentence negation. Note that the ungrammatical string 'immer -

nicht' is logically equivalent with 'never'. And in fact, the intended meaning of the ungrammatical sentence (122a), repeated below in (135a) can only be expressed by (135b).

- (135) a. *daß Hans immer nicht singt
that H. always not sings
b. daß Hans nie singt
that H. never sings

In order to account for this contrast, we have to stipulate two assumptions. First, we assume that the position of adverbial quantifiers proposed in (130) is in the domain of negative concord, and second, that 'immer' is an anti negative polarity item. As an anti negative polarity item, it cannot be found inside the domain of negative concord.

7. Lowering of k-words

In this section, we will consider certain aspects of the interpretation of indefinites and k-words. In section 2.1.2, we assumed that all nominal arguments of a verbal predicate have to shift to the appropriate agreement position at S-structure in order to check case. Since the position of sentential negation follows all agreement projections, all nominal arguments precede it, and c-command it at S-structure. Hence, the fact that indefinite nominal expressions, as the one in (136a), are interpreted with wide scope (136b), but not with narrow scope (136c), with respect to sentential negation can be accounted for by their position in S-structure.

- (136) a. daß Hans ein Buch nicht gekauft hat
that H. a book not bought has
H. did not buy a book
b. $E(x) [\text{book}(x)] \neg [\text{bought}(h,x)]$
c. $* \neg E(x) [\text{book}(x)] [\text{bought}(h,x)]$

In order to exclude interpretation (136c,) it has to be assumed that German indefinites cannot lower to a position inside the scope of sentential negation at logical form. This assumption, however, cannot be considered as holding for all nominal expressions, since, as we will see in the following, there are some nominal expressions which have to be lowered.

Consider (137a), which is three ways ambiguous. The nominal expression 'keinen Fisch' can have wide scope relative to the modal operator: "There isn't any fish such that John must eat it" (137b). Second, the modal operator can intervene between the negation and the existential quantification: "It is not necessary that there is a fish that John eats" (137c). Third, the modal can have wide scope with respect to 'keinen Fisch': "It is necessary that John eats no fish" (137d)

- (137) a. daß Hans keinen Fisch essen muß
that John no fish eat must
b. $\neg E(x) [\text{fish}(x)] \text{necc. John eats } x$
c. $\neg \text{necc. } E(x) [\text{fish}(x)] \text{John eats } x$
d. $\text{necc. } \neg E(x) [\text{fish}(x)] \text{John eats } x$

As shown by (138), 'when'-clauses are adjoined to a projection outside the scope of the modal. In order to bind the pronoun 'er' in the 'when'-clause the k-word in (138a) has to be interpreted with scope over the modal operator (138b). Otherwise binding is impossible (138c,d).

- (138) a. daß Hans keinen Fisch_i essen muß, wenn er_i stinkt
that H. no fish eat must, if it stink
b. $\neg E(x)$ [fish(x)] necc. John eats x [if x stinks]
c. * \neg necc. $E(x)$ [fish(x)] John eats x [if x stinks]
d. * necc. $\neg E(x)$ [fish(x)] John eats x [if x stinks]

The k-word 'keinen Fisch' in (138a) is interpreted in logical form in a position c-commanding both the 'when'-clause and the position where the modal is interpreted. Bavarian shows that this position is also outside the domain of negative concord.

Although the Bavarian example (139a) is identical to (137a) except for negative concord, it shows only one of the interpretations of (137a). (139a) only has reading (137c), where the modal intervenes between negation and existential quantification. The readings (137b) and (137d) are not available.

- (139) a. daß da Hons koan Fisch nit essn muaß
that the H. no fish not eat must
b. \neg necc. $E(x)$ [fish(x)] John eats x

Negative concord blocks the possibility for the k-word to have scope over the modal. Hence, the k-word in (140a) cannot bind the pronoun in the 'when'-clause, since 'when'-clauses are outside the scope of the modal operator. Binding is possible only if the negative marker 'nit' is absent (140b).

- (140) a. *daß da Hons koan Fisch_i nit essn muaß, won a_i stinkt
that the H. no fish not eat must if it stinks
b. daß da Hons koan Fisch_i essn muaß, won a_i stinkt
that the H. no fish eat must if it stinks
H. need not eat a fish if it stinks

If the k-word is interpreted outside the scope of the modal operator (137b), it is interpreted in a position outside the domain of negative concord where it can c-command a 'when'-clause.

Let's now consider the logical representation of interpretation (137c), which is the only interpretation available in (139a).¹⁵ Note first that sentential negation has scope over the modal operator (141) in standard German as well as in Bavarian.

- (141) a. daß Hans nicht essen muß
that H. not eat must

¹⁵ Negative quantifiers can be semantically analyzed as negated existential quantifiers of the form 'not exists (x) P(x)' or as negated universal quantifiers of the form 'for all(x) not P(x)'. The second option has been proposed by Zanuttini (1991) for Romance n-words. Interpretation (137), however, is incompatible with an analysis of k-words as negated universal quantifiers, since ' $\neg E(x) P(x)$ ' is not equivalent with ' $\neg A(x) \neg P(x)$ ' or ' $A(x) \neg P(x)$ '.

- b. daß da Hons nit essn muaß
that the H. not eat must
c. \neg necc. John eats

If the scope of negation is determined by the position of NEGP, it must be assumed that the modal is interpreted in a position in the c-command domain if NEGP.

According to our assumptions on the surface position of k-words in contexts with negative concord, the direct object of the predicate 'eat' in (139a) surfaces in its agreement projection, which precedes NEGP. Hence both the k-word and the negative marker in (139a) c-command the interpretation position of the modal at S-structure. The S-structure of (139a) is sketched in (142).

(142) [AGROP [koan Fisch] [nit [VP modal [XP essn t]]]]
|-----|

If we assume that k-words in contexts with negative concord are pure negative polarity items without negative force, rather than negative existential quantifiers, the k-word in (139a) only has existential force. In this view the semantic content of negation is carried by NEGP filled by the negative marker 'nit'. In order to get the correct semantics of (139a), the movement of the k-word at S-structure to the specifier of AGRO has to be undone at logical form. A trace or copy of the direct object is interpreted inside the scope of the modal operator.

Note that under these assumptions the same mechanism has to be applied to k-words in contexts without a modal operator as in (143). If the negative marker 'nit' carries the semantic content of negation, the k-word 'koa Buach', as a pure negative polarity item' only has existential force. Since the existential quantification is in the scope of negation, it has to be assumed that the k-word lowers also in this context.

- (143) a. daß da Hans koa Buach nit kaft hot
that the H. no book not bought has
b. \neg E(x) [book(x)] [John bought x]

Crucially, it must be assumed that lowering of the k-word is obligatory in contexts of negative concord (144). The k-words in (139a) and (143a) must obligatorily move to the specifier of AGRO at S-structure and obligatorily lower at logical form.

(144) K-words in contexts with negative concord lower at LF

Note that indefinites in the singular differ from k-words in this respect. They must move in S-structure but they do not lower at logical form, since they cannot be interpreted in the scope of negation neither in contexts with modals (145a), nor in contexts without modals (145b). Both indefinites in (145) have to be interpreted with wide scope with respect to negation. Hence for indefinites lowering to a position in the scope of negation at logical form has to be excluded.

- (145) a. daß da Hons an Fisch nit essn muaß
that the H. a fish not eat must
b. daß da Hons a Buach nit kaft hot
that the H. a book not bought has

There are two possible solutions to the problem that negative polarity k-words must be in the scope of sentential negation: (a) NEGP is head-final and its structural position is higher than the positions in which k-words surface. (b) The NEGP which hosts the negative head at S-structure does not determine the scope of sentential negation, which is given by a higher NEGP situated above YP but below TP.

4. Comparison with Romance languages

In this section we will compare the distribution of negation in German and Bavarian discussed so far with negation in Romance languages. In order to do so it is necessary to present a brief summary of the distribution of negative markers in Romance. We will discuss Zanuttini (1991), who proposes a comparative analysis for various Romance languages (as Italian, French, Spanish, Catalan, Portuguese, Romanian, Occitan varieties, Walloon and Northern Italian Dialects). Zanuttini convincingly shows that there are two distinct types of negative markers in Romance:

Preverbal negative markers are always heads as they block V to C movement and clitic climbing (cf. Zanuttini (1991):20) (146) and trigger obligatorily negative concord in their scope (147).

- (146) a. Non parla (Standard Italian)
not (she) speaks
she is not speaking
- b. Voglio non vederlo
(I) want not see-him
I do not want to see him
- c. *Lo voglio non vedere
him (I) want not see
I want to not see him
- (147) a. Non parla nessuno (Standard Italian)
Not speaks noone
Noone is speaking
- b. *Parla nessuno

Postverbal negative markers are always specifiers which do not block verb or clitic movement and can move to the SPECC position (148), and do not obligatorily show negative concord: some tolerate it, some do not (149).

- (148) a. A parla nen (Piedmontese)
b. A-m lo da nen
c. A l'ha fait parej per nen ch'a se stofieissa
- (149) a. Ai pas vist degun (Valdotain)
b. #Ce n'est pas rien (Standard French)

Zanuttini (1991) proposes to treat this partition inside Romance as the consequence of a syntactic difference in encoding the negative projection: some languages realize negation above TP and AGRSP, some others realize it lower in the structure. The two Romance types are represented in (150)

- (150) a [CP...[NEGP1[AGRSP[TP....]]]]
 b [CP...[AGRSP[TP...[NEGP2]]]]

Thus, in Romance there are two different positions where NEGP can be realized: the one of NEGP1 in (150a), and the one of NEGP2 in (150b). In order to explain why negative concord is obligatory only in languages of the first type Zanuttini proposes that negative concord is licensed in a Spec-head relation with a negative head. In languages of the (b) type, in which the specifier of NegP is already filled by the negative marker, negative quantifiers cannot move to SPECNEGP, and never enter the Spec-head relation. Hence, no negative concord is possible.

However, some languages of the (b) type permit (but do not require) negative concord, as (149a) shows: Zanuttini treats these cases as instances of recategorization, since elements such as Valdotain 'pas' are specifiers at S-structure but heads at LF.

On the contrary in languages of the (a) type, in which the negative marker is a head, the specifier of NEGP is always empty, so that negative quantifiers move to this position at LF, instantiating negative concord.

However, in this type of languages the negative projection is higher than TP, so negative quantifiers which appear lower than TP at S-structure have to cross TP to reach SPECNEGP. As TP, being an operator of the same type as negation, acts as a barrier to the movement of a negative quantifier, it needs to be L-marked in order to void barrierhood. The negative marker in preverbal position l-marks TP, so that the movement of the negative quantifier to SPECNEGP at LF is possible (cf. (147)).

Negative quantifier which surface at S-structure in a position higher than TP, as the subject position, do not need the negative marker:

- (151) Nessuno ha mangiato qui (St. Italian)

Notice that in a framework where the subject is also generated inside VP and then raises to SPECAGRS to get case, it is necessary to assume that TP is a barrier only at LF but not as S-structure.

Moreover, a negative quantifier in preverbal position licenses a postverbal one even when no negative head is present.

- (152) Nessuno ha visto niente (St. Italian)

In (152), there is no double negation, the reading is that of negative concord.

This means that not only a head can l-mark TP, but also a negative quantifier via Spec-head agreement.

In this case, where more than one negative quantifier is present, Zanuttini assumes that more than one n-word can occupy the SPECNEG position. In other words, at LF the constraint that no more than one element occupies a specifier position is not valid.

In more recent work, Zanuttini (1993) proposes that the negative projection is always lower than TP, and that the position corresponding to NEGP1 in (150a) is not a negative projection but the syntactic position where the truth value of a sentence is checked, namely TRUTHP. In the languages where the negative marker is a head, it must raise to the head of TRUTHP in order to check its features, while in languages where the negative marker is a specifier it does not need to move at S-structure and can check its negative features at LF.

This revision does not seem to change the analysis of negative concord, as it could still be treated as the interpretive consequence of the structural relation of Spec-head agreement in TRUTHP. At LF, the specifier of this projection would be empty in type (a) languages, where negative markers are heads, while it would be filled by the negative marker in type (b) languages, thus preventing raising of the negative quantifier to SPECTRUTHP and negative concord.

The problem of negative concord in Romance is far from solved, but what is important for our concerns is that it seems to be described by the structural condition of c-command: when a negative quantifier is realized at S-structure in a position lower than TP, there must be a negative element (a quantifier or the negative marker) in a position higher than TP, while this is not permitted when the negative quantifier is realized higher than TP at S-structure.

Moreover, there is no structural requirement of proximity between the negative quantifier and its licenser. Notice that the licenser of a negative quantifier can be found even in an upper clause: (if the embedded clause is an infinitive or a subjunctive clause)

(153) Non gli ho detto di fare niente

Let's now turn to a comparison with German and Bavarian negation:

4.2 *The X' status of the negative marker*

If the arguments given in section 3 is correct, negation is relatively low in the structure in German and Bavarian, as it follows sentential adverbs, the negative adverb 'nie' and nominal arguments. Therefore, it is not a head of the type of standard Italian 'non', which surfaces higher in the structure. 'Nicht/nit' is thus an instance of NEGP2. As such, it could be either a head or a specifier. There is at least one argument in favor of considering 'nicht' as a head, namely, the fact that the negative marker does not appear in SpecC in V2 sentences:

- (154) a. Nie hat er das getan
 b. *Nicht hat er das getan
 c. *Nit hod-a-s ton

As (154a) shows, a negative adverb such as 'nie' can appear in first position in a V2 sentence, this is not the case of 'nicht/nit', which is excluded (cf.(154b)). If nicht/nit is analyzed as a head, the contrast in (154) is immediately explained. A principled solution to the ungrammaticality of (154b) cannot be advocated. Scandinavian languages, which are also V2, permit the negative marker to move to the specifier of CP. The same can be observed in old romance languages which according to Benincà & Renzi & Vanelli (1985) are V2 languages. (cf: also (148c))

- (156) No li la vouse tochar (Lio Mazor)
 not him it wanted give
 He did not want to give it to him

Note that 'nicht/nit' cannot be analyzed as a light specifier, since 'nicht/nit' can be focused, while light specifiers cannot.

The assumption that 'nicht' is a head raises the following problem. The negative head should block head movement, e.g. the movement of the verb to higher functional projections. In principle there are some possibilities to treat this problem. First, one can

assume that the verb can skip the negative head. Belletti (1992) for instances proposes that in Italian the verb can skip the negative head 'non', which then cliticizes to the verb. Analogously the same could be proposed for German at LF. Alternatively, the verb may incorporate into the negative head, and exorporate as happens with prepositions. Third, one may propose that negative heads and the verbs may be of different nature with respect to the head movement constraint. Zanuttini (1993, fn32) proposes that only strong negative heads block V to C movement in Romance. Strong negative heads are characterized by the fact that they need to move to a position which precedes the auxiliary at S-structure. German 'nicht' is obviously not strong in this sense, because it occupies a relatively low position in S-structure. Hence from this point of view it does not block verb movement.

However, note that the analysis of negative concord we proposed is neutral with respect to the X'-status of 'nicht/nit'.

a) West Flemish 'en' needs to be licensed by another negative element (the negative marker 'niet' or a negative quantifier):

- (157) a. *da Valere dienen boek en-eet
 b. da Valere diene boek nie en-eet
 c. da Valere niemand en-kent

b) West Flemish 'en' is clitic on the inflected verb, and it moves to C with it:

- (158) Valere en klaapt tegen geen mens

Bavarian 'nit' differs from West Flemish 'en' in that it is not clitic on the verbal head, therefore it does not move to C and it does not need to be licensed by another negative element.

At this point it could be plausible to derive the difference between West Flemish and Bavarian as a consequence of the different type of negative marker. Haegemann & Zanuttini (1993) propose that West Flemish 'en' is an instance of NEG_{P1} (or else TRUTH_P) while Bavarian 'nit' is clearly a case of Neg_{P2}. Here we will not speculate any further on this argument. It is sufficient to note that in German, negative concord does not seem to be instantiated by a Spec-head relation inside the negative projection.

In section 3 we saw that Bavarian negative concord is limited to a certain portion of the 'Mittelfeld', namely between 'nit' and 'nie'. Bavarian negative concord is also submitted to a structural requirement of proximity, so that k-words must be realized inside the domain between 'nie' and 'nit' in order for negative concord to be possible. If this proximity condition is not met, the interpretation is that of double negation. In addition the structural condition of negative concord are reversed in Romance and in Bavarian. Bavarian k-words are not c-commanded by the negative marker, but they c-command it. Apparently, there seem to be two unrelated syntactic systems for negative concord. However, since Romance n-words undergo LF-raising, it could be proposed that Romance LF is similar to Bavarian S-structure.

Haegemann & Zanuttini (1993) in fact assume exactly that in West Flemish negative concord must apply at S-structure. They propose that the negative projection in West Flemish is realized as NEG_{P1}, i.e. the higher one. K-words surface in the specifier of NEG_{P1} and therefore they precede adverbials as 'doavuaren' (159).

- (159) a. da Valere niets doavuoren gedoan en-eet West Flemish
 b. *da Valere doavuoren niets gedoan en-eet

As Bavarian k-words clearly do not occupy the specifier of NEGP, but surface in the specifier of agreement projections immediately above NEGP, it is plausible to think that the target of Romance LF- and West Flemish SS-movement is not the specifier of NEGP but a group of functional projections.

5. Conclusion

In this paper, we have shown that all NPs assigned structural case must move to Agreement positions which are lower than scrambling positions in the structure. Moreover, in German there is no argument to distinguish a particular position for indefinite objects, while there is clear evidence for supposing that there are two subject positions, and that the lower one is accessible only to indefinite subjects.

We have considered the respective position of the negative marker and of some classes of adverbial elements, which occupy different positions. The structure of the sentence which our data point to is the following:

(160) [AGRSP...[XP wohl [YP nie [AGRSiP [AGRIOP [AGROP [NEGP [ZP gut [VP]]]]]]]]]]

The syntactic space of negative concord in Bavarian is between NEGP and YP. In section 3 we have seen that it is not possible to analyze Bavarian negative concord as an instance of Spec-head agreement inside the negative projection. On the contrary negative concord must be analyzed as a relation extending over a wider structural domain, limited by to negative elements: the negative marker 'nit' and the negative adverb 'nie'.

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On Adjective Placement in Romance and Germanic

Event Nominals *

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0. Introduction

In recent years a number of studies have pursued the idea that a significant parallelism exists between the structure of clauses and that of nominal arguments. In particular, both nouns and lexical verbs are taken to be introduced by a series of functional categories whose succession and selectional properties are constrained by principles of UG.

In this framework, in which a correspondence has been established between CP/DP and VP/NP the problem arises of where APs are located within the nominal structure: in fact, unlike adverbs, which have already been subjected to a restrictive analysis assigning them to different categories which occupy different positions in the clausal structure, adjectives are still often treated in an unprincipled way as elements right- or left- adjoined to nominal projections, with a huge number of superficial exceptions treated as lexical idiosyncrasies. In this work, on the contrary, I will show that regularities comparable to those found in the behavior of adverbs can be detected in the distribution of adjectives as well, and that these support the idea, current in the '70s, that adverbs and adjectives are contextual variants of the same abstract category. To capture such regularities I will propose that adjectives should be treated essentially in the same way as adverbs: a number of different subcategories will be distinguished, which will be assigned fixed positions inside the X-bar structure of DPs; each subcategory will be able to appear only in the Spec of a specified functional projection. Such an account allows us to derive the restrictions on the order and the cooccurrence of adjectives from the independent principles of UG governing the sequence of the functional categories introducing the head noun.

1. The Romance/Germanic asymmetry.

A theory of DPs arguing for a strict parallelism between the structure of noun phrases and that of clauses has to deal with an immediate problem: the asymmetry with respect to the placement of adjectives and subjects of NPs in Romance and Germanic. In fact, as the clausal structure is assumed to be the same crosslinguistically, we would expect the same generalization to hold for the DP structure as well.

Nonetheless, it is a well-known fact that all Germanic languages consistently place adjectives on the left of the head N, regardless of their type, while the behavior of Romance languages is less homogenous: some adjectives precede the head noun, others follow it, others can be found in both positions (sometimes changing their meaning); moreover, the various Romance languages differ with respect to the choice of adjectives which are assigned to each one of the groups above. As for subjects, all Germanic languages allow (and often require) the external argument, bearing a morphological genitive marker, to appear in pre-nominal position; in Romance, on the other hand, both

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the external argument and the internal one surface on the right of N, and are introduced by a preposition¹.

This asymmetry is susceptible of two possible analyses: one possibility is to postulate that Germanic and Romance languages have a different base structure, with adjectives and external arguments generated on the left of N in Germanic and on the right of N in Romance. This is the approach adopted in Giorgi & Longobardi (1991) and Lamarche (1991) among others. The other possibility is to assume that both in Germanic and in Romance adjectives and external arguments are generated on the left of the head, and that in Romance N is raised to a higher functional head across them. This is the analysis originally suggested in Cinque (1990) and subsequently developed in various works (Crisma (1990), Bernstein (1991, 1993), Valois (1991a, 1991b), Cinque (1993) among others). In the next paragraph I will briefly compare the two hypotheses, referring in particular to Giorgi & Longobardi (1991) and to Cinque (1990, 1993).

1.1. Head-movement approach vs. Head-subject parameter

Examining the distribution of arguments in the noun phrase, Giorgi & Longobardi (1991) note that the Romance languages and the Germanic ones systematically differ: while in the Germanic languages the subject precedes the head and the object follows it, in the Romance languages the external argument follows the complement, and both arguments are found on the right of the head:

- (1) a. Rembrandt's poitrait of Aristotle
b. Il ritratto di Aristotele di Rembrandt

They also show that there is asymmetric c-command among the arguments of the head N, with the internal argument always lower than the external one², independently of their linear order.

On the basis of these considerations, they propose that the position of arguments inside a maximal projection is to be determined not by a simple 'Head first/last' parameter but by two distinct parameters, the Head-Complement and the Head-Subject parameters. Their proposal is that the complements of the nouns are universally generated under N' in a position "sister" of N, and that the Head-complement parameter determine their relative order. The same happens with external arguments, which are generated under N" in a position "sister" of N', and whose position is constrained by the Head-subject parameter. In Romance languages the Head-Complement and the Head-Subject parameters are set in the same direction, with both the subject and the complement generated to the right of the head noun. Germanic sets the Head-Complement parameter on the right and the Head-Subject parameter on the left. The structures they propose for the noun phrase in the two groups of languages are reported in (2)a. and (2)b. below, where β indicates "internal arguments" and α "external semantic functions"³. The latter definition includes not only subjects or R-related arguments, but also APs, which cannot be considered internal arguments for they are not subcategorized by the head.

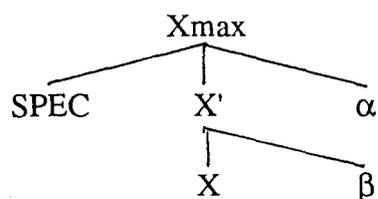
1 This is not true when the argument is a possessive or an argument adjective. See below 1.1.

2 I leave out the problem of the position occupied by the possessor, which, according to Giorgi & Longobardi (1991) is higher than that of the subject.

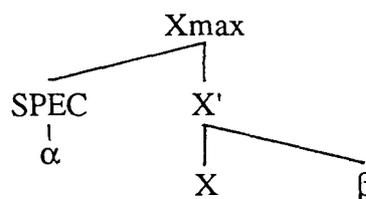
3 It is important to note that, according to this proposal, there is a crucial difference between Romance and Germanic, namely that SPEC position is basically empty in Romance and filled by the subject of NP in Germanic. This has several effects on control, binding and other phenomena involving the arguments in the noun phrase, which would otherwise remain unexplained (see Giorgi & Longobardi (1991) for details). As far as I know, no one of the subsequent works assuming a parametrical rule of N-raising deals with these effects (but see Longobardi (forthcoming)).

(2)

a.: Romance



b.: Germanic



This hypothesis makes the following prediction: as Romance base order is NOS, we would expect that the arguments of N will always be allowed to surface in this order, with the possibility of deriving via extraposition the order NSO. As Giorgi & Longobardi note, however, this expectation is not totally confirmed by the facts: when the subject of the noun phrase is expressed by an argument adjective, the only possible order is NSO (see Giorgi & Longobardi (1991), Cinque (1990, 1993)):

- (3) a. L' invasione tedesca dell' Austria
 b. * L' invasione dell' Austria tedesca

The same effect can be observed with attributive adjectives: Romance attributive APs can either precede the head noun or appear between N and its complement, while the order N-compl-AP is unattested⁴:

- (4) a. La loro brutale aggressione all' Albania
 b. La loro aggressione brutale all' Albania
 c. * La loro aggressione all' Albania brutale
 (examples from Cinque (1993))

This is also unexpected, given that the Head-subject parameter is supposed to determine also the position of attributive APs. In order to account for these facts, Giorgi & Longobardi postulate a surface condition which forces adjectives to be adjacent to the head N they modify; this condition is satisfied by an obligatory extraposition of the object (see Giorgi & Longobardi (1991), ch. 3, fn. 19)⁵: Sentence (4)a., on the other hand, is derivable by an optional raising of the adjective to a prenominal position. It is interesting to note that, according to this analysis, the only two possible sequences are derived via movement, while the combination reflecting the base order (see (2)a.) is ill-formed.

On the basis of this evidence, Cinque (1990, 1993) takes a different approach: he assumes that both Romance and Germanic noun phrases have the same base structure, namely (2)b., with the complement generated on the right of the head N and the external argument occupying the Spec position, always on the left. Then he derives the order N-

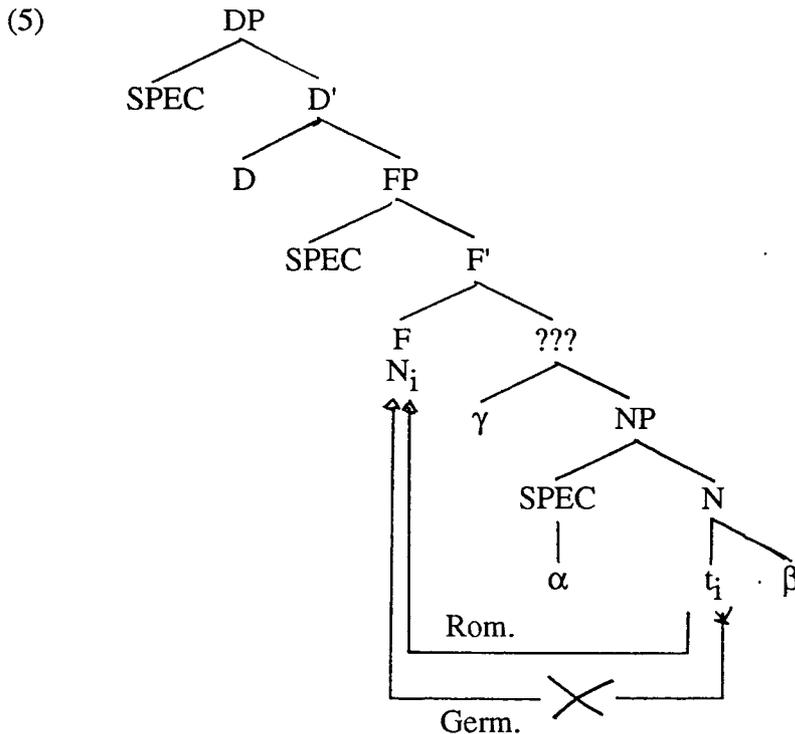
⁴ With normal intonation. See Cinque (1993) for discussion of the order with an intonational break.

⁵ Note that in no case can the NSO order of the example (3)a. be derived moving the argument adjective, for the latter must always stay in its base position, as explained in Giorgi & Longobardi (1990). In fact, though argument adjectives can receive a θ -role, they are not capable of binding an anaphoric expression:

(i) * Le opinioni americane_i su se stessi_i

Therefore, if moved, they could not bind an anaphoric trace in their base position. This property of argument adjectives also explains why they can never express the internal θ -role of the noun phrase: in this case they would be generated under N', but they would not be able to realize agreement because they could not move to a Spec position.

AP⁶-compl. in Romance via N-movement to a higher projection, which, paralleling what has been proposed for other languages, could be a projection of AGR or nominal INFL (see Szabolcsi (1987, 1989)). The structure he proposes for DPs is the following, where α indicates the external argument, β the internal one and γ the attributive AP⁷:



This hypothesis offers several advantages:

- (i) it assigns to Germanic and Romance the same base structure for noun phrases; the difference of surface order between the two groups of languages can be ascribed to a parametrical rule of N-movement, which is obligatory in Romance and absent in Germanic⁸;
- (ii) an obligatory rule of object shift to the right sounds rather stipulatory, if it is true that rightward movement rules are usually marked and generally subject to particular conditions, like the "heaviness" of the constituent moved, for example. The parametrical N-movement rule, on the other hand, qualifies as a general, independently motivated head-movement rule;
- (iii) it allows argument adjectives to be assigned to a SPEC position, where they can receive an abstract case via SPEC-Head agreement: this is particularly important because argument adjectives, as they bear a θ -role, need to receive a case at S-structure in order to be visible at LF;
- (iv) It provides an immediate explanation for the Consistency effects with respect to the distribution of adjectives noted in Cinque (1990):

- (6)
- a. Gli amici antipatici di Gianni
 - b. * Gli amici antipatici a Maria di Gianni
 - c. Gli amici di Gianni antipatici a Maria

6 Argument or attributive.

7 FP is a generic label for "Functional Phrase".

8 At least in syntax; it is possible that N-raising is obligatory at the syntactic level for some languages, and can be delayed till LF for others. See Longobardi (1993), Cinque (1993)

These data can follow from the Consistency Principle only assuming that postnominal APs are generated on a left branch:

- (7) *Consistency Principle:*
 An XP immediately expanding a lexical⁹ category on the non-recursive side is directionally consistent in every projection.
 (Giorgi & Longobardi (1991) p. 112)

(6)b is ill-formed because the AP occupying a left branch has been expanded to the right. The grammaticality of the sentence is restored in (6)c via AP-shift.

The discussion presented so far does not take a stand about the exact position occupied by attributive APs in the structure: in principle they could either be adjoined to NP or to some higher functional projection, or occupy some Spec position¹⁰. The issue will be addressed in the next sections, where some evidence will be presented that should help to decide between the two alternatives (see also Cinque (1993)).

I will focus now on the constraints affecting the placement of adjectives and their cooccurrence restrictions, in order to determine their structural position.

1.2. Adjective placement in Romance

Traditional descriptive grammars generally assume that the unmarked position for Romance adjectives is postnominal, though they allow for some adjectives to be stylistically preposed¹¹. The latter option is generally assumed to be motivated on semantic grounds, for, while postnominal adjectives seem to have a "restrictive" function, prenominal adjectives are generally reported to be "unnecessary" and to have essentially an "ornamental" function. Moreover, "adjective preposing" seems to be governed by substantially arbitrary lexical idiosyncrasies, for there are some adjectives that in no case can precede the noun¹². Such an account leaves several issues open:

(i) it predicts that any adjective will be able to surface in postnominal position in Romance, but this is certainly not true:

- (8) a. L' ultima pubblicazione di Gianni...
 b. * La pubblicazione ultima di Gianni...

(ii) it has no explanation for the fact that some adjectives change their meaning according to the position they occupy (prenominal or postnominal):

⁹ Note that in the formulation given the Consistency Principle is effective only in case the left branching of a *lexical* category is expanded. This restriction was meant in order to allow full XPs expanding to the right to appear in Spec IP and Spec CP. It is clear that, given that the type and number of functional projections seems to be much higher, some modification is needed in order to exclude all and only ungrammatical cases.

¹⁰ Some authors have argued that prenominal adjectives in Romance should be analyzed as heads. I will not address directly this issue. See Bernstein (1993) for a specific proposal and Cinque (1993) for discussion.

¹¹ This description fits most of the Romance languages, though there are some peripheral varieties that exhibit a different behavior: Walloon, Sardinian and Rumanian, for example (see Bernstein (1991) (1993)).

¹² This approach to prenominal adjectives in Romance is essentially adopted in several recent generative works; see Giorgi & Longobardi (1991), Valois (1991 a,b), Zamparelli (1993).

- (9) a. Le numerose famiglie che hanno aderito a questa iniziativa...
 b. Le famiglie numerose che hanno aderito a questa iniziativa...

(iii) it is factually inadequate since it is not true that prenominal adjectives have only an ornamental function: sometimes they bring an essential contribution to identify the referent of the DP. For example, (10) a. and b. below do not necessarily denote the same individual:

- (10) a. il probabile vincitore di queste elezioni...
 b. il vincitore di queste elezioni...

(iv) it has no principled explanation for the restrictions on the cooccurrence and relative order of adjectives in prenominal position¹³.

The proposal by Cinque (1990) presented in (7) above is clearly compatible with the description of adjective placement in Romance found in normative grammars, for it is able to capture the generalization that most adjectives surface postnominally in Romance, still generating them on a left branch.

This hypothesis, however, does not help us to determine the base position of those adjectives which seem to be able to appear before the noun, whether they are generated prenominally or raised there, nor to find an answer to problems (i), (ii) and (iv) above.

First of all, we need to establish whether there is only one structural position accessible to adjectives, namely the one marked with γ in (7), or more than one. If we assume that there is only one position in which adjectives can be generated, we have to admit that successive adjunctions are allowed to this position in order to account for the sequences of non-coordinated adjectives, but we also have to build up a theory which excludes all ungrammatical combinations. Still, such an account would not make any prediction about adjective preposing in Romance, and we would need to stipulate some *ad hoc* condition. The other possibility is to assume that there are different structural positions in which selected adjectives can be generated. The restrictions on number and order of cooccurring adjectives would then naturally follow. Such an account would also predict all possible cases of prenominal adjectives in Romance: instead of building up a rule of adjective-preposing, one can simply assume that adjectives always occupy their base position: thus adjectives which must obligatorily appear on the right of N are generated in a low position, which is always crossed by the raised noun, while those adjectives which always surface prenominally are generated in a higher position, that in no case is crossed by the noun.

The latter alternative looks more appealing, provided that we devise out some criterion that will allow us to define different subcategories of adjectives, and assign each subcategory a specific position in the structure.

2. Attributive adjectives: classes and structural positions

Given the background assumption taken above that a substantial uniformity exists between the clausal structure and the nominal one, a promising approach to a theory of adjectives is immediately apparent: adjectives can be regarded as the nominal counterparts of adverbs in clauses, and therefore their classification and distributional properties will be susceptible to an analysis along the same lines¹⁴. This move is not simply motivated by the evident lexical correspondence between adverbs and

¹³ Of these restrictions I will give several examples in the next sections.

¹⁴ It is clear that such an approach will force us to restrict our attention to event nominals. We will see later to what extent our proposed analysis can be adapted to other types of nominals too.

adjectives. It also allows us to reinforce the already established parallelism between the structure of clauses and that of noun phrases. In fact, as in the clausal structure the asymmetry between Romance and Germanic with respect to adverb placing is accounted for by assuming a parametrical rule of V-raising independently motivated, in the nominal structure too a parametrical rule of N-raising will account for the superficial difference in the distribution of adjectives in the two groups of languages¹⁵.

2.1. Adverbs

2.1.1. Types of adverbs

It should be noted that the puzzling behavior of Romance adjectives is not an isolated case. Rather, it closely resembles that of adverbs: there are adverbs that can surface only in a position high in the structure, never crossed by the verb; others appear preverbally in English but postverbally in the Romance languages; others surface only in a right peripheral position; moreover, as we will see directly, there are adverbs that can occupy different positions, sometimes changing their meaning. A detailed description of these facts is found in Jackendoff (1972). He distinguished six classes of adverbs, according to the position they occupy in the sentential structure:

- (a) adverbs which can appear in all three positions accessible to adverbs in the sentence (i.e. initial, auxiliary¹⁶ and final position), changing meaning accordingly: *cleverly, clumsily, carefully, carelessly, happily, truthfully, specifically, frankly*;
- (11) a. Clumsily (,) John dropped his cup of coffee
Goffamente (,) Gianni rovesciò il suo caffè
b. John clumsily dropped his cup of coffee
Gianni rovesciò goffamente il suo caffè
c. John dropped his cup of coffee clumsily
Gianni rovesciò il suo caffè goffamente
- (b) adverbs which can appear in all three positions, without changing their meaning: *quickly, slowly, reluctantly, sadly, quietly, indolently, frequently, immediately, often, soon*;
- (12) a. Quickly (,) John dropped his cup of coffee
Velocemente(,) Gianni rovesciò il suo caffè
b. John quickly dropped his cup of coffee
Gianni rovesciò velocemente il suo caffè
c. John dropped his cup of coffee quickly
Gianni rovesciò il suo caffè velocemente
- (c) adverbs which can appear in initial and auxiliary position: *evidently, probably, unbelievably, certainly, understandably, unfortunately, naturally, apparently*;
- (13) a. Evidently Horatio has lost his mind
Evidentemente Orazio ha perso la testa
b. Horatio has evidently lost his mind
Orazio ha evidentemente perso la testa
c. * Horatio has lost his mind evidently
* Orazio ha perso la testa evidentemente
- (d) adverbs which can appear in auxiliary and final position: *completely, easily*,

¹⁵ A similar approach implies that the position of adjectives in the structure is fixed. This treatment of adjectives is analogous to the treatment of adverbs in Pollock (1989).

¹⁶ Note that the position called by Jackendoff "auxiliary position" is preverbal in English but postverbal in Italian: Italian lexical verbs are in fact raised to AGR (see Pollock (1989)), so they pass over the adverb.

- purposefully, totally, altogether, handily, badly, mortally, tremendously;*
- (14) a. * Completely Stanley ate his Wheaties
 * Completamente Stanley ha mangiato i Wheaties
 b. Stanley completely ate his Wheaties
 Stanley ha completamente mangiato i Wheaties
 c. Stanley ate his Wheaties completely
 Stanley ha mangiato i Wheaties completamente
- (e) adverbs which can appear only in final position, usually non-*ly* adverbs, considered by Jackendoff (1972) intransitive prepositions: *more, less, before, early, fast, home, slow, terribly, lengthwise, indoors, downstairs;*
- (15) a. * Well Sam did his work
 * Bene Sam ha fatto il suo lavoro
 b. * Sam well did his work
 * Sam ha bene fatto il suo lavoro
 c. Sam did his work well
 ?? Sam ha fatto il suo lavoro bene
 Sam ha fatto bene il suo lavoro
- Final position is characteristic also of "strictly subcategorized" adverbs, i.e. of adverbs occurring with verbs as obligatorily selected phrases, otherwise the sentence is meaningless:
- (16) a. Steve dresses elegantly
 b. * Steve dresses
- (17) a. Gianni si comporta educatamente
 b. * Gianni si comporta
- (f) adverbs which can appear only in auxiliary position, the "*merely* class": *merely, truly, simply, utterly, virtually, hardly, scarcely.*
- (18) a. * Merely Albert is being a fool
 ?? Semplicemente Alberto si sta comportando da scemo
 b. Albert is merely being a fool
 Alberto si sta semplicemente comportando da scemo
 c. * Albert is being a fool merely
 * Alberto si sta comportando da scemo semplicemente

Jackendoff noted that there is a strict connection between the position occupied by adverbs and their interpretation. This is particularly evident with adverbs of class (a): (11)a expresses a quality ascribed to the subject, while (11)c indicates the manner in which the action expressed by the verb was accomplished. (11)b is ambiguous. Jackendoff names the first reading "subject-oriented" and the second one "manner". There is a third type of reading which is characteristic of adverbs occurring in initial position, which express the speaker's opinion about a certain event; Jackendoff labels it "speaker-oriented".

The fact that the position in which an adverb can surface is determined by its meaning, is confirmed by the behaviour of adverbs of the classes (c) and (d): adverbs of class (c) are semantically incompatible with a manner interpretation, and for this reason they can never appear in final position, while adverbs of class (d) can not be interpreted as speaker- or subject-oriented adverbs and, as a consequence, they are excluded from the initial position.

2.1.2. Position of adverbs

In order to assign each of the adverbial categories above to a specific position in the structure, we have to refer to more recent studies, assuming binary branching and a complex functional structure.

One proposal for the position of adverbs is formulated by Belletti (1990). Belletti, following Pollock (1989), assumes that the node IP is in fact made up of at least two maximal projections, AgrP and TP. Then she distinguishes two classes of adverbs,

"sentence" adverbs, corresponding to speaker- and subject-oriented adverbs, and "lower" adverbs, corresponding to manner and strictly final adverbs. The former class is generated always adjoined to the maximal projection of the highest inflectional functional category, Agr(S), even when a speaker-oriented adverb follows the sentential subject. According to Belletti, in fact, these cases can be explained admitting that the subject has moved to a TOP position, crossing the adverb.

"Lower" adverbs are generated in a position left- or right- adjoined to VP. In Romance languages, the position occupied by a lower adverb is always crossed by the raised verb:

- (19) a. Gianni sbaglia completamente
b. * Gianni completamente sbaglia

The problem with "lower" adverbs is that sometimes, with complex tenses, they seem to be able to appear higher in the structure:

- (20) a. Gianni ha sbagliato completamente
b. Gianni ha completamente sbagliato

To deal with these data, Belletti proposes that another position in the structure may be accessible to "lower" adverbs; as these effects are observable only with complex tenses, she proposes that this type of adverbs can be also adjoined to a participial AgrP or to TP.

As for the *merely* class, Belletti argues that it is assigned an independent position, higher than the one occupied by "lower" adverbs. This can be seen on the basis of their cooccurrence:

- (21) a. Hanno semplicemente completamente distrutto la casa.
b. * Hanno completamente semplicemente distrutto la casa.

More recently, Cinque (forthcoming) has proposed a much more articulated structure of functional projections. He distinguishes several classes of adverbs, each occupying the Spec position of a functional projection and bearing a semantical relation with its head.

In such a framework, the fact that some adverbs can surface both before and after the verb in Romance languages is accounted for assuming that the past participle raises obligatorily up to a certain point, and optionally higher. Postulating that the number of obligatory and optional steps allows for parametrical variation, he derives many cross-linguistic asymmetries with respect to the distribution of adverbs.

Apparent cases of optional adverb placing (as in (20) above) need some clarification: in Cinque's system a different base position should correspond to a different interpretation of the adverb, which, at a first sight, doesn't seem true for the relevant examples. The other possibility is to assume that, as past participle raising allows for some optional steps, the adverbs of the *completamente*-class (a class of manner adverbs) can be optionally crossed by the raised participle. As Cinque shows, the latter account is not the correct one. In fact, manner adverbs which belong to the subcategorization frame of a verb can never precede the past participle. Compare:

- (22) a. Gianni ha declinato l' invito
b. Gianni ha declinato gentilmente l' invito
c. Gianni ha gentilmente declinato l' invito
(23) a. * Gianni ha trattato i miei genitori
b. Gianni ha trattato gentilmente i miei genitori
c. * Gianni ha gentilmente trattato i miei genitori

What these examples seem to suggest is that there are actually two different positions accessible to manner adverbs, and that only one of them can satisfy the subcategorization requirements of the verb. Under this perspective, examples like (20)

and (22) above should be reconsidered, in order to see whether the position occupied by the adverb has really no influence on the meaning of the whole sentence.

Summing up, we have seen that adverbs can be divided into several classes, and that each class of adverbs is generated in a specific position in the structure. Some adverbs are ambiguously assigned to different classes, and can therefore be generated in different structural positions.

2.2. *Speaker-oriented and manner adjectives*

What clearly emerges from the evidence above is that the position occupied by adverbs is in part responsible for their interpretation. The possibility of finding an adverb in a certain position will therefore be predictable on the basis of its semantical compatibility with the interpretation assigned to that position.

The problem arises now of whether it is possible to detect similar effects in the distribution of adjectives too. First of all, we should distinguish speaker- and subject-oriented adjectives, manner adjectives, and individuate a class of adjectives corresponding to Jackendoff's *merely* class¹⁷. Then we should try to determine whether they occupy different positions in the structure and whether there is a link between the position they occupy and their interpretation¹⁸.

One possible way to test these expectations is to look for examples of adjectives which can be interpreted as speaker-oriented or as manner adjectives depending on the position they occupy; in other words, we are looking for a class of adjectives in all similar to Jackendoff's class (a) of adverbs. In this respect, Germanic languages do not help much. In fact, as adjectives in Germanic always surface prenominal, it is impossible to determine at which level they are attached, unless there is more than one¹⁹. Romance languages, on the other hand, provide some means of signalling the level of attachment of adjectives: a low adjective, in fact, will be invariably crossed over by the raised N, and will therefore surface postnominally. Prenominal adjectives, on the other hand, can be thought to occupy some position higher than the one reached by the head noun. What we expect, then, is that in Romance an adjective which is compatible both with a speaker-oriented and a manner interpretation will be able to appear both before and after the noun, receiving the former interpretation when preceding the noun, and the latter when following it. This is indeed what we find:

- (24) a L' evidente provocazione di Gianni... (= it is evident that Gianni is provoking somebody)
 b La provocazione evidente di Gianni... (= Gianni is provoking somebody in a manifest way)
- (25) a Il felice atteggiamento assunto da Gianni durante tutta la durata del processo... (= the speaker approves of Gianni's behavior)
 b L' atteggiamento felice assunto da Gianni durante tutta la durata del

17 Adverbs of the class (e) (non -ly adverbs) do not seem to have a lexically related adjectival counterpart. As for subcategorized adverbs, nothing comparable is found in the nominal system. In fact it seems that adjectives are never obligatorily selected in the same sense as corresponding adverbs can be. Compare:

- (i) Gianni si comporta *(gentilmente)
 (ii) Il comportamento di Gianni

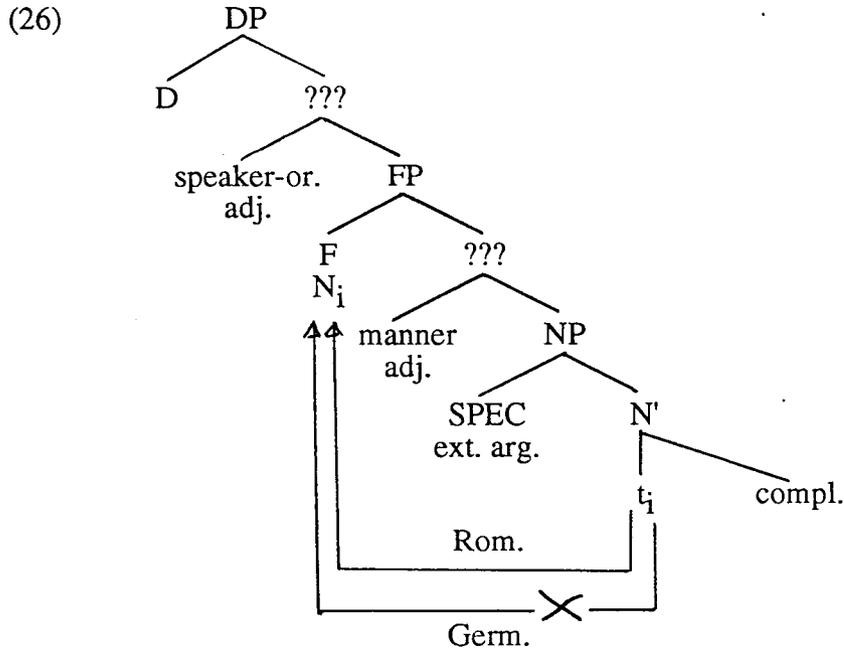
This is probably not due to chance but it is likely to be related to other well-known differences in the government and selection abilities of nouns and verbs (cf. Kayne (1981), Grimshaw (1990)).

18 A similar proposal was independently formulated in Valois (1991a, 1991b). His analysis, however, differs significantly from the one I have proposed in Crisma (1990) and am proposing here; some problems with it will be addressed in the next sections (cf. below *passim*).

19 Cooccurrence restrictions and relative order will be tested below.

processo... (= Gianni put on a happy pose)

The data presented above indicate that it is indeed possible to distinguish two different classes of adjectives, and that each class is likely to occupy a different structural position. We need therefore to build up a DP structure with at least two distinct positions capable of hosting attributive APs, one for speaker-oriented adjectives and one for manner adjectives; in Romance, the noun raised to a functional head will be able to cross over the lower position, but not the higher one, as shown in the phrase marker below:



We should now try to determine which kind of position adjectives occupy; in other words, we need to establish the exact nature of the '???'-nodes in (26) above. In principle, there are two possible alternatives: attributive adjectives can be thought to be generated either in an adjoined position or in a Spec position. The latter hypothesis is more restrictive than the former one, for it predicts that a sequence of two (or more) non-coordinated adjectives belonging to the same class will be ill-formed. This is indeed what we find²⁰:

20 Valois (1991a,b) and Bernstein (1993) argue exactly the opposite, namely that it is possible to find cooccurrence of two adjectives belonging to the same class. Valois (1991b, p.167) reports the following example:

- (i) The clever careful invasion of Jupiter

I will argue that classifying adjectives on the basis of their distributional properties without considering their meaning is rather misleading: adjectives belonging to Valois's frequent/ly class, in my system, have the property of being compatible both with a speaker-oriented (or rather subject-oriented, see below 2.3.) and with a manner reading, therefore they can be generated in two different slots.

Bernstein (1993, ch.2, fn.31), on the other hand, gives the following two examples of multiple adjectival modification:

- (ii) The nice big round ball
 (iii) The long narrow white shelf

- (27) * L' atteggiamento ostile tedesco americano (two argument adjs.²¹)
 (28) * La probabile naturale reazione di sdegno (two speaker-or. adjs.)
 (29) * L' atteggiamento ostile arrogante di Gianni (two manner adjs.)

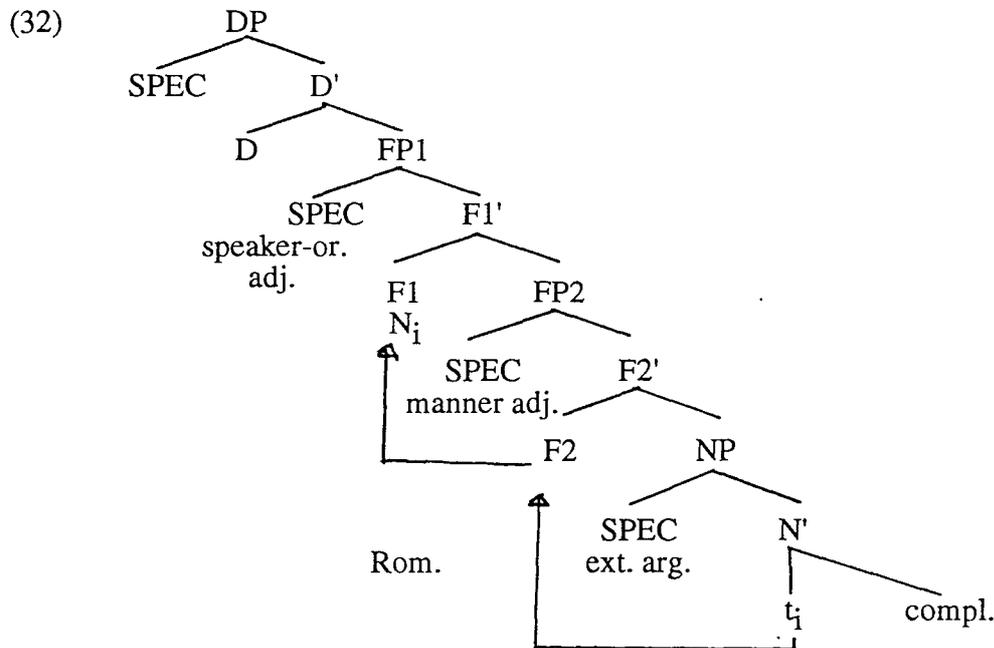
All these sentences become perfectly grammatical if the two adjectives are coordinated. Note however that coordination is possible only among adjectives belonging to the same class:

- (30) * La distruzione terribile e tedesca di Varsavia (Giorgi (1988), p. 311)
 (31) * Il probabile e goffo comportamento di Gianni

All this evidence seems to indicate that there is one and only one position available for each class of adjectives, and that recursion is not allowed.

The adjunction hypothesis can deal with these facts only by stipulating that only one adjunction is possible to each maximal projection (as in Valois (1991a,b)); yet, in order to function, it would need two further stipulations (see Cinque (1993)): (i) that adjectives are always adjoined to the left; (ii) that there is some semantical or selectional relation between the adjoined position and the FP to which it is attached.

None of the stipulations above is needed if we assume that adjectives are generated in Spec. The structure I will tentatively adopt for Romance DPs is therefore the following, with speaker-oriented and manner adjectives generated in the Spec position of two distinct functional projections, and the head N undergoing a two-step movement:



It is not obvious that the two underlined adjectives in example (ii) do belong to the same category. In this respect, see Sproat & Shih (1988, 1990) and Cinque (1993). Example (iii) is less clear; it could be made compatible with the idea of APs in Spec only if it could be shown that it is a case of asyndetical coordination or, as an alternative, a sort of fixed formula (analyzable as a compound).

21 Recall that I assumed, along with Cinque (1990), that argument adjectives are generated in the external argument position, namely Spec,NP (see (7) above). The cooccurrence of two

This structure also predicts that in Germanic languages, where no overt N-raising takes place, speaker-oriented, manner and argument adjectives will all appear preminally, but that the same ordering and cooccurrence restrictions as in Romance will hold; we predict then that coordination will be possible only among adjectives belonging to the same category, that no more than one instance for each category will be possible in non-coordinated sequences of adjectives, and that the hierarchy speaker-oriented>manner>argument adjective will be respected. This is indeed what we find:

(i) coordination:

- (33) a. The American and German attitude toward President Eltsin (arg. & arg.)
 b. John's childish and clumsy behavior (manner & manner)
- (34) a. * The terrible and German destruction of Warsaw (manner & argument)
 b. * John's likely and clumsy behavior (speaker-or. & manner)

(ii) sequences of non-coordinated adjectives belonging to the same class:

- (35) a. * The German American attitude (arg. - arg.)
 b. * The possible probable reaction (speaker-or. - speaker-or.)
 c. ?* John's hostile arrogant attitude (manner - manner)

(iii) relative order:

- (36) a. The probable hostile American reaction
 b. * The probable American hostile reaction
 c. * The American probable hostile reaction
 d. * The American hostile probable reaction
 e. * The hostile probable American reaction
 f. * The hostile American probable reaction

2.3. Subject oriented adjectives

As it emerged from my brief summary of the theory of adverbs in 2.1. above, sentence adverbs are divided into two different classes, speaker-oriented and subject-oriented adverbs. We would expect then to find subject-oriented adjectives corresponding to the class of subject-oriented adverbs, and that these adjectives will appear in a position high in the structure (preceding manner adjectives in both Romance and Germanic languages, and possibly also preceding the head N in Romance). Such a prediction is not easy to test, because adjectives corresponding to subject-oriented adverbs are often ambiguous between a subject-oriented reading and a manner reading, even in prenominal position²²:

- (37) L' accurata descrizione di Gianni (dell' incidente)

There is however one test that can be applied in order to determine whether an adjective is indeed interpreted as subject-oriented: subject-oriented adverbs can appear only in sentences with an agent overtly present²³:

- (38) a. Intelligentemente, il direttore ha promosso Gianni
 b. ?* Intelligentemente, Gianni è stato promosso

The same effect seems to hold for nominals as well:

argument adjective, however, would be independently excluded by the θ -criterion.

²² The possibility of having an adjective with a manner interpretation in prenominal position in Romance is so far unexpected given the structure I proposed in (32). The problem will be discussed at length in section 2.4. below.

²³ Cf. Lonzi (1991).

- (39) L' intelligente rinuncia di Gianni (a candidarsi alle elezioni)
 (40) ?* L' intelligente promozione di Gianni

Some additional evidence suggesting that subject-oriented adjectives are distinct from manner adjectives comes from examples where a subject-oriented adjective and a manner adjective semantically clashing with it modify the same noun:

- (41) L' astuto comportamento ingenuo di Gianni (ha preso in contropiede i suoi avversari)

The sentence above can be interpreted only if the higher adjective is interpreted as subject-oriented, i.e. if it conveys the speaker's attitude towards the subject, like the corresponding adverb:

- (42) Astutamente Gianni si è comportato ingenuamente

All these data seem to indicate that a subject-oriented interpretation is indeed available for adjectives. We should now try to establish whether the distinction between speaker- and subject-oriented adjectives is structural or semantic, namely, whether the two classes are assigned to two distinct structural positions or to the same one. The former hypothesis predicts that the cooccurrence of a speaker- and a subject-oriented adjective will be always possible in non-coordinated structures and that the relative order will not be free, while the latter predicts that they will be allowed to modify the same head only if coordinated. The evidence is rather contradictory:

- (43) a. * Il probabile astuto comportamento ingenuo²⁴ di Gianni
 b. ? Il probabile astuto comportamento di Gianni (*astuto* has a (sort of) manner interpretation, see fn. 22)
 c. ?? Il probabile e astuto comportamento ingenuo di Gianni

While there is a rather sharp contrast between (43)a. and (43)b., suggesting that speaker- and subject-oriented adjectives cannot cooccur²⁵, (43)c. indicates that they cannot easily be coordinated either. What could be said on the basis of this evidence is that speaker- and subject-oriented adjectives do compete for the same position, and it is for semantic reasons that they cannot be coordinated²⁶. One problem with this account is

²⁴ The insertion of a manner adjective is needed in order to force the subject-oriented reading for the second adjective of the sequence. However, the ill-formedness of this example cannot be due to the fact that there are three adjectives modifying the same head: in fact, if we replace the manner adjective by an argument one the sequence improves considerably:

- (i) Il probabile astuto comportamento americano

In this sentence *astuto* is no longer interpreted as subject-oriented but it has rather a manner interpretation.

²⁵ Cinque (p.c.) suggests that the impossibility of the cooccurrence of a speaker- and a subject-oriented adjective can be due to the fact that they have the same grade of absoluteness in the sense of Sproat and Shih (1988, 1990). Italian, then, would be like Chinese in not allowing two adjectives with the same grade of absoluteness to cooccur. If this is the right explanation, we must expect that English will always allow a speaker- and a subject-oriented adjective to cooccur, for in English there seem to be no restriction on the cooccurrence of two adjectives belonging to different classes with the same grade of absoluteness. My informant, however, tends to reject a sequence speaker-oriented>subject-oriented:

- (i) ?* John's probable wise departure

²⁶ This effect would be similar to that found in sentences like:

that it breaks the parallelism so far established between adverbs and adjectives: in sentences, in fact, speaker- and subject-oriented adverbs do not seem to occupy the same structural position, for, according to Jackendoff (1972), they can cooccur and the relative order is always speaker-oriented>subject-oriented. He notes also that while speaker-oriented adverbs can precede epistemic modals, subject-oriented adverbs must always follow them. On the basis of this evidence, Cinque (forthcoming) proposes that there are two ModPs in the clausal structure, an epistemic ModP and a root ModP. In this system, speaker-oriented adjectives are in Spec of epistemic ModP, while subject-oriented adverbs are in Spec of root ModP. The fact that only one position is available in the nominal system, either for a speaker-oriented or for a subject-oriented adjective, could suggest that the two ModP of the clausal structure correspond to a single functional projection in the DP structure. The hypothesis is not implausible, given that the nominal inflectional system is much poorer than the clausal one.

Another potential problem could be posed by the fact that if the relative order of the speaker- and the subject-oriented adjectives is reversed in (43)a., the expression, already clearly ill-formed, is even more readily recognized as ungrammatical:

(44) * L' astuto probabile comportamento ingenuo di Gianni

This might simply be due to a processing effect, i.e. to the delay in the perception of the ill-formedness of the string: in fact the ungrammaticality of (43)a is detected only when the processing of the string has reached *ingenuo*. For, if the manner adjective were missing or replaced by an argument adjective the sequence would be acceptable (see (43)b and fn. 24); my impression, then, is that the string is less immediately rejected owing to a sort of reverse of the classical "garden path" effect. In (44), on the contrary, the ill-formedness of the sentence is detected as soon as the second adjective is processed. We have seen, in fact, that the sequence *probabile astuto* is possible in prenominal position if *astuto* receives a sort of manner interpretation. The reverse order, however, is always banned, whatever the interpretation of *astuto*:

(45) * L' astuto probabile comportamento di Gianni

On the basis of this evidence, I will assume that (43)b. does not instantiate a speaker-oriented>subject-oriented sequence, wherefrom it is possible to conclude that the distinction between speaker-oriented and subject-oriented adjectives is semantic rather than structural, for they seem to compete for the same position.

The discussion in this section has revealed that the picture so far outlined is inadequate to describe all cases of multiple adjectival modification (at least in Romance). This because we had to argue that also prenominal adjectives in Romance can receive a manner interpretation. To this problem I will turn directly.

2.4. An unexpected asymmetry: pre-nominal "manner" adjectives in Romance

Given the structure (32) above, the pre- or post-nominal position of adjectives in Romance event nominal should be entirely predictable on the basis of their interpretation. We have seen that the same adjective can have a different meaning depending on the position it occupies (cf. section 2.2. above). What we expect, then, is that when only one of the two possible interpretations for an adjective is semantically plausible in a certain context, there will be only one position available to that adjective. An adjective like *naturale*, for example, can be used both with a speaker-oriented and with a manner reading, and can therefore appear either on the left or on the right of N, but when it modifies a noun which does not admit its use as a manner adjective, the only possible sequence is AP-N. Compare:

(i) * Ieri ho preso il raffreddore e due biglietti per il cinema

where the two complements, though occupying the same structural position, have a different semantic relation with the verb and cannot be coordinated.

- (46) a. La naturale reazione di Gianni in una situazione tanto imbarazzante...
 b. La reazione naturale di Gianni in una situazione tanto imbarazzante...
 (47) a. Il naturale disappunto di Gianni
 b. ?* Il disappunto naturale di Gianni

We might expect a parallel pattern concerning manner adjectives, in other words, we would expect that an adjective which cannot give rise to a speaker- or subject-oriented reading will not appear prenominal. This expectation is not fulfilled:

- (48) a. La soluzione definitiva del problema
 b. La definitiva soluzione del problema

These data are not particularly surprising in the light of the parallelism between adjectives and adverbs, for we saw that also manner adverbs seem to have at least one extra position in the structure (see (20) and (22) above). However, the problem remains of how to deal with these cases. As we took as a basic assumption that adjectives, like adverbs, cannot be moved from their base position, we have in principle two possible alternative ways to explain the two positions apparently accessible to manner adjectives, paralleling what has been said with respect to adverbs. One possibility is to assume that there is only one position in which manner adjectives can be generated, and that N-raising across this position is optional. The fact that manner adjectives can surface both before and after the noun would then be the consequence of a certain freedom of the scope of N-movement. This option poses a theoretical problem, for, in a minimalist framework, we must assume that movement is possible insofar as it is required, therefore we do not expect any step in the derivation to be inherently optional²⁷.

The other possibility would be to assume (along the lines of the analysis of the placement of manner adverbs suggested in Cinque (forthcoming)) that there are in fact two different positions accessible to this type of adjectives. If there are two positions potentially accessible to adjectives, we might expect some difference in the interpretation. As noted in Cinque (1993), this is in fact what happens: in certain contexts only a postnominal manner adjective yields a good result. Compare:

- (49) a. La loro aggressione brutale all' Albania
 b. La loro brutale aggressione all' Albania
 (50) a. Le aggressioni brutali vanno severamente condannate
 b. * Le brutali aggressioni vanno severamente condannate
 (examples from Cinque (1993))

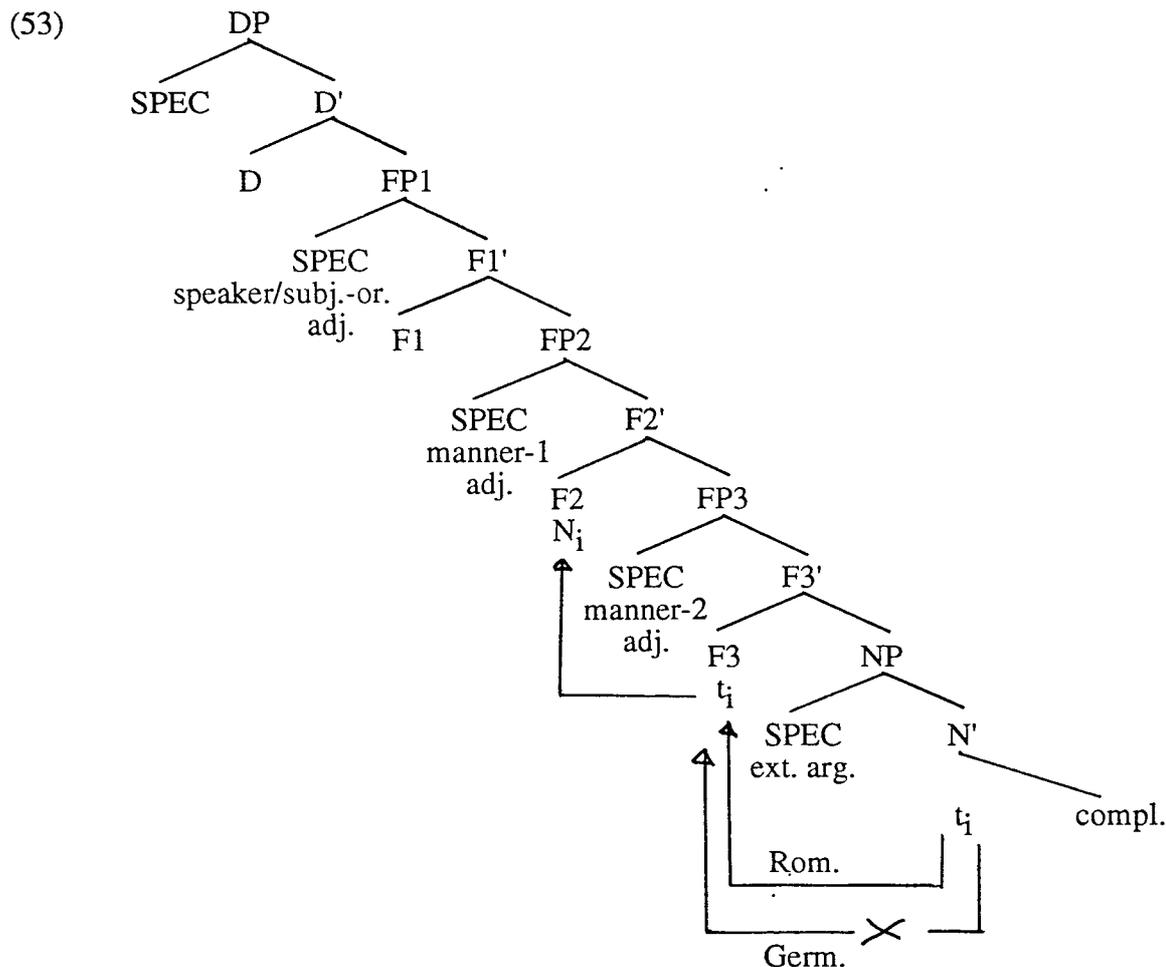
Cinque accounts for this evidence assuming that a prenominal adjective like *brutale* would always receive a subject-oriented interpretation. In sentence (50)b. there is no specific subject, a subject-oriented interpretation of the adjective would therefore not be available and the sentence would be ill-formed. Such an account is however totally incompatible with the evidence I presented in section 2.3. above, where I showed that a sequence of two prenominal adjectives in Romance is possible, but that speaker- and subject-oriented adjectives occupy the same structural position. What we need then is an extra prenominal position for manner adjectives, distinct from the position occupied by speaker- and subject-oriented adjectives. On the basis of the relative order of prenominal adjectives in Romance, we can conclude that such a supposed position of prenominal manner adjectives²⁸ is lower than that of speaker- and subject-oriented adjectives (see also (44) and (45) above):

²⁷ But see Cinque (forthcoming) for apparent optional steps of past-participle raising in Romance.

²⁸ Henceforth manner-1, to distinguish them from postnominal corresponding adjectives, henceforth manner-2.

- (51) a L' evidente deliberata provocazione di Gianni
 John's evident deliberate provocation
 b * La deliberata evidente provocazione di Gianni
 * John's deliberate evident provocation
- (52) a La probabile definitiva soluzione del problema
 The likely definitive solution to the problem
 b * La definitiva probabile soluzione del problema
 * The definitive likely solution to the problem

I will therefore propose the following structure²⁹:



The problem remains of how to deal with Cinque's examples in (50). I think that what makes sentence (50)b. ungrammatical is not the lack of an overt or understood subject but rather its being interpreted as generic. In fact, when a specific interpretation is made available the insertion of a manner-1 adjective does not compromise the acceptability of the sentence:

²⁹ Note that this structure predicts that a manner-1 adjective and a manner-2 adjective may cooccur. Actually, examples of this kind seem to me a bit marginal, though my judgement is not shared by all speakers (see for example Cinque (1993)).

- (54) Le brutali aggressioni che hanno sconvolto questa città nelle ultime settimane (non hanno ancora un colpevole)
- (55) Queste brutali aggressioni (non hanno ancora un colpevole)

Apparently, then, manner-1 adjectives would be able to occur only in specific contexts. Actually, the phenomenon is much more complex and suggestive, and it will be therefore discussed at length in section 3. below.

2.5. "Mere" adjectives

To complete the parallelism between adverbs and adjectives³⁰ we should be able to determine whether there is a class of adjectives comparable to the *merely* class of adverbs. As already noted in Jackendoff (1972, p.55), adjectives corresponding to adverbs like *merely*, *simply*, *truly*, *virtually*, *utterly* form a class with peculiar characteristics which seem to hold crosslinguistically; several recent works on the structure of the noun phrase have addressed the problem of how *mere* adjectives must be analyzed, trying to avoid treating the restrictions on their occurrence as pure lexical idiosyncrasies (see for example Bernstein (1993, pp.50-54), Cinque (1993), Zamparelli (1993) among others). The properties distinguishing *mere* adjectives from common attributive adjectives are the following:

(i) they cannot be used predicatively:

- (56) a. * John's proposal is mere
 b. * La proposta di Gianni è mera
- (57) * Ritengo la proposta di Gianni mera

(ii) they cannot be modified:

- (58) a. * A very mere man (Bernstein (1993))
 b. * Una molto mera proposta

(iii) they appear in a relatively high position. This is clear in Italian, where the level of attachment of an adjective is signalled by its position with respect to the head, for an adjective generated in a low position will always appear on the right of the noun after N-raising; we can easily see that this option is totally excluded for *mero*, while *semplice* admits the postnominal position but changes its interpretation (into a manner one):

- (59) a. Gianni ha fatto una mera proposta
 b. * Gianni ha fatto una proposta mera
- (60) a. Gianni ha fatto una semplice proposta
 b. Gianni ha fatto una proposta semplice (other meaning)

One interesting proposal for the treatment of *mere* adjectives is found in Bernstein (1993). According to her, properties (i)-(iii) of *mere* adjectives immediately follow if they are regarded as A° rather than APs. It should be noted, however, that other adjectives have one or two of the properties (i)-(iii), but cannot clearly be analyzed as

³⁰ It should be noted that there are classes of adjectives modifying event nominals which I will not consider, namely numeral adjectives and possessive adjectives. In Italian possessives are realized as adjectives which can cooccur with an overt determiner and usually appear in the leftmost position in the sequence of adjectives modifying a head; this position is probably a derived one, for possessives need to be generated under NP in order to receive a θ -role. Numeral adjectives include items like *molti*, *pochi*, *numerosi* and the like that have a double use, either as determiners or as adjectives. In the latter case they occur in an intermediate position between possessives and speaker-oriented adjectives (see Crisma (1990) and Giusti (1992) for details).

heads: speaker-oriented and manner-1 adjectives cannot be crossed over by the noun, but they can be modified (*Le assai poco probabili dimissioni di Gianni...*), while an adjective like *principale* cannot be modified nor used predicatively, but it is found in postnominal position.

The other alternative would be to assign them to a Spec position in the functional structure. As *mere* adjectives always appear on the left of the head noun in Romance, we are forced to conclude that this supposed Spec position is higher than the head to which the noun is raised. On the other hand, evidence suggests that they must occupy a position lower than speaker-oriented adjectives, for they always follow them:

- (61) a. Il probabile semplice ammonimento dei responsabili non sarà un deterrente sufficiente
 b. The probable mere warning of those responsible will not be a sufficient deterrent
- (62) a. * Il semplice probabile ammonimento dei responsabili non sarà un deterrente sufficiente
 b. ?* The mere probable warning of those responsible will not be a sufficient deterrent

Given the structure in (53) above, only Spec,FP2 qualifies as a suitable host for *mere* adjectives, which would then compete with manner-1 adjectives for the same position. An alternative solution would be to add another functional projection, intermediate between the one hosting speaker-oriented and the one hosting manner-1 adjectives³¹.

I do not think I have sufficient evidence to take a stand on the status and the structural position of *mere* adjectives, and I will therefore leave this issue for further investigation.

3. Specific/generic distinctions

We have seen in section 2.4. that the occurrence of manner-1 adjectives in Italian seem to be excluded from some generic contexts. In this section I will try to define more precisely the exact nature of this restriction, and to see whether it affects only manner-1 adjectives or also other categories of adjectives.

I repeat here below the relevant data: manner-2 adjectives can freely be used in generic contexts, while the insertion of a manner-1 adjectives yields good results only when the DP refers to a specific event or series of events. Compare:

- (63) Le aggressioni brutali vanno severamente condannate
 * Le brutali aggressioni vanno severamente condannate
- (64) Le brutali aggressioni che hanno sconvolto questa città nelle ultime settimane (non hanno ancora un colpevole)
- (65) Queste brutali aggressioni (non hanno ancora un colpevole)
- (66) a. L' impegno costante alla fine è sempre premiato

³¹ In Crisma (1990) I treated this class of adjectives as APs competing with manner-1 adjectives (called *quasi-manner* adjectives in Crisma (1990)) for the same Spec position; this on the basis of their distribution with respect to speaker-oriented adjectives and manner-1 adjectives. The correctness of this conclusion is however highly questionable. It is true that *mere*-adjectives must occupy a position lower than that occupied by speaker-oriented adjectives. On the other hand it is not true that, as argued in Crisma (1990), they can never cooccur with manner-1 adjectives. Some examples can be found which do not sound too unacceptable:

- (i) ? La semplice concisa descrizione del tuo progetto non basterà da sola a procurarti l' approvazione del consiglio direttivo
 (ii) ? La semplice completa ammissione delle proprie colpe...

The judgements on this kind of sentences is far from uncontroversial, and therefore it does not allow us any safe conclusion.

- b. * Il costante impegno alla fine è sempre premiato
- c. Il costante impegno di Gianni alla fine è stato premiato

In order to account for these facts, one could tentatively assume that manner-1 adjectives are intrinsically incompatible with a generic interpretation owing to some feature of the head F2, whose Spec they occupy. This hypothesis, however, proves to be false because manner-1 adjectives can appear in the context of a generic interpretation, provided that the string is introduced by an indefinite article instead of a definite article (both in the singular and in the plural form):

- (67) a. * Le brutali aggressioni possono lasciare tracce indelebili sulla psiche delle vittime
- b. Delle brutali aggressioni possono lasciare tracce indelebili sulla psiche delle vittime
- (68) a. * La brutale aggressione può lasciare tracce indelebili sulla psiche della vittima
- b. Una brutale aggressione può lasciare tracce indelebili sulla psiche della vittima

These data seem to indicate that the ungrammaticality of (a.) sentences in the examples above is determined by the choice of the determiner rather than by some special feature of FP2. This hypothesis is further confirmed by the fact that all the other categories of adjectives occurring in prenominal position in Romance display exactly the same behavior as manner-1 adjectives: numeral adjectives (see fn. 30), speaker-oriented adjectives and *mere* adjectives can modify generic noun phrases only when the latter are introduced by an indefinite article, while they are excluded from definite generic contexts^{32, 33}. Compare:

- (69) a. * I numerosi/probabili/semplifici fallimenti non devono scoraggiare un bravo ricercatore
- b. Dei numerosi/probabili/semplifici fallimenti non devono scoraggiare un bravo ricercatore
- (70) a. * Il probabile/semplific fallimento non deve scoraggiare un bravo ricercatore
- b. Un probabile/semplific fallimento non deve scoraggiare un bravo ricercatore

These data, then, are a further indication that the nature of the determiner, rather than the specific/generic distinction, has some influence on the occurrence of some classes of adjectives. To be more precise, prenominal adjectives in Romance are excluded when an *expletive* article (in the sense of Longobardi (1993)) introduces the nominal

³² This constraint was already noted in Jackendoff (1972) for *mere* adjectives, but its formulation was somehow different. Jackendoff observed that *mere* adjectives can appear only in indefinite noun phrases, or in definite noun phrases which have a relative clause. Actually the occurrence of a *mere* adjective in a DP introduced by a definite article is possible also without a relative clause modifying the head, provided that a specific reading is made available:

(iii) La semplice/mera menzione del suo nome in nota non dà il meritato rilievo alla sua collaborazione

³³ There are however some counterexamples to this generalization, namely some uses of *vero* and *primo*:

(i) Il vero amico non ti mente mai
(ii) Il primo figlio è spesso il più coccolato

It is not clear to me how these data should be handled, maybe they can be considered fixed formulas.

expression. One way to account for this restriction is to postulate that the expletive article is too "weak" to select a series of functional projections which are normally selected, namely those FPs which, according to my analysis, host numeral adjectives, speaker-oriented adjectives and *mere* adjectives in their SPECs. This hypothesis would be very interesting for its theoretical consequences, for it would be an argument in favour of the claim that adjectives are in Spec rather than in an adjoined position: the distribution of adjectives in sentences (69) and (70) above would be accounted for only admitting adjectives bear a strong relation to the functional heads selected by the determiner; this is more plausibly a characteristic of SPECs rather than of adjoined elements. The idea that the restrictions on the occurrence of higher adjectives are due to the selectional properties of the determiner, however, is problematic: we must assume that at least one functional head will always be selected independently of the nature of the article, namely the functional head to which the noun is raised in Romance; if this head is always present, we would predict that at least one prenominal adjective will be always possible in Romance, the adjective occupying its Spec. Given the framework outlined so far, then, we would expect that a manner-1 adjective will always be able to cooccur with an expletive article. We have seen, however, that this is not true (cf. (67)a. and (68)a. above).

There are other possible analyses of the specific/generic distinction which come from the syntax of expletive articles. According to Longobardi (1993), the N position is always interpreted as referring to universal concepts, i.e. to kinds, while the D position usually hosts some operator ranging over the extension of the kind referred to by the N position. When the D position hosts an expletive article, on the other hand, N is raised at LF to the D position which in this case does not have any semantic content. Thus the DP designate the whole kind referred to by N, hence the generic interpretation. In such a framework, one could claim that adjectives somehow block N-movement to D at LF. However, it is not clear to me how the blocking effect of adjectives should be characterized, and I will therefore leave this issue for further research.

4. "Mirror image" effects

So far, I have argued that the distribution of adjectives in Romance and Germanic supports the idea that the internal structure of DP is the same in the two groups of languages, and that all superficial differences can be attributed to the level at which the rule of N-raising is applied, PF or LF. Now I will take into consideration some apparent counterevidence, and tentatively suggest how it can be dealt with. The facts are well-known: in many cases a sequence of two postnominal adjectives in Romance corresponds to a reversed sequence of two prenominal adjectives in Germanic:

- | | | |
|------|----|--|
| (71) | a. | Una traduzione letterale completa (non è ancora disponibile) |
| | b. | A complete literal translation... |
| | c. | Eine vollständige wörtliche Übersetzung... |
| (72) | a. | Una traduzione completa letterale (non è ancora disponibile) |
| | b. | A literal complete translation... |
| | c. | Eine wörtliche vollständige Übersetzung... |

The speaker's intuition in processing these sequences is that in sentences (71) a complete translation is singled out of a set made up of literal translations, while in sentences (72) a literal translation is singled out of a set made up of complete translations. It is on the basis of similar examples that some authors argue that adjectives are base generated on the right in Romance and on the left in Germanic (see for example Lamarche (1991)). Cinque (1993), defending the superiority of the N-movement approach over a directional parameter to account for adjective placement in the two groups of languages, deals with the mirror-image effects by means of the introduction of the notion of *predicative adjective*. According to his analysis, predicative adjectives are adjectives occurring in the predicate position of a reduced relative clause, and will therefore appear in a right-peripheral position, thus not

intervening between the head N and its complement. This position would not be accessible to adjectives which cannot be used predicatively, like, for example *principale*. Having introduced this notion, Cinque (1993) explains away cases of mirror-image sequences of adjectives in Romance and Germanic claiming that in these cases one or both adjectives are used predicatively in Romance, and therefore they escape the ordering restrictions typically constraining the occurrence of attributive adjectives. He give the following example:

- (73) a. A beautiful red car
 b. Una bellissima macchina rossa
 c. Una macchina rossa bellissima

Examples (73)a. and b. display the same base order, with the only difference that N has crossed *rossa* -"red"- in Italian but not in English. In (73)c. at least *bellissima* -"beautiful"-, if not both *rossa* and *bellissima*, must be analyzed as predicative. This is shown by the fact that the two adjectives cannot both intervene between N and its complement, and at least the rightmost one must appear on the right of the complement, i.e. the position in which predicative adjectives are found, according to Cinque's analysis:

- (74) a. * Una macchina rossa bellissima da corsa
 Una macchina rossa da corsa (,) bellissima
 Una macchina da corsa (,) rossa (,) bellissima
 (examples from Cinque (1993))

As predicative adjectives surface on the right of the complement, this analysis predicts that all sequences of adjectives occurring between N and its complement will display the same relative order in Romance and Germanic, for they must be considered attributive adjectives and not predicative ones in Cinque's terms. However this expectation is not always confirmed by facts. Take examples (71) and (72) above; a complement of the head N can be inserted between the head itself and the two adjectives, but the sequence of the two adjectives in Romance remains the mirror image of the Germanic sequence:

- (75) a. Una traduzione letterale completa del manoscritto (non è ancora disponibile)
 b. A complete literal translation of the manuscript...
 (76) a. Una traduzione completa letterale del manoscritto (non è ancora disponibile)
 b. A literal complete translation of the manuscript...

I will claim that this evidence can be dealt with by assuming that some incorporation process has taken place. This is suggested by the fact that the adjective closest to the head N seems to be itself a head rather than a full AP, for it does not admit any modification³⁴:

- (77) a. Una traduzione letterale molto completa
 b. A very complete literal translation...
 c. Eine sehr vollständige wörtliche Übersetzung...
 (78) a. * Una traduzione molto letterale completa
 b. * A complete very literal translation...

³⁴ Obviously, all the following ungrammatical examples become acceptable if the two adjectives are felt as coordinated.

- c. * Eine vollständige sehr wörtliche Übersetzung...
- (79) a. Una traduzione completa molto letterale
 b. A very literal complete translation...
 c. Eine sehr wörtliche vollständige Übersetzung...
- (80) a. * Una traduzione molto completa letterale
 b. * A literal very complete translation...
 c. * Eine wörtliche sehr vollständige Übersetzung...

I will therefore propose the following structure:

English/German: ... AP ... [N° A N]
 Italian: ... [N°_i N A] ...AP...

In Italian, A incorporates with N on its right, then the newly-formed compound undergoes regular N-movement, crossing over AP (which corresponds to the manner-2 position). In English and German A incorporates with N on its left, and the compound remains in its base position^{35, 36}.

4.1. The manner-2 adjective>argument adjective sequence

The DP structure outlined so far (represented in (53)) predicts that the sequence of manner-2>argument adjectives will always be possible in postnominal position in Romance. At a first sight this seems to be true:

- (81) a. L' atteggiamento ostile/minaccioso americano
 The hostile American attitude...
 (82) a. La risposta diplomatica/militare americana

As Cinque (1993) notes, however, the sequence N>manner adjective>argument adjective is no longer possible when N takes an overt complement:

- (83) * La reazione ostile americana alle critiche

On the basis of this evidence Cinque tentatively concludes that argument adjectives do not occupy the Spec position of the NP projection, but rather compete with manner(-2) adjectives for the same position, namely the Spec position of the first functional projection dominating NP. If Cinque is right, we need to explain why (81) is possible. Actually, there is evidence suggesting that in example (81) above *ostile* is incorporated and that *americano* occupies the manner-2 position; *ostile*, in fact, cannot be modified:

- (84) a. * L' atteggiamento molto ostile americano
 b. L' atteggiamento molto ostile degli americani

Such an account, however, is not totally satisfactory, for it does not explain how

³⁵ Notice that we had to postulate that, at least for incorporation, some directional parameter distinguishing Romance from Germanic must be assumed. Such an assumption, however, is independently needed in order to account for noun compound formation in the two groups of languages (see Giorgi & Longobardi (1991) and Cinque (1993) for some discussion).

³⁶ Sequences of more than two adjectives yielding a mirror-image effect in Romance and Germanic cannot in principle be excluded, if we admit that incorporation can be recursive. My prediction is that in this case the only adjective which will admit some modification will be the most peripheral one.

argument adjectives can receive a θ -role if they are not generated in Spec,NP³⁷.

5. Non-eventive noun phrases

The theory of adjectives outlined so far has been entirely based on the observation of the distribution of nominal modifiers in eventive noun phrases, namely noun phrases indicating an event, headed by a noun which corresponds to a verb and assigns precise θ -roles; this because it was possible to distinguish safely between argument adjectives, manner adjectives, speaker- and subject-oriented adjectives.

It would be desirable to extend the results obtained also to non-eventive noun phrases, i.e. noun phrases headed by nouns denoting real objects. This extension is not immediate, for several reasons: first, it would not make sense to speak of manner, speaker- and subject-oriented adjectives when they are referred to an object; second, it is not always possible to detect which sequences are reanalyzed as compounds and which are not. This has a great influence on the surface order:

- (85) an Italian straw hat
 (86) a silk Persian rug

In the first example the material denotes a particular type of hat, and it probably forms a compound and is therefore preceded by the adjective of nationality. In the second example, on the other hand, the adjective of nationality denotes a particular type of rug, and for this reason is closer to the noun than the material adjective.

A phenomenon which seems to confirm our theory of a complex structure characterizing the noun phrase is that the more an adjective implies a judgement on the part of the speaker, the higher it appears in the structure; remember that according to our hypothesis, speaker-oriented adjectives are the highest descriptive ones (see Cinque (1993) for an attempt to extend the analysis of adjectives in event nominals to object nominals, on the basis of the classification of adjectives presented in Sproat & Shih (1988, 1990)).

6. Conclusions

In this paper I presented some evidence arguing in favour of the superiority of the analysis in terms of N-movement over the Head-subject parameter in order to account for superficial differences in Romance and Germanic noun phrases. I also argued that the restrictions on adjective ordering and cooccurrence supports the idea that APs must be considered SPECS rather than adjuncts. In particular, I proposed that adjectives must be divided into different classes on the basis of their interpretation and that each class must be assigned a fixed position in the structure; I showed that the relative order of adjectives is the same crosslinguistically, the only difference between Romance and Germanic being the position of the head N with respect to the sequence of adjectives. I explained the residual cases of mirror image effects showing that an incorporation process takes place in these cases.

Several issues remain open: the exact nature and position of *mere* adjectives, the restrictions which prevent some adjectives from appearing in conjunction with expletive articles, the exact nature of adjective incorporation with the noun.

³⁷ Recall that argument adjectives cannot be moved from their base position, see fn. 5.

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Notes on the Structure of the Romanian DP and the Assignment of the Genitive Case*

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Introduction

This paper is devoted to the Gen(itive) Case in Romanian, focusing on the following aspects: the assignment of the Gen case, its realization as an inflectional or a prepositional construction. From a Romance, comparative perspective, two points of interest are discussed. First, Romanian exhibits a specific strategy of Gen realization, employing the particular inflectional determiner AL. The properties of this formative strengthen the idea that structural cases are assigned in agreement positions (cf. Kayne (1978), Chomsky (1990), Mahajan (1991) a.o.). Secondly, in contrast with French or Italian, Romanian DPs cannot contain more than one Gen phrase; for instance, one cannot express both the Agent and the Theme of a picture noun using Gen phrases, as in (2a), the Agent has to be expressed as a PP (cf.(2b)).

- (1) F. le portrait de Rembrandt d'Aristote
(2) a. R. * portretul lui Rembrandt al lui Aristotel
c. portretul lui Aristotel de Rembrandt

The explanation that we tentatively suggest for such contrasts has to do with the specific properties of the functional categories of the Romanian noun phrase. The analysis relies on the works of Jackendoff (1977), Abney (1987), Szabolcsi (1991), Valois (1991), Cinque (1990), Picallo (1991), Giusti (1992), Kayne (1993), concerning the structure of the noun phrase, and on Dobrovie-Sorin (1987, 1992), and Grosu (1988) regarding the syntax of Romanian.

The hypothesis that we are exploring is that variation across languages is determined to a large extent by the functional structure of languages. This idea is clearly expressed in the following quote from Chomsky (1990): "If substantive elements (V, N) are drawn from an invariant universal vocabulary, then only functional elements will be parametrized." Therefore linguistic differences involving substantive elements are derivable from differences in the properties of functional categories.

The null hypothesis that we accept (cf. Giusti, 1992) is that languages have the same functional categories, unless otherwise demonstrated. This allows that languages may (but need not) differ as to which morpho-syntactic features may justifiably be analyzed as independent syntactic projections in a particular language. Secondly, parametric variation will be derivable from the lexical properties of the functional categories involved (cf. Ouhalla (1991)). These properties interact in a well defined manner with the general principles of UG.

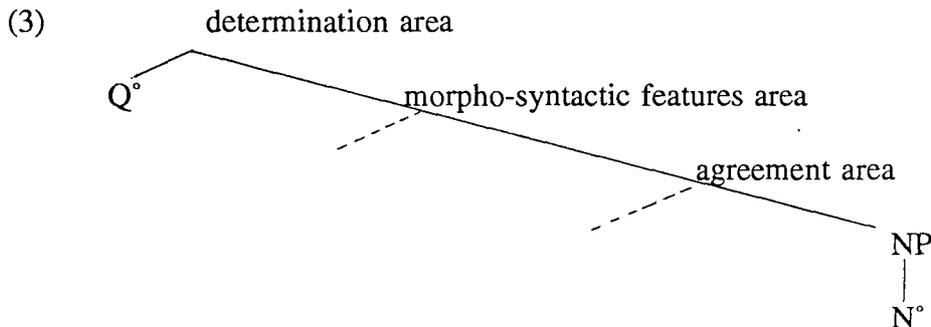
The theory of functional categories assumes that they project regularly, having one specifier and not more than one complement. Unlike lexical categories, they have no θ -grids and no s-selectional properties.

A functional category can be defined by specifying: a) its c-selectional properties (i.e. which syntactic categories it chooses as complements); b) its grammatical features (e.g.

the ϕ -features of Chomsky (1981) in the case of AGR elements, the feature +/-wh in the case of complementizers); c) its m-selectional properties (i.e. its properties of morphological selection, primarily, whether the element is a free or bound morpheme).

1. The functional structure of the Romanian DP

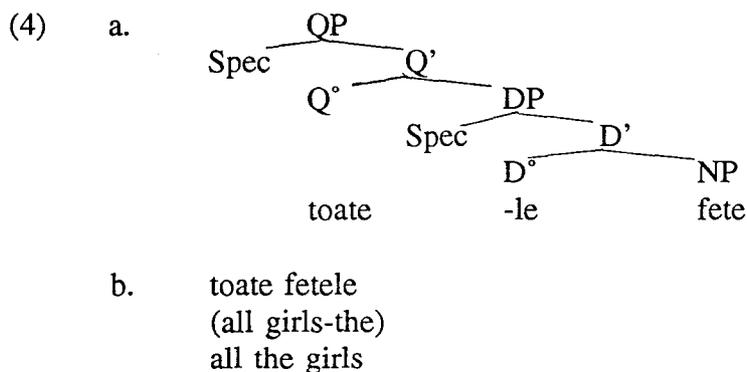
If we accept these general ideas and start from the Romanian data, and from work on Romance (e.g. Valois (1990), Cinque (1990), Picallo (1990), Giusti (1992) a.o.), we may say that the functional structure of the Romanian DP includes the following domains: a determination area, an area of morpho-syntactic features projections, and an agreement area, as in (3):



A general property of Romance, which is also true of Romanian, is that in Romance lexical categories regularly raise to affixal heads by rules like V-Movement, N-Movement, which obey the Head Movement Constraint.

Before we pass to the analysis of the Gen, we mention a few facts about these projections, to the extent that these facts are relevant for the analysis of the Gen.

1.1. We will assume that the determination area includes a Determiner Projection, which is the complement of a higher Quantifier Projection, in a structure like (4):



The Q° position may contain definite quantifiers like *toți* (all), *amândoi* (both), as well as indefinite ones like *fiecare* (every) *orice* (any), cardinal numerals, etc. Definite and indefinite quantifiers differ in terms of their case properties (see Giusti (1992)). All the

elements in Q° have a common semantic role, they act like binders of the internal structural variable of the NP, turning a predicative expression into an argumental one (Higginbotham (1985)). The important syntactic counterpart of the binding function of the quantifiers is their ability to license an NP, in the minimal quantifier+noun sequence: *fiecare elev* (every pupil), *două fete* (two girls), etc.

The second head position, D° in (4a), may be viewed as a Case° position where the [α -Case] feature of the noun phrase is assigned (cf. Giusti (1992)). An element which is itself generated in the $D^\circ/\text{Case}^\circ$ position, such as a case affix or a determiner, is a natural candidate for realizing or otherwise implementing the abstract case feature. Giusti (1992) offers a variety of synchronic and diachronic facts which persuasively indicate that in Romance and Germanic languages the definite article should be viewed as a Case element, a conclusion which is fully endorsed by the behaviour of the Romanian definite article (see Cornilescu (in press)). At the same time, the definite article still functions as a binder (though not in all contexts), licensing a noun (phrase):

- (5) a. *Copac este bătrîn. (tree is old)
 b. Copacul este bătrîn. (tree-the is old)

The D° position has a mixed character containing binders (determiners), but also the morpho-syntactic feature of Case. In Romanian, the existence of a $D^\circ/\text{Case}^\circ$ position is even more plausible, because this language possesses two other formatives, AL and CEL, which may be profitably analysed as expletive syntactic determiners. They are functional elements that head DPs, but have lost their capacity of functioning as nominal binders partly or completely. This is shown by the crucial fact that they no longer occur in the minimal determiner+noun sequence, characteristic of real determiners or quantifiers:

- (6) L+copac *copacul* (tree-the)
 un+copac *un copac* (a tree)
 cel+copac **cel copac*
 al+copac **al copac*

Both CEL and AL are functional constituents actively integrated in the assignment and realization of case in Romanian.

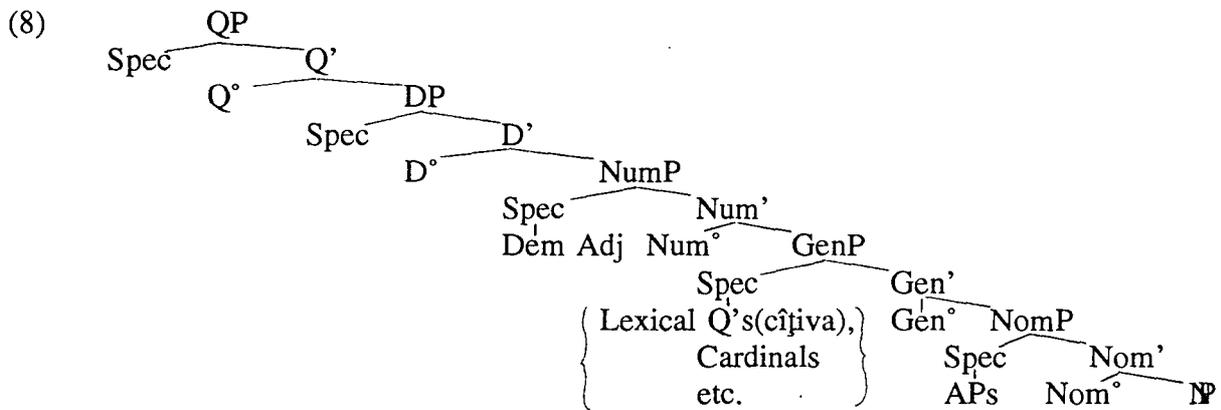
The definite article, which varies for number, gender, and case (-L(m.sg.), -A(f.sg.), -I(m. pl.), -LE(f. pl.)), is unique among the Romanian determiners in having the status of an affix which appears in enclitic position: *om+u+L*. The enclitic position of the noun is the result of Noun Movement, obeying the Head Movement Constraint (cf. Dobrovie-Sorin (1987)). The correctness of the structure in (4), where the DP is the complement of the quantifier has been shown on the basis of Quantifier Floating phenomena (cf. Giusti (1992)):

- (7) a. Au plecat toate fetele, acasă.
 went all girls-the home
 All the girls went home

- b. Fetele_i au plecate toate t_i acasă.
 girls-the went all home

If the DP *fetele* is the complement of the Q° *toate*, then the trace left behind by movement of the subject to the Spec IP position will be properly governed.

1.2. The area of the morpho-syntactic features projections might include a Num(ber) Projection (cf. Valois (1991), a.o.), a Gen(der) Projection (cf. Picallo (1991)), and possibly also a Nom(inalizer) Projection (cf. Valois (1991), Picallo (1990), Ouhalla (1991)). The DP might then look as in (8) below:



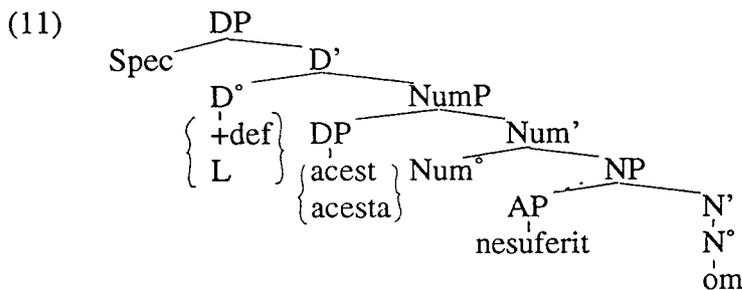
Word order studies will show whether all these positions are needed. Adjectives of various types are generated as Specifiers of these functional projections in a fairly rigid word order, which might be the one shown in (8). Pronominal adjectives, cardinals, ordinals, quantifying adjectives which may have a functional role, becoming part of complex quantifiers or determiners at S-Structure or LF are generated in higher positions than descriptive adjectives, and are rigidly ordered among themselves.

1.2.1. Demonstrative adjectives are the highest in the structure, being generated in the SpecNum position, below the definite article. Evidence for this claim is provided by the existence of "double definite structures", containing the definite article as well as a (postnominal) strong demonstrative form. The Romanian demonstratives corresponding to the English 'this' and 'that' exhibit two forms, each one longer by the tonic vowel *-a* than the other: *acest/acesta* (this), *acel/acela* (that). The long form occurs in postnominal position, strictly adjacent to the noun bearing the definite article. The short form is used only prenominally. Examine the examples in (9) and (10):

- (9) a. acest om (this man) c. acel om. (that man)
 b. omul acesta (this man) d. omul acela (that man)
 man-the this man-the that

- (10) a. acest nesuferit om (this unpleasant man)
 this unpleasant man
 b. acest om nesuferit
 this man unpleasant
 c. omul acesta nesuferit
 man-the this unpleasant
 d. ** omul nesuferit acesta
 man-the unpleasant this
 e. acești doi oameni (these two men)
 these two men
 f. oamenii aceștia doi
 men-the these two
 g. **oamenii doi aceștia
 men-the two these

To derive the correct structures, one might start from a representation like (11), assuming that the D° position is either filled by the affixal article, or by a definiteness feature [+Def], and, moreover, that the feature [+Def] must always be lexically supported:



If the affixal article is in D° , then it must not be stranded; there is obligatory N-Movement to D° , through the empty head positions. The resulting structures are (9b,d), (10c,f). When the head noun passes through Num° , there is Spec-Head Agreement, checking the choice of the longer forms *acesta/acela*, and eliminating the shorter forms *acest/acel*. The added vowel may thus be viewed as a supplementary mark of agreement, left behind by the raising head noun. The presence of supplementary agreement features on constituents that are left behind by the noun is a more general phenomenon of Romanian, as will be seen below. Notice in particular the utter impossibility of having a quantifier (10g), or a descriptive adjective (10d) between the noun bearing the definite article and the demonstrative. This suggests that there is rigid order of the specifier positions, along the lines suggested in (8).

When only the feature [+Def] is in D° , the short form *acest*, which may be assumed to be an X° , raises to D° , to lexicalize this feature. This is possible since demonstratives are inherently definite, and moreover, in Romanian they are also case-inflected. Alternatively, if *acest/acel* are analyzed as XPs, and it is still assumed that a referential phrase should have a lexical element in the DP or QP projection, *acest/acel* could raise to SpecDP. However, if *acest/acel* could raise to Spec DP, we would expect them to co-occur with the

article, an expectation which is not confirmed: ***acest omul*. The first analysis is to be preferred. (For other complexities regarding demonstratives in Romanian, see Cornilescu (in press)).

1.2.2. It is also necessary to say a few things about the behaviour of cardinals, since they interact with the more special definite determiner CEL in Romanian, and since, in its turn, CEL interacts with the assigner of the Gen case, AL.

First, as has often been shown (e.g. Rothstein (1988), Giusti (1992)), cardinals exhibit head behaviour.

a) In this capacity, cardinals occur in the minimal quantifier+noun sequence; this shows that unlike descriptive adjectives, cardinals are binders:

- (12) a Cinci elevi au lipsit ieri.
(Five pupils were absent yesterday.)
b. * Buni elevi au lipsit ieri.
(Good pupils were absent yesterday)

b) Secondly, when they are heads, cardinal quantifiers allow empty noun complements:

- (13) Cinci [e] au lipsit ieri. (Five were absent yesterday)

This property clearly distinguishes between pronominal demonstratives and cardinals. The short, pronominal demonstratives *aces/acel* cannot license empty complements:

- (14) a. Acest copac/ *acest [e] este bătrîn.
(This tree / this is old.)
b. Acel copac/ *acel [e] este bătrîn.
(That tree / that is old)

c) Thirdly, when they are heads, cardinals may be followed, but not preceded by adjectives:

- (15) a. două foarte importante legi.
(two very important laws)
b. * foarte importante două legi.
(very important two laws)

When the cardinal is accompanied by the demonstratives *acest/acel*, its properties change, and it behaves like an ordinary noun modifier, in agreement with the more traditional view that cardinals and ordinals express quantitative properties of substances, while other adjectives express qualities. Thus, when preceded by *acest/acel*, cardinal numerals do not allow empty complements, because the phrase shows the c-selection properties of the demonstrative head, not of the cardinal, and it is known that the complement of the shorter

form *acest* must be a lexical noun:

- (16) a. Aceste două elevé sînt harnice. (These two pupils are hardworking.)
 b. * Aceste două [e] sînt harnice. (These two are hardworking.)

Word order facts are also significant. It is true that the basic, preferred order is determiner+quantifier+adjective+noun, as in (17a). But it is also possible to have adjectives preceding the cardinal, as in (17b), in contrast with (15b) above:

- (17) a. aceste două foarte importante legi
 (these two very important laws)
 b. aceste foarte importante două legi
 (these very important two laws)

Ordinal numerals and a few other lexical quantifiers like *cîþiva* (a few) behave like cardinals, being used as heads or as modifiers.

As to the position of the cardinals in the DP, in (8), when they are adjectival, given their preferred position, right below the demonstratives, it is reasonable to assume that they are generated in the Spec position below demonstratives, as indicated in (8).

When they are heads, it is likely that they occur in the Q° position, because like all the other indefinite quantifiers that share this position, cardinals license partitive constructions:

- (18) a. Unii dintre ei au lipsit.
 (Some of them were absent)
 b. Cîþiva dintre ei au lipsit.
 (A few of them were absent)
 c. Cinci dintre ei au lipsit.
 (Five of them were absent)

Romanian possesses, however, one more construction where the cardinal has head properties. This is the construction introduced by the definite article CEL; the phrase in (19) below is perfectly synonymous with its English equivalent.

- (19) cei doisprezece apostoli (the twelve apostles)
 CEL(m.pl.) twelve apostles

In Cornilescu (in press), we have argued that CEL is an expletive determiner, which cannot license an NP (**cel om*), because it does not have a referential index of its own. Consequently, CEL occurs in contexts where it can inherit a referential index from its complement, or in contexts where it does not need a referential index, because the phrase headed by CEL is a modifier, not an argument.

The first situation is illustrated by prenominal CEL. Assumed to be in D°, prenominal CEL c-selects a complement headed by a cardinal, an ordinal, or an appropriate lexical quantifier, but not by an adjective or a bare noun:

- (20)
- | | |
|-----------------------|----------------------|
| cei doi elevi | (the two pupils) |
| cel de-al doilea elev | (the second pupil) |
| cei câțiva elevi | (the several pupils) |
| *cei buni elevi | (the good pupils) |
| *cei elevi | |

In the well-formed examples in (20), CEL inherits a referential index from its quantifier complement. It is the quantifier that licenses the NP, as shown by the ill-formedness of the phrases where the quantifier is absent. CEL and the quantifier form a definite complex quantifier at LF (cf. Keenan and Stavi (1986)). The second situation, when CEL does not need a referential index, is illustrated by examples like (21), where CEL phrases function as postnominal modifiers.

- (21)
- | | | |
|----|----------------------------|---------------------|
| a. | elevul cel bun | (the good pupil) |
| | (pupil-the CEL good) | |
| b. | palatul cel de argint | (the silver palace) |
| | (palace-the CEL of silver) | |

From the point of view of the structure proposed for the Romanian DP, what counts is that, when the cardinal is preceded by CEL, an element assumed to be in D° , it continues to exhibit head behaviour; there is thus a sharp contrast between the demonstrative+cardinal+NP construction and the CEL+cardinal+NP construction.

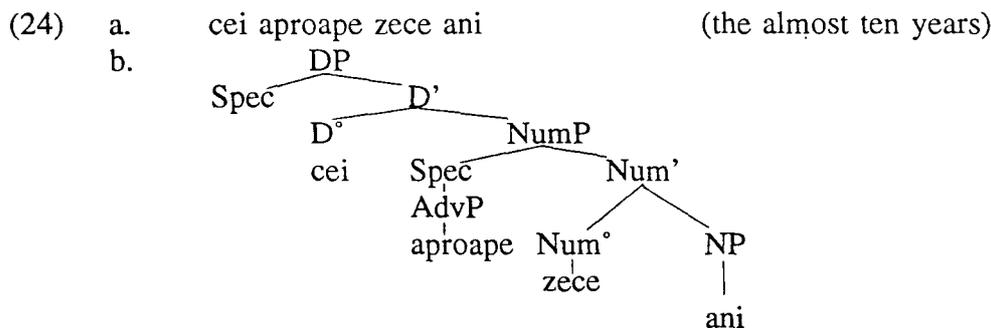
a) First, the cardinal preceded by CEL authorises an empty NP complement, while the cardinal preceded by the demonstrative *acest/acele* does not:

- (22)
- | | |
|----|--|
| a. | Cei doisprezece [e] nu sînt de acord. |
| | (The twelve do not agree) |
| b. | * Acești doisprezece [e] nu sînt de acord. |
| | (These twelve do not agree) |

b) Secondly, it is impossible to insert an adjective between CEL and the cardinal quantifier. This is possible in *acest/acele* phrases, where the cardinal is in some lower specifier position:

- (23)
- | | | |
|----|-----------------------------|------------------------------|
| a. | cele trei importante legi | (the three important laws) |
| b. | *cele importante trei legi | |
| c. | aceste trei importante legi | (these three important laws) |
| d. | aceste importante trei legi | |

Thus, cardinals behave like heads in construction with the definite article CEL. Since no adjective can intervene between CEL and the cardinal, it follows that the cardinal is in the head position of the projection right below D° , which is the Number Projection. The cardinal can have its own specifiers; this shows that CEL cannot be in the specifier position of the cardinal; (see example (24a), represented in (24b):



The most likely assumption to make is that in this construction, the cardinal is base-generated in Num°. This supposition explains why CEL is needed at all, as a variant of the definite article -L. Notice that the definite article -L cannot be used instead of CEL in (24b), since the presence of the cardinal in the Num head position blocks N-Movement. CEL, which is not affixal, replaces -L in contexts where the latter is stranded, CEL being a positional variant of the definite article. (Historically, they descend from the same Latin *ille*.)

At the same time, there is an intuitive motivation for the fact that cardinals are heads in the context of the weak, expletive CEL, but lower specifiers in the context of the semantically "stronger" demonstratives. We might speculate that given their functional, binding properties, cardinals, ordinals and other constituents that may be attracted in the determination / quantification system, tend to occur as high in the base structure as they are allowed to. Demonstratives in the SpecNum position block the generation of indefinite cardinal quantifiers in the Num° position. This is not surprising. Since they have strong agreement features, they presumably mark as [+Def] the Num° position, by an expected process of Spec-Head Agreement. Numerals, which are inherently indefinite will not be able to occur in Num°, as long as demonstratives are in Spec Num. On the other hand, the definite article CEL/L, which is in D°, allows, in fact, *requires*, the cardinal to be in Num°. These assumptions explain the rigid word order of CEL-phrases (cf. *cele trei legi importante!* **cele importante trei legi*), as well as the impossibility of phrases like **legile importante trei* (laws-the important three), or **legile trei importante* (laws-the three important). If in a structure like (24b) above, the D° position is occupied by -L, the cardinal is in head position and N-Movement is blocked, so that such phrases cannot be derived.

As to descriptive adjectives, for the limited purposes of this paper, we shall accept that they are generated in lower specifier positions than the cardinals.

2. The Agreement Area

We have so far spoken of the determination area and of the area of the morpho-syntactic features projections as parts of the functional architecture of the DP.

An interesting property of the Romanian DP is the existence of a third area, which was referred to above, as the agreement area. This is an area of phrases that must follow the head noun, but which overtly show their dependence on the noun. These phrases are headed by constituents that limit their distribution to occurrence inside the DP, or by constituents that are virtually meaningless and simply agree in gender, number and case

with the noun, being pronominal copies of it. Since these elements must follow the head, they are base generated in the lower part of the DP, certainly below demonstratives and cardinals, which remain pronominal. However, in the unmarked (and sometimes only possible) word order, these phrases precede subcategorized complements of the head noun. This suggests that these phrases are also generated in pronominal position, the noun being forced to move past them towards its functional features. Let us examine a few examples.

2.1. In Romanian, locative and temporal prepositional phrases that modify syntactically underived nouns acquire an extra functional preposition, the preposition *de*, which shows dependence on the noun. It is important to notice that the insertion of *de* is obligatory, and that the complex prepositional phrase *de* + PP does not occur in predicative position across the copula. Here are examples:

- (25) a. Cartea este pe raft (the book is on the shelf)
 b. cartea de pe raft (the book on the shelf)
 (book-the of on the shelf)
 c. *Cartea este de pe masa.
 d. *cartea pe raft
- (26) a. Casa este la Paris. (the house is in Paris)
 b. casa de la Paris (the house in Paris)
 (house-the of at Paris)
 c. *Casa este de la Paris.
 d. *casa la Paris.

To the extent that in this context the preposition has any meaning at all, it can be viewed as a mark of adjectivization. We will not discuss this construction any further, but merely notice that these PPs tend to precede complements, and regularly precede Possessor Genitives:

- (27) a. deschiderea de la Paris a expoziției
 (opening-the of at Paris of the exhibition)
 the opening from Paris/ the Paris opening of the exhibition
 b. ??deschiderea expoziției de la Paris
 (quite infelicitous in the intended meaning, (27a), OK if the PP refers to the second noun.i.e.,
 the opening of the Paris exhibition)
- (28) a. casele de pe deal ale stăpînului
 (houses-the of on (the) hill of the master)
 the master's houses on the hill
 b. ?* casele stăpînului de pe deal
 (houses-the of the master of on (the) hill)

2.2. The definite article CEL may introduce adjectival modifiers, or prepositional phrase modifiers:

- (29) a. mărul (cel) roșu (the red apple)
 (apple-the cel red)
 b. palatul (cel) de argint (the silver palace)
 (palace-the of silver)

As the examples show, CEL has virtually no meaning, its presence being optional. CEL agrees in gender, number, and case with the head noun, being a sort of pronominal copy of it. A plausible hypothesis is that the CEL phrase is generated in the specifier of one of the lower functional projections in the agreement area. CEL phrases precede subcategorized complements and also tend to precede Genitives in the unmarked word order. In the examples below, notice especially that in the fixed-order proper name construction (30a), the CEL phrase precedes the Gen phrase.

- (30) a. Ștefan cel Mare al Moldovei (Stephen the Great of Moldova)
 (Stephen the Great AL Moldova(Gen))
 ??Ștefan al Moldovei cel Mare
 b. credința cea străveche în Dumnezeu (the ancient belief in God)
 ?? credința în Dumnezeu cea străveche
 c. speranța cea deșartă într-o lume mai bună (the vain hope for a better world)
 (hope-the CEL vain for a better world)
 d. ?* speranța într-o lume mai bună cea deșartă.

As will be seen below, the case assigner of the Gen case in Romanian, that is, the formative AL is also a functional head which agrees in gender, number and case with the noun that θ -marks the Gen.

This discussion suggests the existence of three agreement projections, in the specifier of which one finds the adjectivized locative and temporal phrases, the modifiers headed by the article CEL, and the Genitive headed by AL. Interestingly, the locative and temporal *de* PPs tend to stay closer to the head noun. The stronger agreement features a constituent has, the further away it can stay from the head. For instance, adjectives introduced by CEL can felicitously be used at a greater distance from the head than adjectives without the article CEL:

- (31) a. rochia de catifea de pe canapea a Mariei cea nouă
 (dress-the of velvet of on the sofa AL Mary's CEL new)
 Mary's new velvet dress on the sofa
 b. ?rochia de catifea de pe canapea a Mariei nouă
 (dress-the of velvet of on the sofa al Mary's new)

Taking into account all these suggestions, the functional structure of the Romanian DP, might look like in (32):

- (35) a. cartea lui Ion (Possessor, alienable possession)
John's book
- b. surîsul Giocondei (Possessor, inalienable possession)
Gioconda's smile
- c. floarea câmpului (Possessor or Locative)
the flower of the field

At the same time, Gen constructions are perfectly uniform in Romanian, factors like animacy of the possessor, alienability of the possession, simple noun possessed or deverbal noun with a complex event structure, appear to make no difference.

3.1. The D-Structure position of the Gen when it is an argument (or at least a complement in the lexical conceptual structure) is not controversial; an object, internal Gen DP will be base-generated under N', as a right hand sister to the head; subjected Gen DPs will be projected in the SpecNP position, so as to allow them to be θ -marked within a projection of the θ -marking head.

Things are less obvious for the Possessor role. Grimshaw (1990) proposes that an important test distinguishing between arguments (complements) and modifiers is that only the latter occur across the copula. The examples below show that indisputable Possessors behave like modifiers, while clear cases of argumental (complement) Gens do not occur in predicative position after the copula:

- (36) a. sosirea invitațiilor (Agent)
(The arrival of the guests)
*sosirea este a invitațiilor
(The arrival is of guests)
- b. trădarea cauzei (Theme)
(The betrayal of the cause)
*Trădarea este a cauzei
(The betrayal is of the cause)
- c. surpriza lui Ion la vederea ei (Experiencer)
(John's surprise at the sight of her)
* surpriza la vederea ei este a lui Ion
(the surprise at her sight is John's)
- d. cartea lui Ion (Possessor)
(John's book)
Cartea este a lui Ion
(The book is John's)

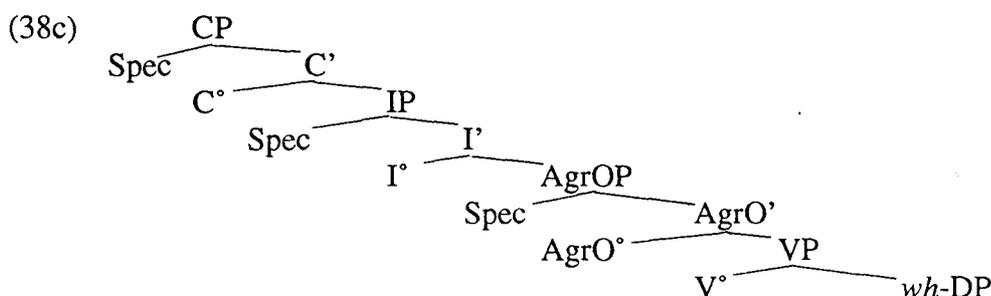
We will tentatively assume that the Possessor phrase is generated in the SpecNP position, a position which is, in principle, accessible to modifiers.

3.2. The next step is to determine whether the Gen is assigned in its base position(s) in the NP, or in some other position.

Kayne (1989) is among the first to suggest that there is a correlation between structural cases and agreement positions, starting from facts regarding past participle agreement in French. French past participles illustrate the connection between agreement and structural case in that only structurally case-marked objects trigger past participle agreement. Compare (37) and (38):

- (37) a. Quelles lettres Gustave a-t-il écritES ?
 b. Les lettres que Gustave a écritES
 (38) a. Combien de lettres a-t-il écrit(*es)
 b. Combien de lettres est-il arrivé(*ES).

In the framework of Belletti (1988), Chomsky (1990), a.o. this contrast may be explained by saying that in sentences (37), on its way to SpecCP, the DO transits through the specifier of a functional Object Agreement position, as in (38c).



Movement of the *wh*-phrase through SpecAgrOP accounts for the agreement relation between the *wh*-phrase and the participle, the underlying assumption being that an agreement relation holds under government by AgrO°. Case is assigned from I° to the object DP in the specifier of AgrOP. In contrast, in both, the impersonal passive constructions and the unaccusative construction in (38), the DO is marked for case in its base position (inherently (Belletti (1988) or structurally (Mahajan (1990))). The object moves to SpecCP by adjunction to VP or in a single step and no agreement is triggered. In his analysis of the French DP, Valois (1991) also insists that there is a one-to-one correspondence between structural cases and agreement positions.

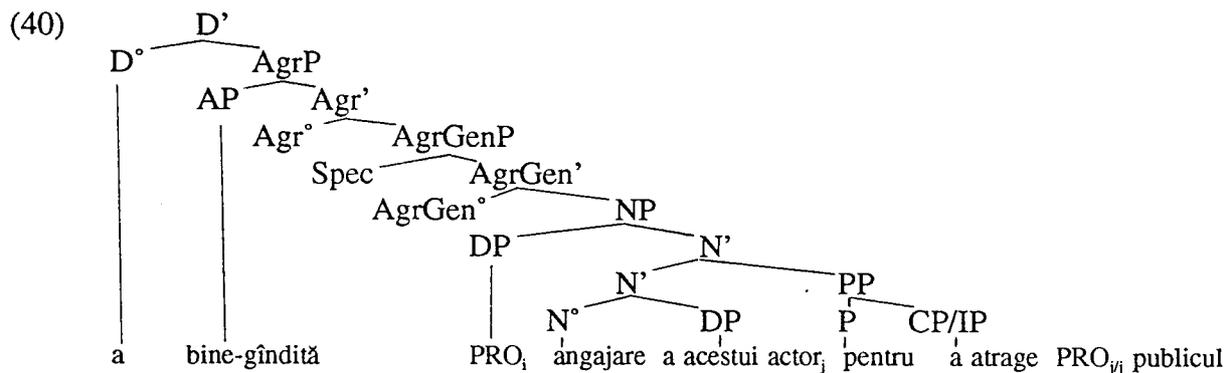
3.3. We propose here that the Gen in DPs is assigned in one of the lower, possibly the lowest, Agreement Projection in the agreement area of the Romanian DP. There are several empirical facts which together suggest that such a conclusion might be correct.

Some evidence comes from control facts. Consider the examples below:

- (39) a. angajarea bine gândită PRO_i a acestui actor_j, pentru a atrage PRO_{ij} publicul
 (hiring-the wise AL this actor (Gen) in order to draw the public)
 the wise hiring of this actor in order to attract the public
 b. angajarea oportună PRO_i a acestui actor_j, pentru a interpreta PRO_j rolul lui Hamlet
 (hiring -the timely of this actor in order to perform role-the of Hamlet)
 the timely hiring of this actor to perform Hamlet's part

- c. angajarea nefericită PRO_i a acestui actor, pentru a-i face PRO_i plăcere soției sale
 (hiring-the unhappy AL of this actor merely in order to please his wife)
 the unhappy hiring of this actor merely in order to please his wife

Example (39a) might have D-Structure (40). The sentence is ambiguous. The controller of the purpose clause subject may be the Agent of the head nominalization, whose presence is activated by the subject-oriented adjective *bine-gîndită* (carefully-considered, wise). On this reading, the sentence means: "They wisely hired this actor for them to attract the public". On the second reading, the controller of the purpose clause is the Genitive Theme, the object of the nominalization. The sentence means that "They wisely hired this actor, for him to draw the public". Sentences (39b,c) are not ambiguous. In (39b) the controller can only be the internal Genitive object of the nominalization. In (39c) the unambiguous controller is the subject of the nominalization. Examine representation (40) now:



The domain governing category of the PRO subject of the infinitive clause is the DP containing the nominalization (since it includes a governor of the clause (the preposition) and an accessible SUBJECT, which is the subject of the nominalization). It is in this domain that the PRO subject of the infinitive clause should have a c-commanding antecedent. Notice now, however, that the object of the nominalization is not in a c-commanding position with respect to the clause. This indicates that following the movement of the head nominalization towards the functional projections of the DP, the object also raises to a higher c-commanding position with respect to the purpose clause. Let us assume that this position is the Specifier position of a Genitive Agreement Projection (AgrGenP), a position where the Gen is assigned. It is also reasonable to believe that at the moment when the object moves to Spec AgrGenP, the SpecNP position does not, or does no longer, contain any lexical DP, so as to avoid minimality effects. If the SpecNP is empty, the object may cyclically raise through this position.

These control facts show that the object leaves its basic position and moves higher, undergoing a kind of Object Shift. It is likely that, as usual, Object Shift is caused by the necessity of moving to a position of case assignment.

We will thus hypothesize that Gen is assigned outside the NP, in the specifier of a lower functional projection from the agreement area of the DP, a projection that we might call the AgrGen Projection. This hypothesis can account for control by the object in (39a,b), since

the Spec position of the AgrGenP is a c-commanding position in the domain-governing category of the PRO subject of the purpose infinitive clause. On the other hand, control by the subject of the nominalization is not problematic, since the subject's basic position, SpecNP is c-commanding, with respect to the clause.

However, examples (39) do not provide decisive evidence that Gen is assigned out of the NP projection. The control facts in (39) involve an event nominalization (*angajarea* 'the hiring') and the status of the subject in event nominalizations is not clear (Grimshaw (1990), Bottari (1989)). Perhaps when there is control by the object, the subject is not projected at all, and it is merely inferred as an argument in the lexical conceptual structure of the nominalization; or perhaps the subject θ -role is represented as an adjunct. If this were the case, the object could move out of its complement position into the SpecNP position. This is a position of agreement, and we might believe that this is the position where Gen is assigned.

There is, nevertheless, conclusive evidence that such a hypothesis is not correct, and that the complement must move out of the NP, when it gets Gen, moreover, that the movement of the object cannot cross a lexically expressed subject in SpecNP. This evidence comes from the only kind of Romanian DPs where it is possible to have two lexically expressed Gens, one of which has to be pronominal. The respective DPs must be headed by topicalized adjectives, which bear the definite article. It is known that in Romanian, a topicalized adjective in SpecDP can incorporate the definite article, as in examples (41). (For the details of this process, see Giusti (1992)). At the same time, a pronominal Genitive may cliticize on the topicalized adjective, showing up to the left of the noun. As shown by the ill-formedness of (42d), the structure adjectival phrase+Gen+noun is available only to a Genitive pronoun, not to a nominal Genitive. This is a very important property of the construction, whose significance we cannot analyze now:

- (41) a. palatul foarte vechi (the very old palace)
(palace-the very old)
b. foarte vechiul palat (the very old palace)
(very old-the palace)
- (42) a. frumoasa soție a tânărului prinț
(beautiful-the wife AL young-the(Gen) prince)
the young prince's beautiful wife
b. frumoasa lui soție
(beautiful-the his (syntactic clitic) wife)
his beautiful wife
c. frumoasa-i soție
(beautiful-the his (phonological clitic) wife)
his beautiful wife
d. * frumoasa tânărului rege soție
(beautiful-the of the young king wife)
the young king's beautiful wife

It is important to notice that the pronominal post-adjectival Genitive is in no way thematically restricted; it may represent an Agent, a Theme, a Possessor, etc.:

- (43) a. frumoasele palate ale oraşului (Possessor)
 (beautiful-the palaces AL the city(Gen))
 the beautiful palaces of the city
 acest oraş, cu frumoasele lui palate (lui = Possessor)
 (this city, with beautiful-the its palaces)
 this city, with its beautiful palaces
- b. nenumăratele traduceri ale acestui roman (Theme)
 (numberless-the translations AL this novel(Gen))
 the numerous translations of this novel
 acest roman, cu nenumăratele lui traduceri (lui = Theme)
 (this novel, with numberless-the its translations)
 this novel, with its numerous translations
- c. celebrele traduceri ale acestui expert (Agent)
 (famous-the translations AL this expert(Gen))
 the famous translations of this expert
 acest expert, şi cunoscutele lui traduceri (lui = Agent)
 (this expert and well-known-the his translations)
 this expert, and his well-known translations

Thus, as long as there is only one Gen, the pronoun may receive any thematic interpretation. The situation is different if two Gens are lexically expressed. As already mentioned, this construction is the only one allowing two lexicalized Gens in Romanian, one pronominal, and one nominal. The pronominal Gen obligatorily cliticizes on the adjective. What matters from the point of view of our discussion is that in this double Genitive construction the higher pronominal position is reserved for the external argument (the Agent). The internal argument (the Theme) has to remain in a lower position, as the inspection of examples (44) shows:

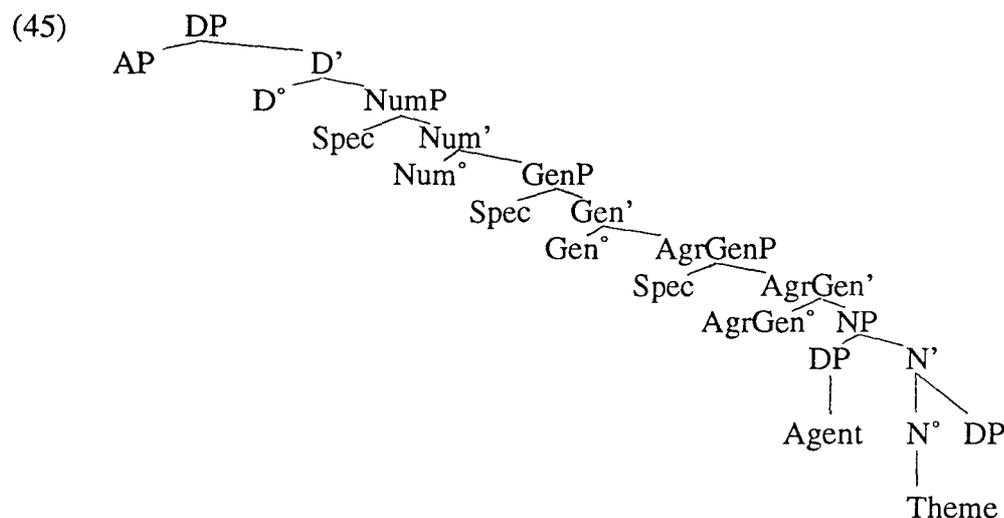
- (44) a. Dan Duşescu şi cunoscuta lui traducere a acestui roman (lui=Agent)
 (Dan Duşescu and known-the his translation AL thisnovel(Gen))
 Dan Duşescu and his well-known translation of this novel
- b. * acest roman şi cunoscuta lui traducere a lui Dan Duşescu (lui=Theme)
 (This novel and known -the its translation AL DanDuşescu(Gen))
 this novel and its well-known translation of Dan Duşescu

In (44a), the higher pronominal Gen can only be interpreted as an Agent, on the model of (43c). The lower nominal Gen is interpreted as a Theme. In (44b), the Agent is lexicalized as a nominal DP, in the lower Gen position. Therefore, the higher, pronominal Gen has to be interpreted as the Theme of the construction, i.e., as if it represented the lower argument.

But such an interpretation is simply not possible in the double Gen construction, although, as shown by the well-formedness of (43b), the internal argument can, in principle, reach this higher position. Assuming that the D-Structure representation of (44a) is (45), this example clearly indicates two things. First, one cannot assume that the internal argument DP is assigned case in SpecNP, since this position is filled by the subject or by its trace. The object clearly has to move to some other position, which we assumed to be SpecAgrGenP, in order to get case.

Secondly, the ungrammaticality of (44b) indicates that the object cannot move past a lexical subject, presumably because of minimality effects. This is why, if both the external and the internal arguments are lexically realized, it is the external argument, expressed as a pronoun, which raises to a position preceding the head noun and cliticizes on the topicalized adjective. The subject and the head noun raise first, making it possible for the object to move to SpecAgrGenP.

We may conclude that the Gen case is assigned outside the NP in Romanian; the DP which is to be assigned Gen case moves to the Spec position of a lower agreement projection and has its case checked in that position:



One more empirical fact supports the idea that Romanian Gen is a structural case assigned in an agreement position. Mahajan (1990) has shown that in Hindi the object of a verb is assigned case either by the V, in its base-generated position inside the VP, or the object moves to the Spec AgrOP position and is assigned case there. Moreover, he stresses that only specific, referential phrases receive structural case in SpecAgrOP. He therefore establishes a connection between the referential and the case properties of noun phrases: specific DPs get structural case in agreement positions which they reach by Object Shift.

The same idea can be defended considering Romanian genitives. Let us start by considering the direct object in the following sentences:

- (46) a. Ei au acordat burse elevilor silitori.
They granted scholarships to the hardworking pupils.

- b. Ei au acordat unsprezece burse elevilor silitori
They granted eleven scholarships to the hardworking pupils.
- c. Ei au acordat toate bursele elevilor silitori.
They granted all the scholarships to the hardworking pupils.

The direct object in (46a) is a non-referential bare plural, a NumP in terms of the structure we postulated for the DP. The direct object in (46b,c) is a referential constituent, and it is categorially a QP, in both cases. However, the two QPs differ in their morphological properties. The QP, *unsprezece burse* (eleven scholarships) in (46b) is headed by the cardinal *unsprezece*, an element which cannot be inflected for case. Let us say that it is marked as [- I-Case], that is, [- Inflectional Case]. The QP in (46c) is headed by the quantifier *toți* (all) which can be inflected for case, i.e., which is [+ I-Case]. This morphological difference between these two types of QPs is systematically shown in the way the Gen case is realized in Romanian:

a) If the D° or Q° of the DP/QP can be inflected for case, Gen is assigned by the special Genitival article AL, and it is registered on the flexible D° or Q°:

- (47) a. *Nom.* această (f.sg.) fată (f.sg.) (this girl)
Gen. al (m.sg.) acestei (f.sg.Gen.) fete (f.sg.Gen.)
ai (m.pl.) acestei (f.sg.Gen.) fete (f.sg.Gen.)
a (f.sg.) acestei (f.sg.Gen.) fete (f.sg.Gen.)
ale (f.pl.) acestei (f.sg.Gen.) fete (f.sg.Gen.)
- b. *Nom.* cei trei copii (the three children)
Gen. al/ai/a/ale celor trei copii
- c. *Nom.* toți acești studenți (all these students)
Gen. al/ai/a/ ale tuturor (Gen.) acestor (Gen.) studenți

Notice that the genitival article AL agrees with the possessed object, that is, with the noun which θ -marks the Gen as Possessor. Notice also that if there are several inflectional heads, as in (47c), all of them are marked for case. It appears that the genitival article c-selects a QP with a head that can be case-marked, i.e., AL c-selects /...QP[+I-Case].

b) If the head of the quantifier phrase cannot be inflected for case, the preposition *a* is inserted, as a last resort, case-marking strategy:

- (48) a. *Nom.* trei elevi (three pupils)
Gen. a trei elevi
- b. *Nom.* câțiva elevi (a few pupils)
Gen. a câțiva elevi

The elements which are not inflected for case are all indefinite quantifiers, preferably non-personal ones; e.g. *nimic* (nothing), *ce* (what), *câțiva* (a few), cardinals.

Thus, one way or another, noun phrases which are categorially QPs (or DPs) may receive Genitive case.

Let us return to the examples in (46), and to the idea that there is a relation between

the referential and the case properties of DPs. The fact is that in Romanian, bare plurals, which are categorially Number Phrases, are simply not used in the Genitive. In the nominalization that corresponds to (46a), the bare plural is in the Accusative (or rather Partitive) case, assigned by the dummy preposition *de*.

- (49) a. acordarea de burse elevilor silitori
the granting of scholarships to hardworking pupils
b. acordarea a unsprezece burse elevilor silitori
the granting of eleven scholarships to hardworking pupils.
c. acordare grabnică a tuturor burselor elevilor silitori
the urgent granting of all the scholarships to the hardworking pupils

Noun phrases capable to be marked for Gen in Romanian must be referential, i.e. QPs (or DPs). Non-referential NumPs do not reach the agreement position where Gen is assigned. Therefore, if it is generally true that referential/specific DPs tend to move out of their base position and get case in an agreement position, then, since only NPs that are referential may be in the Gen case in Romanian, it is to be expected that the position where Gen is assigned is an agreement position, outside of NP.

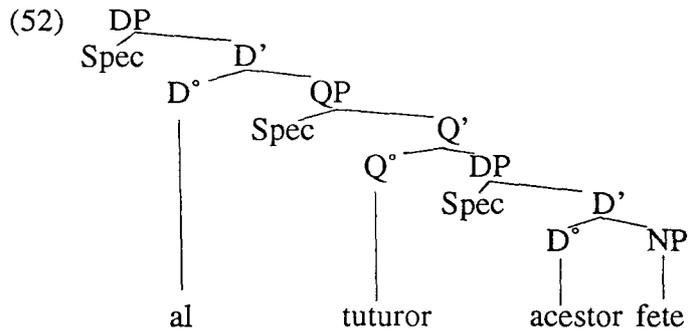
Moreover, it looks as if there is only one Genitive position in the DP, since although, there are two different means of implementing the Gen, just like in English, the DP cannot contain two Genitives, one marked prepositionally, and the other one marked inflectionally, as shown by the ungrammaticality of (51):

- (50) Ion a interpretat două roluri în acest spectacol
John performed two parts in this show
(51) * Interpretarea lui Ion a două roluri în acest spectacol
(performance-the of John of two parts in this show)
John's performance of two parts in this show.

The severe ungrammaticality of (51) shows that the two phrases that must get case compete for the same case assignment position.

The most direct piece of evidence that Gen is assigned in a specifier position is represented by the syntax of the Gen assigner AL. The discussion so far has already revealed some of the properties of this element. We have mentioned that AL agrees in gender number and case with the noun that θ -marks the Genitive. Since it agrees with the noun that θ -marks the Gen, and since it has virtually no meaning, AL may be thought of as a pronominal copy of the head noun, whose role is to assign case.

In Cornilescu (in press) we have argued that AL, like CEL, is an expletive definite determiner, that has lost its binding properties: **al copil*. We have assumed that AL is a functional D° head which assigns Gen to its QP/DP complement, on condition that the latter has an inflectional Q°/D° head, in a structure like (52); (in (52) we have represented the Gen of *toate aceste fete* (all these girls), namely, *al tuturor acestor fete*; see (47)):



What is important at this point, especially because AL is an expletive element, is to specify the way in which this element, and, therefore a DP like (52) is licensed. As already mentioned several times, AL is a pronoun-like element which duplicates the gender, number and case features of the noun that θ -marks the Gen. Here are examples:

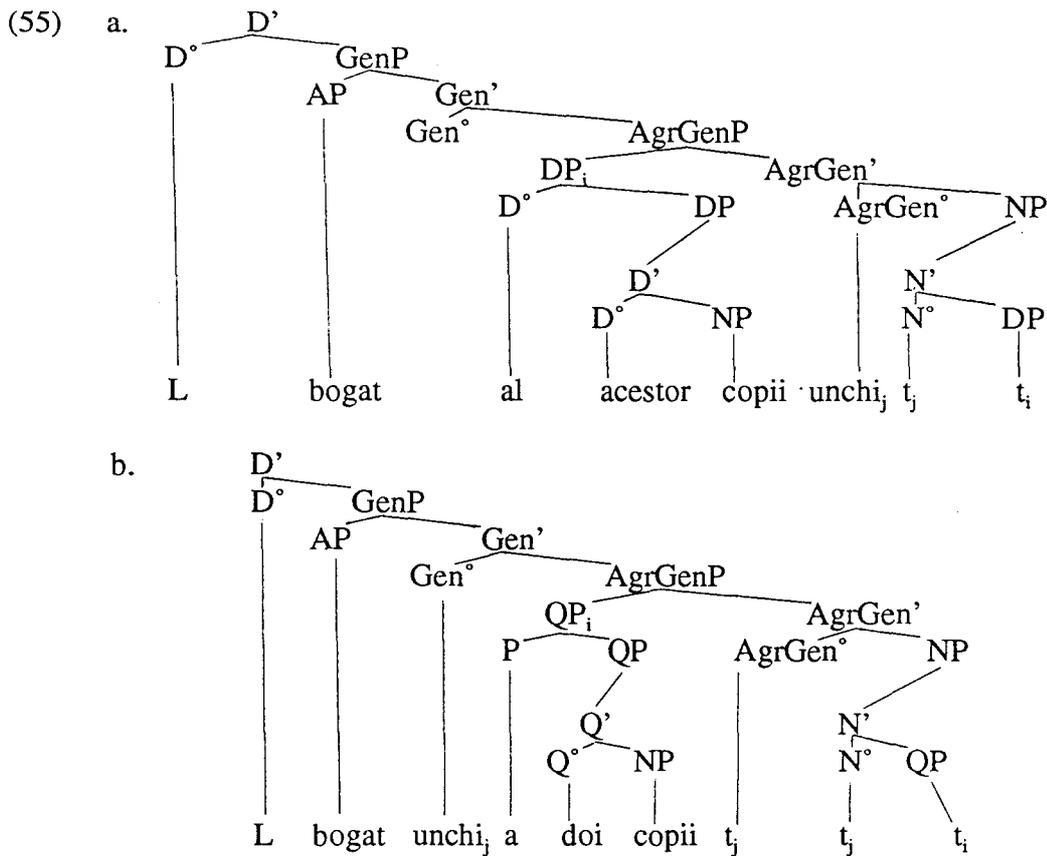
- (53) a. *acest PĂRINTE* (m.sg.) *AL* (m.sg.) *acestEI* (f.sg.Gen) *elev*
 (this parent AL of this child)
 this parent of this child
- b. *o VICTORIE* (f.sg.) *A* (f.sg) *acestOR* (m.pl.Gen) *profesori*
 (a victory AL of these professors)
 a victory of these professors

Given the clear agreement facts in (53), it is natural to assume that this Gen-assigning article is licensed by a process of Spec-Head agreement. In other words, the Gen complement has to reach a specifier position also because it is in this position that the case-assigner AL is licensed, i.e., its number, gender, case features are checked under agreement with the noun.

Since the Genitival article AL and the preposition *a* are in complementary distribution, competing for the same position, the proposed case-realization mechanism has to account for this complementarity. Consider a minimal pair like (54); in (54a), the Gen complement is headed by the inflectional determiner *acest* (*acestor* =m.pl.Gen.); the Gen case is assigned by AL. In (54b), the Gen complement is headed by the invariable cardinal *doi*; the Gen case is marked by the dummy preposition *a*:

- (54) a. *unchiul bogat al acestor copii*
 (the rich uncle of these children)
- b. *unchiul bogat a doi copii*
 (the rich uncle of two children)

Let us consider the (intermediate) representations of (54a,b), in (55a,b), leaving irrelevant details aside:



Consider (55a); since the head noun *unchi*(uncle) is a relational noun, the Gen is base-generated in complement position. The head noun undergoes obligatory cyclic movement to the functional projections. Movement of the head noun allows movement of the complement DP_i to a position where it can get case, a position which we assumed to be the specifier position of the Genitive Agreement Projection. When the head noun reaches the head position of the AgrGenP Projection, there is Spec-Head Agreement, licensing AL, i.e., checking its gender, number, case features. Notice in (55a) that, while AL is licensed by agreement with noun, AL is itself a head which assigns case under government. It appears to be a general property of Romanian that structural case is assigned under government, not by Spec-Head Agreement, even though it is assigned in positions of agreement. Dobrovie-Sorin (1992) shows that even the Nominative case is assigned in SpecVP position under government by Inflection, since SpecIP (where Nominative is assigned under agreement with Inflection) is not a case position in Romanian.

Consider (55b) now, where the QP, *doi copii*(two children) cannot be c-selected by AL, since it is headed by the cardinal *doi*(two), which cannot be inflected for case. The referential QP reaches the specifier position of AgrGenP, like before, but there is no Spec-Head agreement. If AL fails to be checked when the head noun is in $GenAgr^\circ$, and the complement phrase is still caseless, when the noun reaches the next head position, the Gen° position in (55b), the preposition *a* is inserted under government by the noun, in a context typical for dummy preposition insertion. The insertion of the preposition *a* is an

elsewhere, last resort strategy of marking the Genitive.

4. Conclusions.

In this paper, we tried to establish the position where the Gen case is assigned, in relation to the general configuration of the DP. Since we accepted the premise that cross-linguistic variation primarily springs from the properties of functional constituents, we have started by proposing a very general hypothesis on the functional structure of Romanian DPs, which we sketched on the basis of existing work on Romance.

Two characteristic aspects of the Romanian DP have come out in this brief presentation.

The first is the existence of a well-represented class of D° constituents, i.e., of elements which must play a part in the case system (since the DP is a case projection), and may, but need not have the role of semantic binders. In Romanian, the class of D° formatives includes, the definite article -L, the articles CEL and AL. An interesting result is that the presence of a weaker versus stronger form in D° modifies the syntactic behaviour, and therefore the position, of constituents in lower projections. A very clear example of this phenomenon was offered by the behaviour of cardinals in the presence of a demonstrative in the DP projection, in striking contrast with their behaviour when the D° position is occupied by CEL. In the first case, cardinals are specifiers, in the second, they are heads.

Secondly, we found that a very characteristic aspect of the functional structure of the Romanian DP is the existence of an agreement area in the lower part of the noun phrase. The XPs that are base-generated in the specifiers of these agreement projections are headed by functional heads typical of Romanian, such as the functional preposition *de*, which indicates that a locative or temporal PP is subordinated to a noun (e.g. *cartea de pe masă* (book-the of on the table), the adjectival article CEL, or the Genitival article AL. All these phrases are licensed by Spec-Head agreement with the head noun, which always raises at least as high as the area of the morpho-syntactic features projections, crossing the agreement area, and leaving these phrases behind. It also appears that constituents which must follow the noun have more agreement marks than those that may either precede or follow the head noun; (e.g. adjectives preceded by the article CEL must follow the noun, adjectives without CEL may precede or follow the noun (e.g. *copil drăguț / drăguț copil* (nice child) vs. *copilul cel drăguț / *cel drăguț copil*).

The Gen finds its natural place in this lower agreement area, given its position, and its assigner AL, which is one of these agreeing functional heads.

In the third section, we have arrived at the following conclusions regarding the assignment and realization of the Gen in Romanian:

a) The Romanian Gen inside DPs is a structural case assigned outside the NP projection, in the specifier position of a lower functional projection, here referred to as AgrGenP.

b) Two strategies of implementing case are used, function of the morpho-syntactic properties of the QP which is to be marked for Gen. If the QP has an inflectional head, case is assigned by the genitival article AL, licensed by Spec-Head Agreement with the head noun. The Gen assigned by AL is registered on the inflectional head of the QP. If the

QP has a non-inflectional head, the Gen will be realized as the dummy preposition *a*.

c) Whether the Gen is inflectional with AL or prepositional with *a*, it is assigned under government, in a position of agreement. For inflectional Gens, case is assigned under government by AL (in its turn licensed by the head noun). For prepositional Gens, the case-marking preposition *a* is inserted under government by the head noun, which reaches the head position immediately higher than the AgrGenP. The insertion is a last resort, elsewhere device.

d) There is only one Gen case position, since the head noun, or AL, which is a pronominal copy of it, cannot assign the same case twice under government, and Romanian does not assign structural case under agreement.

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