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# The Logical Form of Negative Concord

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## 1. Introduction

### 1.1. Negative Concord

The descriptive term 'Negative Concord' (NC) refers to the phenomenon whereby an interpretively single instance of negation is expressed more than once in a sentence. As shown by the Italian examples in (1), in languages with generalized NC a 'concordant' reading can obtain between a negative marker and a negative quantifier, or between two (or more) quantifiers:

- (1) a. Gianni non ha visto nessuno.  
Gianni not has seen no one  
'Gianni didn't see anyone'.  
b. Nessuno ha visto niente.  
No one has seen nothing  
'No one saw anything'.

The availability of NC is generally taken to oppose languages such as Italian to languages such as Standard English, where corresponding sentences never admit a 'concordant' reading:

- (2) a. John didn't see no one.  
b. No one saw nothing.

Sentences like (2) are only acceptable if both expressions of negation are separately interpreted (double negation).

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*1.2. Against a  $\pm$ NC parameter*

If, as would seem to be the case, languages differ typologically depending on the presence of concordant readings, the descriptive phenomenon labelled NC calls for an explanation. Such an explanation has been attempted in recent investigations on the syntax of negative sentences (Haegeman and Zanuttini 1991, Haegeman 1995, Déprez 1995), which have capitalized on two formal notions: Quantifier Absorption and Resumptive Quantification, introduced respectively in Higginbotham and May 1981 and May 1989. Both concepts define the semantic process by which a sequence of quantifiers  $Q_1 \dots Q_n$  are interpreted as a single operator, simultaneously binding all the variables  $x_1 \dots x_n$ ; the difference, as detailed in May 1989, is that only Resumptive Quantification forms a simple quantifier, interpreted by a single quantificational function. Absorption, by contrast, creates a complex quantifier, interpreted by the sequence of functions associated with each quantifier. In the case at hand, a sequence of negative quantifiers undergoing Absorption will still be interpreted by a sequence of negative operators — just the opposite of what is understood by NC (May 1989: 398-410). The correct semantic result is instead accomplished by Resumptive Quantification, whereby a sequence of negative quantifiers is interpreted by a single negative operator.

However, closer scrutiny reveals that the typological divide between languages with and without NC cannot be reduced to the generalized availability of Resumptive Quantification. For at least two reasons, the explanation for contrasts like (1)-(2) above cannot be provided just by stating the semantic process underlying NC. The first reason is fairly obvious: the concept of Resumptive Quantification was defined in order to account for the 'unloving world' interpretation of English sentences like (3):

- (3) a. Nobody loves nobody. (May 1985, 1989)  
 b. If no one listens to no one, bombs will fall instead of words.  
 (van Benthem 1983)

Crucially, these are *English* sentences: at least for those speakers that accept them in the NC interpretation ('there is no lover-loved pair', and 'if there is no listener-listened to pair, ...'). Resumptive Quantification must be at work, or some equivalent mechanism. But then this mechanism cannot be responsible for the typological divide between languages with and without NC, since (Standard) English is a member of the latter class. All that can be said is that NC is exceptionally admitted even in English,

and that the real issue is what makes NC routinely available in other languages: but this merely restates the question<sup>1</sup>. In addition, it is highly unlikely that a typological difference such as the  $\pm$ NC divide could follow from a parametrized semantic property such as Resumptive Quantification: since the learner's evidence amounts to uninterpreted strings, it would be far from clear how such 'semantic parameters' could be set (Higginbotham 1985).

The second reason is that, appearances notwithstanding, NC is not a unitary phenomenon even in languages that routinely exhibit it. French and Italian, to mention just two thoroughly investigated languages, display a number of restrictions on NC. It is well known that the French marker *pas*, unlike its correlate *ne*, cannot enter NC with negative quantifiers (although this is possible in the Quebec dialect):

- (4) Jean ne parle \*(pas).  
'Jean doesn't speak'.
- (5) a. Jean (n') a pas parlé (\*de rien) (\*à personne).<sup>2</sup>  
'Jean didn't talk at all (with anyone) (about anything)'.  
b. \*Personne n'a pas parlé. (acceptable in Québécois: Déprez 1995)  
'No one spoke'.

In Italian, by contrast, the single marker *non* must accompany negative quantifiers (except when they are in preverbal position), but the optional *affatto* 'at all' blocks this relation:

- (6) a. Gianni non ha parlato (a nessuno) (di niente).  
'Gianni didn't talk at all (with anyone) (about anything)'.  
b. Gianni non ha parlato affatto (\*a nessuno) (\*di niente).

The puzzling fact here is that *affatto*, unlike *pas*, does not occupy just one fixed

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1. Note also that, under such a simplistic approach, languages should consistently allow or disallow Resumptive Quantification for all types of quantifiers, not just for negatives; NC would then be just a facet of a hypothetical 'quantifier concord', which is never attested.

2. In this and in the following examples, diacritics refer to the interpretation described in the gloss.

position,<sup>3</sup> and cannot autonomously negate a sentence:

- (7) a. Jean (n') a (pas) parlé (\*pas).  
 b. Gianni non ha (affatto) parlato (affatto).  
 c. \*Gianni ha parlato affatto.

It thus seems unlikely that *pas* should block NC for structural reasons, since the same effect is accomplished by *affatto*, which has a different syntax. A number of other restrictions on NC are discussed in Acquaviva 1995. The few data here considered suffice to show that NC is subject to considerable crosslinguistic variation, and (more interestingly), its application is not uniform even within any given language: far from being a generalized interpretive option, NC is conditioned by specific lexical choices.

The conclusion to draw is that the familiar typological divide exemplified by (1)-(2) cannot be handled in terms of a  $\pm$ NC parameter. The attested cross- and intralinguistic variation with respect to negation must be derived from deeper properties of the language faculty. Having established this, the following paragraphs articulate the alternative proposal that the observed variation ultimately stems from crosslinguistic differences in the morphological properties of the functional projections hosting negative elements, and from interpretive characterization of single lexical items. The first of these two sources of variation is examined in section 2, which introduces the formal notion of operator-chain and analyzes in these terms NC involving 'light' (preverbal, clitic) markers. Section 3, addressing negative quantifiers and 'heavy' postverbal negative markers, traces the availability of NC for these elements to the interaction of their semantics and their syntactic placement.

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3. The examples in (7) suffice to show the clear distributional difference between *affatto* and *pas*. Having said that, it should be added that it does not follow that the position of *affatto* is really fixed; in fact, a closer investigation of the placement of this adverb with respect to other verbal or adverbial material in the Italian inflectional complex may suggest otherwise. Thanks are due to G. Cinque for pointing this out.

## 2. A reinterpretation of the *NegP* hypothesis

### 2.1. *NegP* as a set of projections

Since at least Pollock 1989, the NC relation obtaining between the two elements *ne* and *pas* of the French complex negative marker has been accounted for by viewing *ne* as the head of a projection whose specifier is filled by *pas*. The negative features are thus associated with only one functional projection, which has a split expression. In an interesting extension of this classic analysis, Zanuttini (1991, 1995) has proposed that the position of this *NegP* projection can vary, and, most importantly, that the distribution of negative markers in several Romance dialects is best accounted for by positing that more than one *NegP* projection may be present in a negative clause:

- (8) C ... *NegP*<sub>1</sub> AgrS (subj clitics) F<sub>1</sub> (non-subj clitics) (*NegP*<sub>2</sub>) F<sub>2</sub> (verb)  
 ...(*NegP*<sub>n</sub>)

The original insight about NC can be maintained, however, if it is made clear that the various instances of *NegP* are interpreted jointly by a single negative operator (presumably located on the highest *Neg*<sup>o</sup> head). Just as *ne* and *pas* jointly lexicalize a single projection in Pollock's analysis, elements filling the head or specifier position of any member of the *NegP* set (*NegP*<sub>1</sub> ... *NegP*<sub>n</sub>) spell out a single set of projections. In both cases, the semantic operator is just one: hence the single negation reading.

This (very sketchy) outline of how NC may be handled within the *NegP* hypothesis, however, only concerns markers like *pas* or *non*, or such elements that have a fixed position with respect to inflectional projections. Negative quantifiers in adverbial and argument positions (like *in no way* or *no book*) cannot be accounted for in the same way, since they do not lexicalize any member of the set of *NegP* projections (assuming sentential negation can indeed be represented by such a complex object).

This last statement, however, needs some qualification. It is by now a well-established result that nominal projections have a fairly articulate structure, reminiscent in important respects of clausal structure (see, in the extensive literature, Szabolcsi 1984, Abney 1987, Ritter 1991, Duffield 1996). In particular, quantified nominals are often argued to involve an additional projection embedding the DP (see Shlonsky 1991, Bianchi 1992):

- (9) [DP John / a man / the man / that man ]  
 [QP every [DP man ]]

A new perspective opens up if we choose to regard the QP projection of negative quantifiers as a realization of the same kind of projection usually called NegP:

- (10) [NegP/QP no [DP man ]]

In this sense, NegP is the purely conventional label for a functional projection defined by operator- and negative features, which when embedding DPs may be enriched with additional features (see Acquaviva 1995 for discussion). Schematically, negative sentences involving a negative quantifier will have the following structure:

- (11) [IP John [NegP [VP said [NegP nothing ]]]]

Sentential negation is expressed by a complex formal object, made up of potentially several projections. If a negative quantifier (like *nothing* in (11)) expresses sentential negation on its own, it is part of this NegP set. The higher NegP projection in the inflectional complex marks the scope position where the negative operator is interpreted (in (11) this is below the subject, but whether a higher NegP should be posited is an independent issue).

This extension of the independently justifiable hypothesis that NegP is in fact a potentially multi-membered set makes it possible to account for a number of distributional restrictions on negative markers and quantifiers, which so far have been noted but not related to the general issue of how negation is syntactically encoded. We will now turn to a review of these data.

## 2.2. *Empirical evidence*

2.2.1. Consider the following generalization, due to Barwise and Cooper 1981 (their Universal 5):

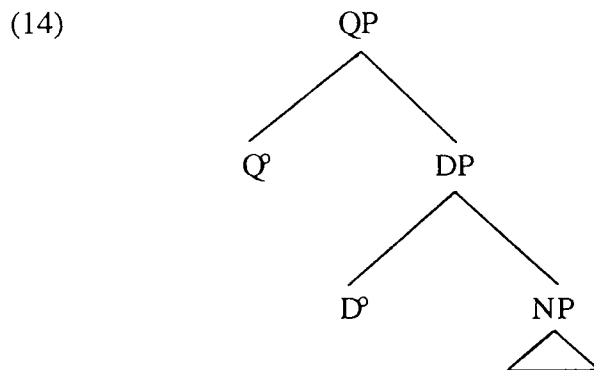
- (12) There is a simple NP which expresses the monotone decreasing quantifier **NOT Q** if and only if there is a simple NP with a weak non-cardinal determiner which expresses the monotone increasing quantifier **Q**.  
 (Barwise and Cooper 1981:186)



If true, this statement strongly constrains the range of semantic objects which can be lexicalized by a single determiner ('simple NP' is here understood as opposed to a NP prefixed by a negative marker, like *not everyone*, or by a coordination of determiners). The existence of a determiner forming simple NPs interpreted as **NOT Q**, it is claimed, depends on the existence of a weak non-cardinal determiner forming a simple NP interpreted as **Q** (see Barwise and Cooper 1981 for the definition of weak and strong quantifiers; the distinction goes back to Milsark 1974). In practice, no language should have single determiners expressing **NOT EVERY** or **NOT TWO**, for example, since *every* is strong and *two* is cardinal. The same applies to hypothetical 'negative versions' of *both* and *most*:

- (13) a. a — no  
       many — few  
       a few — no few  
       a/either — neither (defined for a domain with 2 individuals)
- b. every — \*nevery  
       most — \*nemost  
       both — \*neboth

Suppose now that the weak-strong distinction has a partial syntactic correlate, in the sense that strong determiners fill a higher position than weak ones. More precisely, assume that in a schematic structure like (13) weak (non-cardinal) determiners either fill  $D^{\circ}$  or move there to  $Q^{\circ}$ :



Barwise and Cooper's universal now follows if  $Q^{\circ}$  is also the locus for negation — in other words, if NegP is a possible value for what is usually dubbed QP, in such a way that the feature content of  $Q^{\circ}$  defines either negation or a strong determiner, but not both. Consider a concrete example: the simple determiner *few*, interpreted as **NOT MANY**, derives from raising an abstract  $D^{\circ}$  expressing **MANY** to  $Q^{\circ}$ , where it merges with negation. The determiner lexicalizes the resulting bundle of features. Crucially, **MANY** is semantically weak: a strong determiner could not likewise raise

to merge with negation, because the features defining negation and strong determiners are alternative realizations of the outer functional projection.<sup>4</sup>

2.2.2. A second piece of supporting evidence comes from the distribution of negated quantifiers, like *not every* or *not both*. As is well known, not all determiners can be negated in this way, but among those which can, strong determiners can only be negated in subject position, as shown in (15-16):

- |                   |                  |
|-------------------|------------------|
| (15) a. not one   | b. *not several  |
| not a (single)    | *not three       |
| not a few         | *not each        |
| not many          | *not most        |
| not every         | *not a number of |
| not more than ten | *not no          |
| not that many     | *not the         |
| not a lot of      | *not that        |

(Hoeksema, 1986)

- (16) a. Not every student came.  
 b. \*I met not every student.  
 c. Not many students came.  
 d. I met not many students.

In addition, Rothstein (1988) noted that *not every N* in subject position does not behave like a simple distributive quantifier for pronominal variable binding:

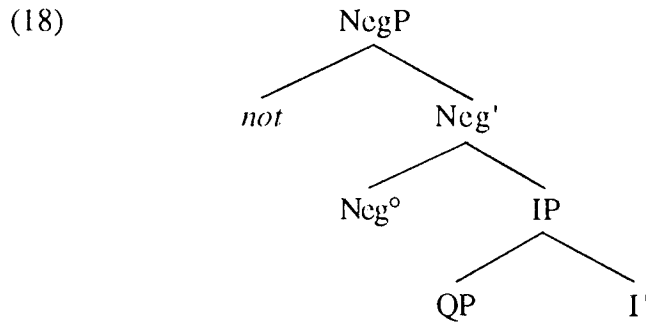
- (17) a. In his<sub>i</sub> kitchen, every student<sub>i</sub> hates to find cockroaches.  
 b. In his<sub>i</sub> kitchen, no student<sub>i</sub> hates to find cockroaches.  
 c. In his\*<sub>i</sub> kitchen, not every student<sub>i</sub> hates to find cockroaches.

These generalizations can now be explained in the following way. Suppose *not* fills Spec NegP (a standard assumption since Pollock 1989). Nothing prevents a NegP from appearing above the subject position, in a position that calls to mind the FP

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4. Negative (or rather monotone decreasing) determiners may well be strong, like *neither*; but it is predicted that their monotone increasing counterparts be weak: such is the case for *either*.

projection hypothesized by Uriagereka 1995 (cf. also Rothstein 1988):



No such position is available within VP, so that (16b) is ruled out. In (16d), on the other hand, *not* fills the specifier of a NegP shell embedding a DP, instantiating the same structure as (14) with different lexical choices. Again, the strong-weak distributional asymmetry is derived by the hypothesis that (monotone increasing) strong determiners and negation are alternative realizations of the same projection. This explanation is supported by the observation that in Italian, where subjects can precede or follow the verb, strong determiners may not be negated just in any subject position, but exclusively in the preverbal one:

- (19) a. Non tutti gli studenti sono venuti.  
       'Not all students came'.  
       b. Sono venuti (?\*non) tutti gli studenti.

2.2.3. The reinterpretation of NegP as a value for QP also helps to shed light over the peculiarities of negated quantifiers with respect to the licensing of polarity items. In an abstract structure like (18), with NegP embedding IP, negation is expected to have scope over the whole clause; at the same time, however, the quantifier in subject position may interfere with the licensing of polarity items lower in the clause. A natural consequence is that certain items are licensed, but not all, and this is indeed what happens: :

- (20) a. Not every student bothered to come.  
       a'. \*Every student bothered to come.

- b. Not everybody gives a damn about it.  
 b'. \*Everybody gives a damn about it.
- (21) a. \*Not every student ever did anything.  
 b'. \*Not everybody ever understands anything.

The attached negation is indispensable to license *bother* (cf. \**every student bothered to come*); it cannot, however, license *ever* and *anything*. Similar facts were also noted by Hoeksema (1983 and 1986). They show that a verb like *bother* is simply licensed by a dominating NegP node, whereas *ever* and *anything* impose further semantic constraints on the licenser.

### 3. *Dimensions of variation*

#### 3.1. *'Light' markers and morphological requirements*

Having provided independent justification for the claim that the complex NegP set may include those quantificational projections embedding negative quantifiers, let us now turn to see the consequences of this new approach for an account of NC. Recall that the main challenge is to state the cross- and intra-linguistic differences without having recourse to parameters like  $\pm$  Absorption,  $\pm$  Resumptive Quantification, or just  $\pm$  NC.

Semantically, the NegP set must be interpreted by a single negative operator. Assuming that the operator is associated with the Neg<sup>o</sup> head position, this means that at LF the set of Neg<sup>o</sup> heads must count as a single syntactic object: a representational head-chain, the X<sup>o</sup> analogous to the A-bar DP-dependencies not derived by movement variously posited in the literature (cf. Cinque 1990 and Safir 1996). Since Neg/Q heads, unlike DPs, have no referential index, the characterization shared by all elements of the chain will be a non-referential index (a notion independently necessary for any instance of head movement with heads other than D) and the [+operator] feature, which I take to be a formal feature in the sense of Chomsky 1993. The index makes it possible to establish a binding relation between two appropriately positioned Neg<sup>o</sup>; the feature, which is directly relevant for the interpretation, identifies the potential members of a chain. A non-distinctness clause rules out incompatible feature values, like [+Wh] and [+negative]. A [+operator] head which is not part of the chain

(either because it has a different index, or because of an incompatible featural specification) qualifies as a potential binder, and cannot intervene between two links of the chain. A formal definition is given in (22):<sup>5</sup>

- (22) a. A sequence of [+operator] heads  $X_1 \dots X_n$  is an operator-chain iff for every  $m$ ,  $1 \leq m \leq n$ ,
- $X_m$  binds  $X_{m+1}$
  - there is no [+operator] head  $Y$  such that  $Y$  c-commands  $X_{m+1}$  and  $Y$  does not c-command  $X_m$
  - the feature matrices of  $X_m$  and  $X_{m+1}$  are non-distinct.
- b.  $X$  binds  $Y$  iff  $X$  c-commands  $Y$  and  $X$  and  $Y$  are coindexed.
- c. An operator-chain is interpreted by a single semantic operator.

By this definition, two functional heads sharing the features [+operator, + negative] can form a single interpretive object under specific structural conditions, even though the lower one may well have additional features — for example, pronominal features, in the case of negative quantifiers. The syntactic locality requirements must be understood as requiring that no operator head may interpose, in a way that is closely reminiscent of the theory of syntactic dependencies proposed in Manzini 1994, 1995 (where non-referential indices are not introduced). In this sense, the notion of syntactic dependency necessary to account for NC is only a subcase of the general mechanism operative in other kinds of dependencies, like polarity item licensing, subjunctive triggering, and antecedent-trace relations.

If we view the  $\text{Neg}^\circ$  set (the potentially singleton set of heads in a  $\text{NegP}$  set) as a representational  $X^\circ$ -chain, we may go one step further and link the attested

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5. A notion of representational operator-chain along the lines of (22) can probably account for the distribution of sequences of operators other than negation; a suitable extension may also derive the Immediate Scope Constraint of Linebarger 1987, which states that no 'logical expression' must intervene between a negative polarity item and its licenser (cf. also Hornstein 1995:167, where the ISC is assumed without argument). I address these developments in Acquaviva 1996.

crosslinguistic variation to different morphological characterizations of what is essentially the same LF object. Synonymous sentences like (23) have a structurally identical LF representation:

- (23) a. Gianni [NegP non ha visto [NegP nessuno]]  
 b. John [NegP saw [NegP no one]]

The single negative operator is expressed only on the lower link in English, while in Italian *non* also lexicalizes the higher Neg<sup>o</sup>. It would not do to assume that the features of the higher Neg<sup>o</sup> are strong in Italian only, in the sense of Chomsky 1993: first, the specifier of *non* is not lexicalized, and, second, even the marker *non* disappears in negative sentences like (24), where the focussed *mai* 'never' expresses alone sentential negation in a higher specifier position:<sup>6</sup>

- (24) a. Mai avrei pensato di rivederti.  
 'Never would I have thought I would see you again'.  
 b. [CP mai avrei [IP *pro* pensato ... ]]

The Transparency Principle of Brody 1995, reinterpreted to apply to the Neg<sup>o</sup> chain, gives a better result:

- (25) *Transparency* (Brody 1995):  
 The contentive category in the chain must be in the highest position licensed by morphology.

'Contentives' are defined as 'elements with substantive lexical contribution to meaning', as opposed to expletives whose contribution to the interpretation is 'a property of the construction they appear in' (Brody 1995:32). Lexical and phrasal units appear in syntactic representations as chains, consisting of exactly one contentive and, possibly, a number of expletives. By Transparency, a chain is made recoverable in as high a position as is permitted by the morphological properties of a language.

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<sup>6</sup>. *Non* is also not admitted with a negative subject, unlike for instance in French; but that does not prove the point that the entire NegP (head and specifier) may be abstract even in Italian, since the subject could well be in the specifier position of a raised *non*. See Belletti 1994 and Zanuttini 1995 for in-depth discussion of the syntax of *non* (although the latter leaves the issue of negative subjects somewhat in the shade).

Viewing the higher and the lower Neg<sup>o</sup> heads as two links of a chain not derived by movement enables us to propose the following parametrization:

(26) a. The Neg<sup>o</sup> chain must be recoverable. Universal

- b. Neg<sup>o</sup> is morphologically licensed in Inflection.  
 + Italian, Old French, Gothic, Old High German, Spanish, Romanian, Catalan, (non-standard English ?) ...<sup>7</sup>  
 - English, French, German, Middle High German, Bavarian, West Flemish, ...

As (26b) states, in some languages but not in others the interpretation of a sentence as within the scope of negation (sentential negation) is always matched by a syntactic structure where a negative element appears at least as high in the phrase marker as on the inflectional complex (referred to as 'Inflection' for simplicity). Languages with a positive setting spell out the Neg<sup>o</sup> chain by a marker attached (or rather cliticized, at least in some cases) to the verb: Italian *non*, Old French *ne*, Gothic and Old High German *ni*, etc. Negation may be lexicalized even higher, if a negative constituent appears as a preverbal subject or a fronted phrase; in this case languages differ depending on whether or not the verb is still accompanied by the marker.<sup>8</sup> Additional

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7. A problem is brought out by this formulation (which is a positive feature of precise statements). The languages where Inflection morphologically licenses Neg<sup>o</sup> (that is, where an inflectional marker is sufficient and generally necessary to express sentential negation) are those with a 'rich' Inflection, which arguably hosts the verb and also licenses pro-drop in one of its varieties. Non-standard English where NC is common (*we don't need no education, you ain't seen nothin' yet*) is a conspicuous exception; that's why the analysis does not take the seemingly obvious step of relating the two sets of properties. Regardless of the precise role of Inflection, however, pro-drop is not related to NC as such: several Germanic dialects, French and Russian have only the latter, while Classical Latin seems to only have had the former. This reinforces the general conclusion that NC must be factored out into formal principles like (26), which might well be related to pro-drop (which, incidentally, is also best understood as a collection of epiphenomena following from other properties).

8. Space considerations prevent a full exemplification. The contrast is illustrated by the Old French and Italian pair in (i)-(ii):

constraints must account for the variation within this class; for example, the following descriptive statement holds for Italian (cf. also Zanuttini 1995):

- (27) Italian:  
The head of a Neg-dependency can be licensed by a locally c-commanding NegP. (≠ feature checking)

The second class in (26b), as noted, includes systems with and without generalized NC. French, Middle High German and West Flemish, in particular, beside displaying generalized NC also have a clitic negative marker which parallels at first sight the inflectional markers of the first class. However, a cluster of three properties sets these markers apart from those like Italian *non*: 1) they cannot negate a sentence on their own, 2) they are generally optional, and 3) they are only employed on verbs (finite verbs in West Flemish) in instances of sentential negation, never on other categories for constituent negation (as English *not* in, for instance, *many but not all*). (28) illustrates the first two properties for French and West Flemish, and (29) shows the optionality of Middle High German *ne*:

- (28) a. Jean ne parle \*(pas). French  
'Jean does not speak'.
- b. ... da Valère die boeken \*(nie) an zijn voader **en**-toogt.  
'... that Valère does not show his father those books'.  
(West Flemish: Haegeman and Zanuttini, 1991:237)
- (29) a. Ez **ne** gebôt nie wirt mêre sîme gaste groezer êre.  
it [neg] gave never host more to-his guest greater honour  
'No host ever made greater honour to his guest'.

- 
- (i) Onques de rien ne m'aparçui ... (Yvain 565, ed. Foerster)  
Never of anything [neg] I took notice  
'Never did I realized in any way ...'.
- (ii) In nessun modo mi potei accorgere ...  
'In no way could I realize ...'.

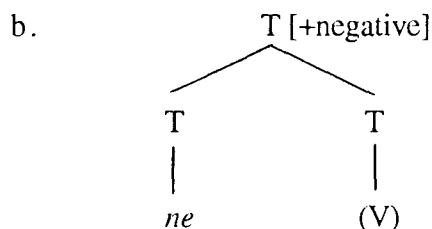


- b. Und gerate ich niemer doch dar an.  
and touched I no more sure there at  
'And never again did I come across that'.

(Middle High German: Paul, Wiehl and Grosse, 1989:399)

The cluster of these properties justifies the view that such markers are not really lexicalizations of the Neg<sup>o</sup> chain (as they probably were in earlier stages), but rather inflectional affixes that spell out the information that the verb is part of a Neg<sup>o</sup>-dependency (that is, is part of the set of heads made up by the Neg<sup>o</sup> set and the intervening heads):

- (30) a. [+negative] is morphologically licensed by verbal Tense.  
+French, West Flemish, Middle High German, ...



(30b) illustrates the structure tentatively hypothesized, with *ne* (or its counterparts) filling a slot in the subcategorization frame of Tense if this is [+negative], and the other slot available for incorporation by the verb if this is required. Not being part of the representational Neg<sup>o</sup> chain, these particles are not required by Transparency to be spelt out in absence of higher negative expressions. Two predictions are entailed. First, a clitic negative marker which is optional should always negate verbs, and should never be used for constituent negation (no equivalents of *\*beaucoup, mais ne tous* 'many, but not all', where negation modifies the quantifier *tous*; *pas* and its counterparts must be used for these constructions). Second, languages may exist where a clitic marker which is necessary and sufficient to negate a sentence, like Italian *non*, may optionally be doubled by a verbal negative affix. I have not so far been able to confirm or disconfirm these generalizations.

### 3.2. 'Heavy' markers and interpretive homogeneity

3.2.1. The dimension of variation examined so far involved the appearance of clitic

markers like Italian *non* or French *ne*; we have seen how the proposed reinterpretation of the NegP hypothesis makes it possible to derive part of the attested variation with respect to NC from morphological properties of Inflection. Turning now to a second dimension of variation, let us examine the behaviour of negative quantifiers and 'heavy', non-clitic negative markers.

Markers like the English *not*, German *nicht*, West Flemish *nie* and French *pas* have all been argued to fill the specifier of NegP, as opposed to the 'light' markers filling Neg<sup>o</sup> and cliticizing to Inflection (see, among others, Pollock 1989, Zanuttini 1991, Acquaviva 1993; for different views cf. Laka 1990 and Ouhalla 1990). Although a superficial examination of the most familiar languages may seem to indicate that all such markers are incompatible with NC, it is by now an established result that 'heavy' markers do in fact allow NC in a number of languages: cf. Zanuttini 1991, 1995 for Northern Italian Gallo-Romance dialects, Haegeman and Zanuttini 1991 for West Flemish, Brugger and Poletto 1993 for Bavarian, Acquaviva 1993 for some varieties of German, Déprez 1995 for Québécois. Instead of attempting to derive the impossibility of NC of some such markers from their structural position (as in Zanuttini 1991 and Moritz and Valois 1994), I will now argue that the attested variation is a function both of the position of these markers and of their semantics.

I have little to add to the standard analysis that locates such markers in Spec NegP. On the basis of its position with respect to the inflected verb and other elements (like adverbials), the relevant NegP may be located at various points in the inflectional complex, depending both on the language and on the marker itself (cf. (8) above). The original contribution of the approach being explored lies instead in the interpretation of such structures, and specifically in the link between 'heavy' markers and negative quantifiers.

That such a link should exist at all is not obvious, if one considers the interpretation of a simple negative sentence like (31):

(31) John does not laugh.

Here the proposition *laugh (John)* lies in the scope of a negative operator; a propositional operator informally translatable as 'it is not the case that'. Things are slightly different with a negative adverbial:

(32) John never laughs.

In this case, the negative operator quantifies over a domain indicated by *never*: for no

moment  $x$  is it the case that John laughs at  $x$ . The resulting quantificational structure is brought about more clearly replacing *laugh* by the transitive *laugh at*:

- (33) a. John laughs at no one.  
 b.  $\neg\exists x$  :            [ human ( $x$ ) ]    &            [ John laughs at ( $x$ ) ]  
                                  operator            restrictive term                            nuclear scope

These examples illustrate the different interpretive roles of pure markers like *not*, on the one hand, and quantifiers like *never* or *no one* on the other. Only the latter introduce a quantificational structure, where the descriptive content of the quantifier defines the set over which the variable ranges: instances for *never*, human individuals for *no one*, and so on. The richer the descriptive content of the quantifier, the smaller the set in the restrictor: if we replace *no one* in (33) with *no friend*, which is richer in descriptive content, the variable in the restrictive term will range only over friends (of John's), not over just any human individual.

Consider now the structural position of the negative elements involved. Assuming *never* to be in Spec NegP (not necessarily the same as *not*, witness their different distribution),<sup>9</sup> the other negative quantifiers realize, according to the present approach, other NegPs in specifier or complement positions. It has already been proposed that, regardless of morphological realization, the set of Neg<sup>o</sup> heads is a single LF object, interpreted as one negative operator. We can now propose that the elements in the set of complement and specifier positions of the various Neg<sup>o</sup> heads act as a restrictor for the operator associated with the Neg<sup>o</sup> set. For complex quantifiers like *no friend*, the complement of Neg<sup>o</sup> is lexicalized by an overt NP (*friend*); for bare quantifiers, the restriction ([+human] or [-human]) is associated with a null NP complement.

The proposal that, in a quantificational projection, the head and the specifier are associated with the operator and the restriction respectively is in itself not novel (cf. Acquaviva 1993, Giannadikou and Quer 1995), although one should point out that it is orthogonal to the issue whether heads and specifiers sharing a quantificational feature are in one-to-one correspondence (the Negative Criterion: see Haegeman 1995). In the framework of the present analysis, however, a strict application of this insight raises an interesting problem. The crucial feature of the analysis is that the notions of head and specifier are defined relative to a (possibly singleton) set of NegP projections. Just as the members of the Neg<sup>o</sup> set are jointly interpretively associated

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<sup>9</sup>. The problem of *do*-support lies outside the scope of this paper.

with one operator, the entire set of Neg<sup>o</sup>-specifiers (and complements) must be associated with restrictors. But obviously this is not always the case: as we have just seen, a pure marker like *not* fills a Spec NegP but is not interpreted as a restrictor.

**3.2.2.** Instead of giving up the idea that the whole NegP set is partitioned along the lines suggested (heads associated with an operator, specifiers and complements mapped in the restrictive term), I would like to propose that this is the reason why a pure marker like *not* is incompatible with NC:

- (34) All elements in the Neg<sup>o</sup> set are interpreted *jointly* (as an operator).  
All elements in the spec / complements of the Neg<sup>o</sup> set are interpreted *jointly* (possibly as a restriction).

As (34) makes clear, the NegP set is subject to an interpretive homogeneity requirement. Some of the specifiers may be empty, or even all of them, as in sentences like (35), where the marker is a Neg<sup>o</sup> and no other negative element appears:

- (35) Luisa non è venuta.  
'Luisa has not come'.

Whether Spec NegP hosts an empty operator here is an independent issue, as noted. In any case, there is no restrictive term, because there is no quantificational structure. The same interpretation obtains for the English version of the sentence, with the important difference that *not* fills a specifier. *Not*, like *non*, is a pure Boolean negative operator, not a quantifier. Because of this, no other specifier or complement in the NegP set may host a (negative) quantifier: since that would introduce a restrictor, it would violate the homogeneity constraint stated in (34). In other words, a simple restriction like (34) blocks NC of any element with *not*, by requiring that the specifiers and complements of the NegP set hosts either only restrictors or no restrictors at all.

Note that the homogeneity principle stated in (34) excludes *not* from NC relations, but says nothing on negative quantifiers. This is a welcome result, since the marker differs from the quantifiers in two respects: 1) in standard English, NC may occur in cases of Resumptive Quantification (see above), but *not* is never involved; and 2) even in non-standard dialects admitting NC, the full form *not* is excluded from NC. In fact, these dialects employ the reduced version *n't* in virtually all contexts; as has been suggested above, this marker could be regarded as Neg<sup>o</sup>. In standard English, on the

other hand, *n't* can be viewed as the cliticized version of *not*. Cliticization clearly affects the distribution of the particle, but not its interpretation.

Another advantage of this approach is that the same analysis can be extended to other markers, regardless of the behaviour of negative quantifiers with respect to NC. The French 'heavy' marker *pas* is a close counterpart of *not*: it arguably fills a specifier in the NegP set and is not compatible with NC with other quantifiers. The reason for this impossibility is the same as for *not*. French differs from English in two relevant respects: by the presence of the optional *ne*, which has already been discussed, and by the availability of NC between negative quantifiers, as in (36):

- (36)      Aucun homme n'a (\*pas) jamais rien dit à personne.  
           no man      [neg] has (not) never nothing said to nobody  
           'No man ever said anything to anybody'.

Instead of claiming that French, unlike English, allows NC but that some independent reason blocks it when *pas* is involved, it seems more revealing to argue that the universal principle (34) blocks NC for all markers sharing with *pas* and *not* the two characteristics of filling a specifier and being associated with a pure Boolean negative operator, as opposed to a variable-binding quantifier (the different behaviour of Québécois *pas* will be discussed in 3.3. below). The availability of NC between quantifiers, on the other hand, is best seen as a separate dimension of variation. This conclusion is also supported by the existence of at least one language which is like French in having generalized NC, but contrasts with French in prohibiting concordant readings between complex negative quantifiers, that is, quantifiers with a determiner and a complement NP (like the English *no cat* as opposed to *nobody*). This language is Italian, as exemplified by (37) (see Acquaviva 1995 for detailed discussion):

- (37) a. Nessuno (studente) ha letto niente.  
           'No one / no student read anything'.  
       b. \*?Nessuno (studente) ha letto nessun libro.  
           'No one / no student read any book'.

**3.2.3.** Italian also provides a second piece of evidence supporting the view that NC is blocked by certain elements (like *pas*) both because of their position and their interpretation, not just because of the former. As illustrated in (6b) and (7) above, the adverbial *affatto* 'at all' is incompatible with any negative quantifier, although it must be c-commanded by the negative marker *non*:

- (38) Giacomo \*(non) parla affatto (\*con nessuno).  
'Giacomo does not talk at all with anyone'.

As was shown above, *affatto* differs from *pas* both in its meaning and in its distribution: unlike *pas*, it is not a negative marker and it does not occupy a fixed position. This surprising state of affairs receives an immediate explanation by the hypothesis that *pas* and *affatto* share just one characteristic, which is crucial in excluding NC with negative quantifiers (as opposed to markers): the interpretive characteristic of not expressing a restriction. *Pas*, like the English *not*, expresses the pure, not variable-binding negative operator; *affatto* expresses the same in conjunction with a *c*-commanding *non*. In both cases a non-quantificational element fills a specifier in the NegP set; in accordance with the homogeneity principle in (34), this prevents quantificational elements from appearing in the NegP set. If they appear at all, they must belong to a different NegP set, resulting in a double negation reading.

The hypothesis that *affatto* is incompatible with restrictors is independently confirmed: it is also incompatible with exceptive constructions (just like *pas*) and with certain negation-dependent quantifiers which likewise express a restriction on the negative operator (see Acquaviva 1995):

- (39) a. Non bevo affatto (\*che acqua).  
'I [neg] drink at all (but water)'.  
b. Non bevo affatto (\*poi molto).  
'I do not drink at all (all that much).'

At this point, it is convenient to recapitulate the dimensions of variation into which NC phenomena have been factored out so far:

- (40) a. Resumptive Quantification under syntactic and semantic parallelism;  
b. morphologically conditioned lexicalization of the Neg<sup>o</sup> as a clitic marker within the inflectional complex;  
c. presence of 'heavy' markers interpreted as pure negative operators in Spec NegP which inhibit NC;  
d. availability of NC between negative quantifiers.

(40a) appears to be an option open to all languages in principle,<sup>10</sup> as is to be expected from a semantic operation. The parametrization along (40b) was discussed above; it has to do with the morphological properties of the inflectional projections in each language. (40c) is largely a matter of lexical accident: English, German and French have such a marker, which is the only marker for the first two; Italian does not. The resulting picture is complicated by the fact that, as by (40d), French allows NC between any two negative quantifiers; Italian disallows NC between two non-bare quantifiers (except for cases of Resumptive Quantification); and English and German disallow NC between any two quantifiers. I have nothing to say here about this last dimension of variation, which appears to be both cross- and intra-linguistic.

### 3.3. *'Heavy' markers allowing NC*

We have not yet discussed the case of NC between a 'heavy' marker and negative quantifiers, here illustrated with, respectively, Québécois, Piedmontese, Bavarian and late XVIII century German (Goethe):

- (41) a. J'ai (pas) vu parsonne. (Déprez 1995)  
'I have not seen anyone'
- b. A'm da (nen) gnun conseil. (Zanuttini 1995)  
'S/He doesn't give me any advice'.
- c. ... daß neamt sei Frau nit mitgnumma hot. (Brugger & Poletto 1993)  
'that nobody took along his wife'.
- d. Keine Sorge brauchst Du nicht für mich zu haben. (Acquaviva 1993)  
'You do not need to have any worry about me'.

The existence of generalized NC in these dialects is at first sight very problematic for the present analysis, because there is minimal or no syntactic difference with respect to

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<sup>10</sup>. Only 'in principle', because other factors might intervene. A language may not have negative quantifiers, for example.

the corresponding dialects without NC. However, a historical regularity suggests a different explanation, which supports the conclusions arrived at so far. All 'heavy' markers diachronically develop in one of two ways: they are derived either from simple indefinites or from negated indefinites — that is to say, negative quantifiers. The former arise from minimizers, in the sense of Vallduví 1994: indefinites (*pas* 'a step', *mie* 'a crumb', *got* 'a drop' and the like) which act as minimally descriptive adverbials. The latter case only differs in that the indefinites are prefixed by a negative particle; again, the development into negative markers requires a stage in which these negative indefinites are used as adverbs instead of arguments. Markers with the original meaning 'nothing' include Middle High German *niht* (the non-negated *iht* is also attested), German *nicht*, Old Norse *ekki*, Old French *noiant*, Old Italian *neiente* and also English *not* (from *ne-aught*). Rather than pure markers, these elements are or were in their early stages polarity items or negative quantifiers employed in adverbial function, paraphraseable as '[not] by any means' and 'by no means', respectively.

Crucially, the interpretation of these adverbs involves a quantificational structure, with a degenerate restrictive term with minimal or null descriptive content. As an illustration from a -NC language, consider the English phrase *by no means*. This is not a fixed idiom, since it can appear as *by any means* under the scope of an affective operator; yet it certainly does not quantify over means. Its interpretation fits perfectly that proposed by Lewis (1975) for *never*: 'in no case', that is, for no assignment of value to an n-tuple of restricted variables appearing in the open sentence that describes the event. Adverbials of this kind may also be taken to quantify over possible world-instant pairs or over situations, depending on the adopted semantic framework (cf. Farkas 1994). The relevant point is that a quantificational structure is built, where, as in the case of other adverbials, the variable bound by the quantifier does not range over individuals. This is the status, for example, of modern French negative adverbs like *jamais* 'never' or *plus* 'anymore', which allow NC with argument quantifiers (like *rien* 'nothing') because they are themselves quantificational.<sup>11</sup> Remaining with French, the same applies to adverbs like *aucunement* or *nullement* 'in no way', which likewise allow NC for those speakers who have intuitions about such literary and archaic forms (Gaatone 1971: 134). But in this case the restrictive content is as poor

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<sup>11</sup>. Notice that the existence of a negative adverbial with such a degenerate descriptive content is independent from the availability of NC in a language: *by no means* does not enter NC any more than *not* does in English.



as in the English *by no means*. So, negative adverbs with degenerate restrictive term (that is, with minimal descriptive content) certainly exist and display the properties of other negative quantifiers, including NC when this is admitted for quantifiers. It is at this point extremely natural to suggest that those 'heavy markers' that allow NC are in fact adverbially used quantifiers, akin to French *nullement*. The Québécois *pas*, we are suggesting, allows NC because it is a member of this class: it is what standard French *pas* used to be, namely an adverbial minimizer. Recall that the reason why standard French *pas* blocks NC is that *pas*, in that language, is interpreted as a non variable-binding operator, and the homogeneity requirement stated in (34) ensures that a pure operator and a variable-binding quantifier may not be part of the same NegP set. But the Québécois *pas*, by its different interpretation, does not violate that requirement, and NC with other quantifiers is therefore admitted.

The view that certain 'heavy' markers allow NC with negative quantifiers because they are themselves variable-binding elements entails a prediction: in certain contexts, we expect such 'markers' to be licensed by operators other than negation, just as some polarity items are licensed by non-negative operators like comparatives, *before*-clauses, or clausal complements of verbs like *doubt* or *prevent*. That this prediction is indeed borne out in at least some languages is a striking confirmation of the proposed theory (see Acquaviva 1993 for further examples):<sup>12</sup>

- (42) a. Die er mehr liebt als nicht sein Augen. (Werder)  
'which he loves more than [neg] his eyes'.
- b. Und ist vielmehr davon abzumahnem daß man nicht zu viel Wert auf die  
Meinung Anderer lege (Schopenhauer)  
'People should rather be dissuaded from [neg] putting too much value  
in the opinions of others'.

The only necessary hypothesis, therefore, is that such 'adverbial markers' have retained their quantificational interpretation in some dialects but not in others. French and Québécois, for instance, do not differ in the setting of a hypothetical global  $\pm$ NC parameter (both routinely allow NC between quantifiers); rather, they differ in the semantic interpretation of the single lexical item *pas*, which has the LF of a negative quantifier (like *rien*) in Québécois only. The standard German and English markers

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12. As far as I know, *pas* in Québécois is not licensed in non-negative contexts. But neither is *nullement* in standard French.

*nicht* and *not* have undergone the same evolution as modern French *pas*, losing the value of a quantificational adverbial and becoming pure negative operators, and thereby turning a degenerate restriction into no restriction at all. Recall that, for the reasons outlined above, the issue of NC between quantifiers is partly or even totally independent. Although this much is clear, the question remains open.

#### **4. Conclusion**

The notion of NC is only useful in a very informal descriptive sense, because of the strong variation within and across languages as well as for theoretical considerations. The analysis proposed in this paper has attempted to reduce the attested variability to a few dimensions of variation, ultimately relating it to parametrizable differences in the morphological component and to lexical variation. But the decomposition of NC phenomena into distinct explanations proceeds from a unitary theoretical stance: that negation, over and above the issue of NC, is encoded in the language faculty by means of a set of functional projections. This view shifts parametrization from the placement to the realization of negative elements, and unifies to a significant extent the syntax of negation and that of indefinite and quantified expressions.

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# The Diachronic Development of a Modal Verb of Necessity <sup>1</sup>

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## *1. Introduction*

The relation between syntax and morphology has been investigated in a number of works in the linguistic research of recent years.<sup>2</sup> With the analysis that we are presenting here, we would like to suggest that certain aspects of verbal morphology are determined by the semantic content and in particular by the thematic structure of the corresponding lexical entry. This topic, even in the particular and limited perspective we have chosen, has great ramifications. We will limit ourselves to showing that synchronic and diachronic instances of grammaticalization (which we can view as the process that changes a lexical item into a functional element) can be analysed as a consequence of the loss of specific semantic properties of the lexical item undergoing change. Moreover, the morphosyntactic limitations that we will observe for modal auxiliaries can shed some light on the syntactic relations between tense and modality, which have been studied by many authors from a semantic point of view. The correlations we will observe can support a syntactic implementation of the interaction between tense and mood in a very restricted theory such as that

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proposed in Chomsky (1992) (1994), where a functional head can only be marked as strong or weak.

In Benincà and Poletto (1993) we have presented evidence, drawn from some modal verbs of necessity in Italian varieties, suggesting that the loss of forms in a verbal paradigm can be predicted by the loss of certain semantic properties. The idea we have put forth is that verbs' syntax and morphology are determined in some of their aspects by the presence of a thematic grid of the lexical entry. If this thematic grid is not associated with a given item in the lexicon, the item is analysed as a functional element and is inserted in the functional position corresponding to its semantic features. In the present paper we will show that this is true of both synchronic and diachronic instances of grammaticalization.

This paper is organized as follows. In section 2 we will first describe the exact meaning of modern Italian *bisogna*, which has the poorest thematic grid among Italian verbs of necessity. We will then list its possible and impossible forms and the limitations on its syntactic behaviour. In section 3 we will summarize the discussion of other modal auxiliaries presented in Benincà and Poletto (1993): Venetian *toca*, 'touch' standard Italian *va* 'go' and Polesano *vuole* 'want' all share the observed limitations with *bisogna* only if a particular reading is selected. These verbs are, on the one hand, normal transitive verbs, but they can also have modal uses with a special meaning indicating a pure state of necessity where no theta -role is assigned (we will define this reading as "deontic reading"); when they assume the precise meaning of "pure necessity" of Italian *bisogna*, or better, when they lack a theta grid as *bisogna* does, they also undergo the same impoverishment of their paradigm and inhibition of syntactic capacity. In section 4 we will examine the diachronic development of *bisogna*, showing how it has developed from a normal transitive verb into a pure modal head. While Old Italian *bisogna* is still a full verb that projects a VP with its arguments, modern *bisogna* is a purely functional element that is inserted directly into a modal head Mod<sup>o</sup> with strong features. Moreover, Old Italian *bisogna* does not show any of the morphosyntactic restrictions that we observe in modern Italian. The diachronic data strongly support our hypothesis about the change of some modals from lexical verbs to functional categories and reinforce our claim that this goes hand in hand with the loss of the thematic grid. In section 5. we will present a possible analysis of the synchronic and diachronic data and discuss the hypothesis that modal auxiliaries that have no thematic grid are directly inserted under Mod<sup>o</sup>.

The behaviour of the Italian verbs of necessity under consideration presents striking similarities with English modal verbs on the one hand, and with the French deontic *falloir* on the other. We will limit ourselves to pointing out the similarities of *bisogna* with corresponding verbs in other languages, as this paper is part of a larger project concerning the diachronic development of modals and auxiliaries in Italian varieties and their present status (cf. Benincà and Poletto (in progress)).

## 2. Surface properties of 'bisogna'

### 2.1. 'Bisogna' has a defective paradigm

The verb *bisogna* only means a pure state of necessity, leaving aside any cause of the necessity itself as well as leaving aside that a particular person or object is individually concerned with it. This semantic characteristic will be clear when contrasted with one of the readings of the modal *toca*. *Bisogna*, as the examples in (1) show, can select either a CP with an subjunctive complement clause, or an infinitive clause: they express 'what is necessary'.

- (1) a. *Bisogna partire subito*  
'It-is-necessary to leave immediately'  
b. *Bisogna che Mario parta subito*  
'It-is-necessary that M. leave (subjunctive) immediately'

The first characteristic to be pointed out concerns its morphological paradigm: it is always inflected at the third person singular, and it only occurs in the forms listed below in (2), no matter what type of sentence it selects:

- (2) a. *Bisogna farlo/che lo faccia*  
'It-is-necessary to do it/that he do it'  
b. *Bisognava farlo/che lo facesse*  
'It-was-necessary (imperfect)... '  
c. *Bisognerà farlo/che lo faccia*  
'It-will-be-necessary... '



- d. Bisognerebbe farlo/che lo facesse  
'It-would-be-necessary (conditional)... '
- e. ?Credo che bisogni farlo/che lo faccia <sup>3</sup>  
'I think that it-be-necessary (present subjunctive)... '
- f. Penso che bisognasse farlo  
'I think that it-was-necessary (imperfect subjunctive)... '

The possible forms of *bisogna* are then the present, imperfect and future indicative, the present and imperfect subjunctive and the present conditional. All other forms are impossible, as the following list illustrates:

- (3) a. \*Potrebbe bisognare farlo /che lo faccia  
'It could be-necessary (infinitive)... '
- b. \*Bisognando farlo, lo fece  
'Being-it-necessary (gerund).... '
- c. \*E' (era, etc.)/ ha...bisognato farlo  
'It is (was, etc.)/has been-necessary (past participle and compound tenses) '
- d. \*Bisognò farlo <sup>4</sup>  
'It was necessary to do it'

The sets of possible and impossible forms are less mysterious if we recall well-known observations regarding the possible forms, which are often referred to as forms having 'modal quality'. More formally, we hypothesise that:

a) they are not marked for a specific aspectual feature and are compatible with an unspecified time localisation. The Italian present indicative is also an 'atemporal' or

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<sup>3</sup>. For reasons that are not clear, the present subjunctive (ex. (2e)) is not as natural, for many speakers, as the imperfect subjunctive is, though it is not impossible as the infinitive, gerund and past participle are. We will idealise the data and treat the present subjunctive as a possible tense of *bisogna*.

<sup>4</sup>. In Northern Italian the simple past tense is not used, but speakers of most of those Central and Southern varieties that admit it do not find (3d) grammatical.

'generic' tense, (cf. Giorgi and Pianesi (1991) for a syntactic characterisation of this observation).

b) On the contrary they have a modal specification. The imperfect, future and conditional have epistemic [+irrealis] possible interpretations; both subjunctives can be [+irrealis] forms. These properties can be thought of as sharing a precise structural correlate, namely the presence of a Modal phrase which is marked with a strong feature, an hypothesis that we will discuss in section 5.

We will propose that all other forms are excluded as they do not have this modal meaning and consequently do not have a ModP marked as [+strong].

Note that the lack of non finite forms strongly recalls the development of English modals (cf. Lightfoot (1979) and Roberts (1985)). The crucial difference here is that the simple past is also excluded for Italian modals, but it is not in English, at least for *can*.<sup>5</sup>

## 2.2. '*Bisogna*' lacks a subject

The morphological lacunae are accompanied by severe syntactic limitations: *bisogna* has apparently no subject, as the following test - set out to discover non-argumental subjects - clearly shows. There is a clear difference in grammaticality between the sentences in (4), in which the PRO subject of the infinitive takes a controller in the subject position of the governing sentence. A quasi-argumental subject in the governing sentence is able to govern the PRO subject of the untensed clause in (4a), the expletive subject of the impersonal verb in (4b) is able to do so with some difficulty. On the contrary, the subject of *bisogna* in (4c) is completely unable to give PRO any content; (4d) illustrates the fact that with a different locution of necessity, formed with the verb *essere* "be", the structure becomes (marginally) possible:

- (4) a. Nevica senza necessariamente fare molto freddo.  
'It snows without necessarily being very cold'

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5. This difference could be reduced to differences between the the aspectual systems of the two languages.

- b. ?Sembra che si tratti di un delitto senza esser chiaro chi sia il colpevole.  
'It seems that it is a murder without being clear who the culprit is'
- c. \*Bisogna che lo leggiamo senza esser necessario che lo facciamo subito.  
'It is necessary that we read it without it being necessary to do so immediately'
- d. ?C'è bisogno che lo leggiamo senza esser necessario che lo facciamo subito.

The contrast between (4b) and (4c) shows that there is a difference between the expletive subject of a verb like *sembrare* 'seem' and *bisogna*, as the subject of *sembrare* can marginally control a PRO while the subject of *bisogna* cannot.

Moreover, there is some evidence coming from Sardinian and Northern Italian dialects that indicates that *bisogna* has no subject at all. In some Sardinian varieties the verbal form for *bisogna* lacks the third person ending. No other verb, including impersonals and meteorological, lacks the third person agreement morpheme:

- (5) a. bisongath-  
'it is necessary'
- b. proethe  
'it rains'

Sardinian shows that *bisogna* is different from other impersonal verbs, as it does not carry any subject feature at all.

The difference between Sardinian and Italian could be derived from a very general property that only Italian displays, namely the necessity of an agreement marker "closing" every word (cf. Li (1990), Giorgi and Pianesi (1991) and Poletto (1991) for a detailed discussion on the role of Agreement as defining the word boundary).

Hence the fact that standard Italian *bisogna* has a third person agreement marker could be required by an independent constraint that imposes the presence of a default agreement for all words and is irrelevant as a test to determine the syntactic presence of a subject.

Further evidence of the absence of a subject with *bisogna* comes from the behaviour of northern Italian dialects: even in those varieties that show an obligatory

subject clitic with impersonal verbs as the verb corresponding form to seem, if there is a verb with the deontic reading of *bisogna*, it does not tolerate a subject clitic (see Benincà and Poletto (1993):(5)).

Again we see a difference between *bisogna* and other impersonals.

A second interesting fact about the subject is that, in Italian as in the dialects, *bisogna* cannot host a raised subject coming from the selected clause. The sentences in (6) are to compare with the behaviour of the impersonal *sembra* "it seems" given in (7):

- (6) a. \*Mario bisogna leggere  
'M. is-necessary to read'  
b. \*Bisogna partire Mario  
'M. is-necessary to leave'
- (7) a. Mario sembra leggere  
'M. seems to read'  
b. Sembra conoscerlo Mario  
'It-seems to know him M.'

The contrast between (6) and (7) shows that *bisogna* is not a raising verb. We will come back to this in section 5.

### 2.3. '*Bisogna*' cannot host clitics

The third property to be outlined is the impossibility for *bisogna* to have clitics attached to it, whether thematically related to it (see (8a)) or to the embedded predicate via restructuring (8b). Even benefactive clitics that in Italian are possible with any verb. This behaviour is again to be compared with that of *sembra* on the one hand and that of other modal locutions on the other, given in (9):

- (8) a. \*Gli bisogna mangiare  
'Him is-necessary to eat'  
'He needs to eat'  
b. \*Lo bisogna incontrare  
'Him is-necessary to meet'

- (9) a. Lo sembra fare volentieri  
'It he-seems do willingly'  
b. Ci sembrano andare  
'There they-seem to go'  
c. Gli sembravate parlare amichevolmente  
'To-him you-seemed to speak friendly'  
d. Gli è necessario partire  
'To-him is necessary to leave'

Any type of object clitic cannot appear on the head of *bisogna*.

Let us thus summarize the special properties that we have observed for *bisogna*:

- (10) a. Only verbal forms that can be marked as [+ irrealis] can be realized  
b. Neither an overt nor a null subject is available as *bisogna* has no external argument and it is not a raising verb (some dialects show no or very poor subject agreement)  
c. No clitics as *bisogna* has no argument (apart for the embedded clause) and raising is not possible

In the following section we will present arguments that are dealt with in more detail in Benincà and Poletto (1993).

### 3. *Other deontic modals*

#### 3.1. *Venetan 'toca'*

The idea that the morphological and syntactic restrictions of *bisogna* are related to its defective thematic structure is supported by the comparison with a verb that acquires the same meaning of *bisogna* in the Venetan dialects of Padua and Venice. This verb is *tocar(e)*, a transitive main verb which can be also used as a deontic. When it is used as a main verb, *tocar(e)* is a regular verb meaning "to touch", as the corresponding Italian *toccare*: it has all tenses and normally hosts a subject DP, corresponding to a thematic agent, in the SpecAgrS position.

*Tocar(e)* can also have an impersonal use with a number of modal readings, one of which is very similar to *bisogna*. The others all involve, with varying characterisations, a dative experiencer to which the necessity is addressed. Let us call *tocal* the various uses, and *toca2* the reading that corresponds to *bisogna*. The argument of *tocal* is expressed by a dative clitic, possibly doubling a bare DP, and, with this reading, *toca* only selects an infinitive clause:

- (11) Me toca partire  
'I have to leave'

The meaning of *tocal* goes from "Someone decided that it is someone else's duty to do something", to "Someone is obliged to do something that he would have preferred not to do", or "Someone is concerned with doing something", or else "it is someone's turn to do something", etc. When the complement is an infinitive, the subject of the selected clause is always the person affected by the necessity expressed by the governing verb *toca*, and it surfaces as a clitic attached to *toca*. With these readings, *toca* has all tenses.

The purely deontic reading, very similar to Italian *bisogna*, is expressed by *toca* when it governs an inflected complement clause. In (12) *toca* has only the purely deontic reading:

- (12) Toca che lo fasa mi  
"I have to do it"  
"\*It's up to me/it is my turn to do it"

We will use this distinctive feature to isolate the syntactic and morphological properties of this variant. The purely deontic reading of *toca2* shows the same morphological restrictions that we have examined in section 2. for the verb *bisogna*: it cannot be inflected in the infinitive, participial and gerund forms. We cannot test if the simple past is possible as in this dialect the simple past does not exist for any verb.

- (13) a. \*Ga tocà che lo fazese mi  
'Has touched that it did I'  
"I have had to do it"

- b. \*Podaria toccare che lo fazese mi  
'I might have to do it'
- c. \*Tocando che lo fasa mi,...  
'Having to do it myself,...'

Moreover, the tenses that are admitted with *bisogna* are grammatical also with the purely deontic reading of *toca2*:

- (14) a. Tocava che 'ndase mi  
'I had to go'
- b. Tocarà che vaga mi  
'I will have to go'
- c. Tocaria che 'ndase mi  
'It would be necessary for me to go'
- d. Credevo che tocasse che te 'ndassi ti  
'I thought that you had to go'

As (14) shows, it is possible to use the imperfect, future, conditional and subjunctive forms.

If the hypothesis presented in section 2. is correct, we should expect that *toca2* also presents the syntactic properties already discussed for *bisogna*, namely the impossibility of having a subject DP and the impossibility of realising a clitic on the modal verb. This is indeed the case:

- (15) a. \*Nisuni toca che vaga  
'Nobody has to go'
- b. \*Me toca che parla doman  
'I have to speak tomorrow'

Example (15a) shows that *toca* cannot have a subject DP. (15b) illustrates that no clitic can be hosted by it.

It is important to point out that the cluster of properties shown by *bisogna* is not an idiosyncratic fact connected to this verb, but is strictly related to the purely deontic meaning, which we will analyse in section 5. as an effect of the impoverished thematic structure. When *toca / toccare*, which is a regular transitive verb, assumes the meaning of *bisogna* thus disactivating its VP as a site of thematic

role assignment, there are effects both in syntax and morphology, and they are exactly the same ones that characterise *bisogna*. In this perspective, the difference with an impersonal verb such as *sembrare* "seem" is basically the fact that this verb always has an intended argument, i.e. the experiencer, no matter whether it is lexically filled or left unexpressed.

### 3.2. Two more deontic modals

In this section we will examine two more cases of deontic modals which are partially similar to *bisogna* and *toca*.

The first verb is standard Italian *andare* "to go", which is a regular main verb of the unaccusative class and as such can be used in all inflected forms.

As an auxiliary it has two distinct readings: one is purely passive, the other is passive plus deontic. The purely passive reading is only possible with a subclass of verbs which entails the "loss" of the object (it includes verbs such as *perdere* "lose", *bruciare* "burn", *distruggere*, "destroy" etc.). A sentence like the following is ambiguous, admitting both readings of the auxiliary *andare*

- (16)    La sterpaglia andava bruciata  
           "The brushwood went (imperfect) burnt<sub>v</sub>  
           "The brushwood had to be burnt"  
           "The brushwood was burnt"

The passive-deontic reading shows some morphological restrictions which parallel those found with *bisogna* and *toca*:<sup>6</sup> The simple past, participial, infinitive and gerund forms cannot be used with the passive-deontic reading: they are possible only with the pure passive one. Moreover, as for *bisogna* and *toca*<sub>2</sub>, the passive plus deontic reading is possible with the future, conditional, and subjunctive forms.

As the morphological restrictions parallel those found with *bisogna* and *toca*<sub>2</sub>, we should also expect that the same syntactic restrictions be present: the modal *andare*, like *bisogna*, should not tolerate a subject DP in its SpecAgrS position. However,

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<sup>6</sup>. Also the pure passive reading shows some restrictions: for instance, no agent can be realised in these structures (see Salvi 1988 for evidence in this sense).



(16) can have the deontic reading and the subject position is occupied by the DP *la sterpaglia*.

The syntactic restriction regarding the subject is also present with *andare*, but it is limited to first and second persons: only the third person singular and plural can be realised in the subject position of the deontic *andare*:<sup>7</sup> This seems to be the effect of restrictions that require a very detailed analysis of the AgrS projection and of its sub-components.

- (17) a. ??Io vado bocciato  
           'I go failed'  
           'I have to be failed'
- b. ??Tu vai bocciato  
           'You have to be failed'
- c. Questo studente va bocciato  
           'This student has to be failed'
- d. ??Noi andiamo bocciati  
           'We have to be failed'
- e. ??Voi andate bocciati  
           'You have to be failed'
- f. Questi studenti vanno bocciati  
           'These students have to be failed'

The fact that the restriction on the subject is more limited with *andare* than with *bisogna* and *toca2* is parallel to another difference between these verbs: *bisogna* and *toca* select a complete CP as their complement, while *andare* selects a passive past participle:

- (18) a. *Bisogna* [che vada io]  
           'It-is-necessary that go I'  
           'I have to go'

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7. If the modal is inflected in the conditional form, these sentences are only marginal:

- (i)       ?Tu andresti bocciato  
           'You should-go (conditional) failed'

- b. Toca [che vaga mi]  
 'It-touches that go I'  
 "I have to go"
- c. La sterpaglia va [bruciata]  
 'The brushwood goes burnt'  
 "The brushwood is / has to be burnt"

It may be hypothesized that these two facts are connected, and that the possibility of realizing a third person subject is related to the presence of the selected passive past participle. We will discuss a possible account for this relation in section 5.

Note also that a verb like *andare* is different from English modals: it can host a subject but only a third person one. Moreover, it selects a past participle and not a complete CP, and in some sense it is more similar to the English modals that select a bare infinitive, but the meaning that we obtain can only be a passive one.

This hypothesis is confirmed by data coming from other Italian varieties, where the verb *volere* "want" is used in a deontic sense and selects again a past participle. The surface subject is the object of the past participle, which becomes the subject of the passive:<sup>8</sup>

- (19) El vole magnà *Basso Polesano*  
 'It wants eaten'  
 "It wants eating, it is necessary to eat it"

The deontic reading of *volere* cannot be obtained when the verbal form is the infinitive, gerund or past participle (the simple past is not possible in this variety).<sup>9</sup> The possible forms are the present, the imperfect, and the future indicative, the present conditional and the simple subjunctive. The parallel regarding the morphological restrictions (cf. Benincà and Poletto (1993) (32)) with the other deontic modals is striking.

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<sup>8</sup>. The variety used for the examples is Basso Polesano, a Southern Venetan dialect.

<sup>9</sup>. A southern variety spoken in Puglia presents the same phenomenon and has the simple past which is excluded in this construction.

With respect to the syntactic restrictions regarding the subject, *vuole* behaves as *andare*: the deontic reading of *vuole* can only be used with a third person subject:

- (20) a. \*Mi voio petenà  
       'I want combed'  
       'I need to be combed'  
       b. \*Ti te voi petenà  
       'You want combed'  
       c. El vole petenà  
       'He wants combed'  
       d. \*A volemo petenà  
       'We want combed'  
       e. \*A vulì petenà  
       'You want combed'  
       f. I vole petenà  
       'They want combed'

At this point we have two types of deontic modals: *bisogna* and *toca2*, which do not admit any subject, and *andare* and *vuole*, which only admit third person subjects. *Bisogna* 'it is necessary' and *toca2* 'touch' select a full CP while *andare* 'go' and *vuole* 'want' select a passive past participle. Moreover, all deontic modals examined so far show the same morphological gaps in the verbal paradigm.

Thus, the evidence presented above leads us to conclude that:

- some morphological and syntactic restrictions are connected with the deontic reading of a modal verb
- the syntactic restriction on the subject depends on the type of selected structure: if a complete CP is selected no subject is permitted, if a past participle is selected only third person subjects are possible.

#### **4. The diachronic perspective**

##### **4.1. Introduction**

An argument in favour of the idea that the morphological and semantic properties are tied together comes from the history of Italian. In fourteenth century

Italian and, in the literary style, up until nineteenth century, *bisogna* has a different grammar form from the modern Italian *bisogna*. It appears that many of the restrictions indicated for modern Italian are absent.

#### 4.2. '*Bisogna*' through the History of Italian: the Data

##### 4.2.1. Boccaccio's '*Decameron*'

In Boccaccio's *Decameron* (second half of the XIV century) the thematic structure of *bisogna* is the following: an experiencer theta role is realized with a dative and a theme takes a nominative. The verb agrees with the theme-subject (recall that this is never the case in modern Italian).

- (21) a. E quivi da una vecchia procacciato quello che le bisognava,...(II, 9, 42)  
'And here from an old woman taken what that to-her was-necessary...'
- b. Saper far ciò che a ciò bisognava, ... (II, 10, 17)  
'Can (Inf.) do (Inf.) what that to this was-necessary'
- c. Oltre a questo non vi bisognerebbe d'aver pensiero... (III, 1, 16)  
'Above this not to-you would-be-necessary to worry... '
- d. Per ciò che egli ci bisogna... (III, 1, 16)  
'For what that he (Nominative) to-us is-necessary'
- e. e quando la gelosia gli bisognava del tutto...  
'and when the jealousy to-him was really necessary... '
- f. mi bisognano fiorini dugento d'oro  
'to-me are-necessary florins two hundred of gold'
- g. e per ciò che tu ci bisognavi per dir certe orazioni (VII, 3, 31)  
'and for what that you to-us were-necessary to say some prayers'

As predicted by our hypothesis, non finite forms are possible (we could not find an infinitive form, but the occurrences of *bisogna* are very limited in this text):

- (22) a. ...in più lunghi digiuni che loro non sarien bisognati  
(past participle) (II, 6, 41)  
'in longer fasten than to-them had not been-necessary'

- b. ...bisognandogli una grande quantità di denari... (gerund) (I, 3, 6)  
'...being-necessary to-him a large amount of money'

(21) and (22) are consistent with the modern *bisogna* examined in section 2. and show that the connection between the forms and the thematic structure postulated in section 2. is correct: Old Italian *bisogna* has two arguments in its theta grid and therefore it can be inflected for all tenses.

Also present in the corpus are some examples of impersonal *bisogna* (parallel to the modern usage) which does not show any overt argument:

- (23) a. e perciò non bisogna che io vi dimostri,...(III, 5, 11)  
'and therefore is not necessary that I to-you show...'  
b. che egli, se bisognasse, gli spezzerebbe delle legne (III, 1, 13)  
'that he, if were-necessary, to-him would break some wood'

In the *Decameron* there are very few examples of this type. All of them are coherent with the modern *bisogna*. The most frequent verb of necessity is *dovere*. Also *tocca* (cf. section 3) is not much used and it only has the construction *tocca*+NP or *tocca*+di infinitive meaning "it is someone's turn to".

No case of *tocca*+bare infinitive has been found. This means that also the verb *tocca* was different both from the modern Italian and from the Venetan counterparts.

#### 4.2.2. Machiavelli

*Il Principe* by Machiavelli (1513) shows the same type of *bisogna* found in the *Decameron*, as it has two theta roles, an experiencer and a theme.

- (24) a. e quando pure li bisognassi procedere contro al sangue di alcuno  
(p.82)  
'and when to-him were-necessary to go against the blood of anyone'  
b. et a tenere indietro li Veneziani, bisognava la unione di tutti gli altri  
(p. 55)  
'and in order to keep back the Venetians, was-necessary the union of all the others'

There are also some examples of impersonal *bisogna* with no overt arguments. However, the impersonal has all the forms that are not possible in modern Italian:

- (25) a. se fussino venuti tempi che fussi bisognato procedere con rispetti...  
(p. 124)  
'if were come the time that had been-necessary to go on with respect...'
- b. cioè se uno principe ha tanto stato che possa, bisognando, per sè uno destino reggersi,...  
(p. 51)  
'that is, if a prince has so much state that he can, being-necessary, for himself a destiny rule...'

The examples in (25) seem to contradict our hypothesis that whenever *bisogna* lacks a theta grid it loses non-finite inflection.

However, these cases can be interpreted as having an implicit experiencer argument, as the following examples suggest:

- (26) a. Chi vuole operar bene, bisogna allontanarsi da tutte le cure  
(Vasari, III, 507)  
'Who wants to act good, is-necessary to go away from all the cures...'
- b. Chi voleva entrare in essa, bisognava per forza inchinarsi con il capo  
(Giulio Cesare Croce, 95)  
'Who wanted to get in it, was-necessary to bend his head'

Here there must be a PRO which binds the reference of the anaphoric pronoun *si* attached to the infinitival verb. This PRO, which is coreferent with the wh-pronoun *chi* is controlled by the experiencer of *bisogna*. Therefore this experiencer must be present in the Syntax.

The modern counterpart of this example is the following, where an inflected sentence is obligatory:

- (27) Chi voleva entrare in essa, bisognava che si inchinasse con il capo  
'Who wanted to get in it, was-necessary that he bend his head'  
\*Chi voleva entrare in essa bisognava inchinarsi con il capo  
(modern Italian)

Hence, even the impersonal forms can be considered as different from the modern version of *bisogna*, as in Old Italian there is always at least one argument which may or may not be overtly realized.

Hence these cases do not constitute a counterexample to our hypothesis. On the contrary, they confirm our idea that thematic roles and functional projections are tightly linked.

#### 4.2.3. Case Alternations

Another possible structure which is realized in Old Italian but has disappeared in modern Italian is the following, where the experiencer is not realized with a dative but with a nominative and the theme is in the genitive case:

- (28) ...coloro che ne bisognano  
 ((Fra' Bartolomeo Amm.) ant. volg. 207)  
 '...those that (wh- subject) need of-it'

This possibility is present, though less frequent, throughout the history of Italian up to the XIX century:

- (29) Quasi tutte le giovani si fanno più belle in viso e non bisognano d'altri  
 ornamenti  
 (Foscolo, IV 342)  
 'Almost all young(fem) themselves make more beautiful in the face  
 and not need of other ornaments'

We thus have two possible case realizations of the two arguments of *bisogna*:

- (30) a. experiencer--> dative  
 theme--> nominative  
 b. experiencer --> nominative  
 theme--> genitive

The existence of two possible case realizations gives us a hint about the functional and argumental structure of *bisogna* in Old Italian, as we will see in section 4.3

#### 4.2.4. Galileo Galilei

We have examined the *Dialogo sui massimi sistemi* (1632) by Galilei, whose language seems to be less artificial than those of literary works.

Most examples of *bisogna* show the same pattern that we find in the modern language: the verb has no subject or object DP, it can take an inflected or infinitive sentence, and it is not inflected for participle, gerund and infinitive:

- (31) a. *bisogna dunque che voi diciate che...* (p. 114)  
       'is-necessary that you say that...'  
       b. *bisognerebbe detrarre quello che avesse fatto l'artiglieria* (p. 140)  
       'Would-be-necessary to deduce what that the artillery had done'

Only 8 examples out of 250 show the older structure with two arguments, an experiencer and a dative, which is common in the *Decameron*:

- (32) a. *che non vi bisogna chiamar principio interno ne' esterno per...* (p. 317)  
       'that not to-you is-necessary to invoke neither an internal nor external principle to...'  
       b. *vi bisogneranno l'emendazioni di minuti...* (p. 370)  
       'to-you will-be-necessary the correction of minutes...'

In each case the dative experiencer is realized as a clitic pronoun.<sup>10</sup> Note that this version of *bisogna* shows up in a present perfect, which does not occur when it is used without arguments:

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<sup>10</sup> The fact that the experiencer is always realized as a clitic pronoun strongly recalls some facts regarding *toca*. If the experiencer is realized as a tonic pronoun, it can only mean "it is someone's turn" and the infinitive sentence seems to be dislocated (as the intonational contour indicates). On the contrary, when the experiencer is realized as a clitic, the following infinitive sentence does not have any special intonation and the meaning is "someone has to do something which he does not like":



- (33) Mi è bisognato tardar lì (p. 335)  
 'To-me has been-necessary to linger there'

No gerund has been found. There are two examples with an infinitive, both of them embedded under the verb *concludere*:

- (34) a. vengono calcolando ... e concludendo bisognare in dottrina del  
 Copernico ammettere che... (p. 427)  
 'They are calculating and concluding be-necessary in the doctrine of  
 Copernico to admit that... '
- b. vo meco medesimo concludendo bisognare che quelli che restano ....  
 (p. 425)  
 'I am myself concluding be-necessary that those that stay... '

The verb *concludere* takes an inflected clause as its complement in modern Italian.<sup>11</sup> It is interesting to observe that when *bisogna* is used without arguments

- (i) Tocca a me, farlo  
 'Touches to me, to do it'  
 'It's my turn to do it'
- (ii) Mi tocca farlo  
 'To-me touches to do it'  
 'I have to do it (but I do not want to)'

This suggests that there are two different structures involved in the realization of the experiencer theta role. As the reading in (ii) is available only with a clitic, it could be hypothesized that the experiencer is realized as a sort of benefactive only when *toca* is a deontic auxiliary, but not when it has the reading in (i). If this is true, we could think that also the eight examples found in Galilei's work do not have the same structure than those found in Boccaccio's *Decameron*.

<sup>11</sup>. It seems plausible to think that in Old Italian the infinitive could show some of the properties connected with finite forms in modern Italian, especially because it could license an overt subject (cf. the Aux to C construction, which is still possible at a high stylistic level).

it never shows these forms in a sample of 242 sentences. It thus seems that the correlation between the presence of arguments and the activation of some functional projections that we have hypothesized for modern Italian holds in this case too.

A brief remark on *tocca*: in this stage it maintains the meaning "it is someone's turn" but it can also mean "it falls to/on someone, to happen to someone":

- (35) a. secondo il numero che gli è toccato (p. 91)  
       'according to the number that fell to him'  
       b. adunque non vi è toccato mai a veder la Terra (p.110)  
       'then not to-you has ever happened to see the earth'

It is construed with a DP or with an infinitive preceded by *a*. No bare infinitive has been found.

#### 4.2.5. Collodi

As a third stage we have examined Collodi's *Pinocchio* (1883), a tale written for children using the everyday language; the author intended to use a standard colloquial language based on spoken Florentine. This work presents the same distribution that we find in contemporary Italian, as *bisogna* is only used without arguments and only in the forms possible in modern Italian:

- (36) a. Bisogna sapere che... (p. 236)  
       'Is-necessary to know that...'  
       b. Bisognava pensarci prima (p. 295)  
       'Was-necessary to think about it before'

This shows that in the second half of the XIX century *bisogna* has already developed into its modern form. On the other hand, the use of the verb *tocca* is similar to that present in Galileo's language:

- (37) Non sai la fortuna che mi è toccata? (p.287)  
       'Not (you) know the luck that fell to me'

However, *tocca* has already acquired the modern deontic reading, even though it is construed with a prepositional infinitive:

- (38) ...o per forza mi toccherà a studiare (p.220)  
 'or necessarily to-me will touch (prep.) study (inf.)v  
 ' or I will necessarily have to study'

No bare infinitive has been found.

#### 4.3. *Diachrony and Synchrony come together*

The three stages that we have exemplified show that *bisogna* has changed over the course of time. In Old Italian *bisogna* is a verb with two arguments: an experiencer and a theme. These two arguments can be realized with two possible case configurations:

- a) the experiencer is realized with a dative and the theme with a nominative; or alternatively,
- b) the experiencer takes the nominative and the theme the genitive.<sup>12</sup>

In the first stage the impersonal *bisogna* is also present, even though in a limited number of occurrences. In Boccaccio's *Decameron* the impersonal *bisogna* only takes the modern forms, while in Macchiavelli it also occurs in the forms that contemporary Italian does not allow (past participle, infinitive and gerund). However, there are reasons to believe that also in these cases *bisogna* is not a real impersonal, having a phonetically empty experiencer which can control a PRO in the embedded infinitive (as we have hypothesized above commenting cases as (26)).

The second stage, represented by Galileo Galilei's work, shows a majority of examples of the impersonal *bisogna*, which behaves as in the modern language. A small group of examples has a behaviour which partly overlaps with the older usage.

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<sup>12</sup>. Recall that a similar pattern has been found in the case of auxiliary alternation between BE and HAVE (cf. the recent paper by Kayne (1993)). If the explanation adopted by Kayne for auxiliaries can be exploited in order to account for the development of *bisogna*, then the pattern FP [DP] is not to be confined to aspectual auxiliaries.

It takes a dative experiencer (always realized as a clitic) and a nominative theme: past participles are found with this structure.

The third stage, (Collodi's *Pinocchio*) shows no trace of the older construction with two arguments and behaves as the modern *bisogna* with respect to the forms possible.

Thus, the development of *bisogna* constitutes an argument in favour of our hypothesis that functional and argumental structure go together: when there are arguments, all forms are possible, when no argument appears to be selected by *bisogna*, only modal forms are found.

## 5. Deontic modals as functional heads

### 5.1. The problem

Let us sum up what we have seen so far: some modal auxiliaries have a particular reading that we have defined as “deontic reading” of pure necessity, where no thematic role is assigned. They show some particular morphosyntactic properties: some verbal forms are impossible (simple past, infinitive, gerund and past participle) and there are also restrictions on the occurrence of a subject; furthermore, deontic modal auxiliaries cannot host object clitics. We have formulated the hypothesis that there exists a relation between the deontic reading and the morphosyntactic properties observed. Both synchronic and diachronic observations confirm our hypothesis: some verbs in modern Italian varieties only show the morphosyntactic restrictions when they have the deontic reading. Moreover, the diachronic development of one of these verbs (*bisogna*) shows that the morphosyntactic restrictions appear only when the deontic reading is present.

We will now discuss a possible analysis of the relation we have hypothesized.

We have four different properties to explain:

a) the connection between the thematic grid and the morphological gaps in the verbal paradigm. This property is shared by all modal verbs that can select the particular deontic reading of pure necessity.

b) the reason why the morphological gaps in the paradigm exclude some verbal forms and admit others. In particular we would like to find out what the possible or impossible forms have in common that renders them respectively grammatical and ungrammatical.

c) the relation between the possibility of having a subject and the structure selected by the modal auxiliary. If the modal auxiliary selects a CP, no subject is possible (cf. *bisogna* and *toca2*); if it selects a passive past participle, only a third person subject is possible (cf. *andare* and *vuole*).

Both cases differ from English modals that have no restriction on the subject.<sup>13</sup>

d) the difference between verbs like *bisogna/toca2* and *sembra* “seem” with respect to subject raising. Both verbs take a + or - finite CP as their complement. Why is it the case that with *bisogna/toca2* the subject of the embedded verb cannot raise while this is permitted with *sembra*?

To account for these properties, we will assume an articulated functional structure of the sentence such as has been proposed in Cinque (1993) on the basis of surface relative order of adverbs. Cinque’s work shows that there exist restrictions on the sequence of sentence adverbs, so that some kinds of adverbs must always precede others. Moreover, the sequence appears to be the same in many languages. Cinque’s observations cannot be explained by the structure of the sentence that includes only AgrS, TP, AgrO and that treats adverbs as adjoined to VP. As the sequence of adverbial types is ordered and seems to be universal, he proposes that adverbs are located in specifier positions of semantically related FPs.

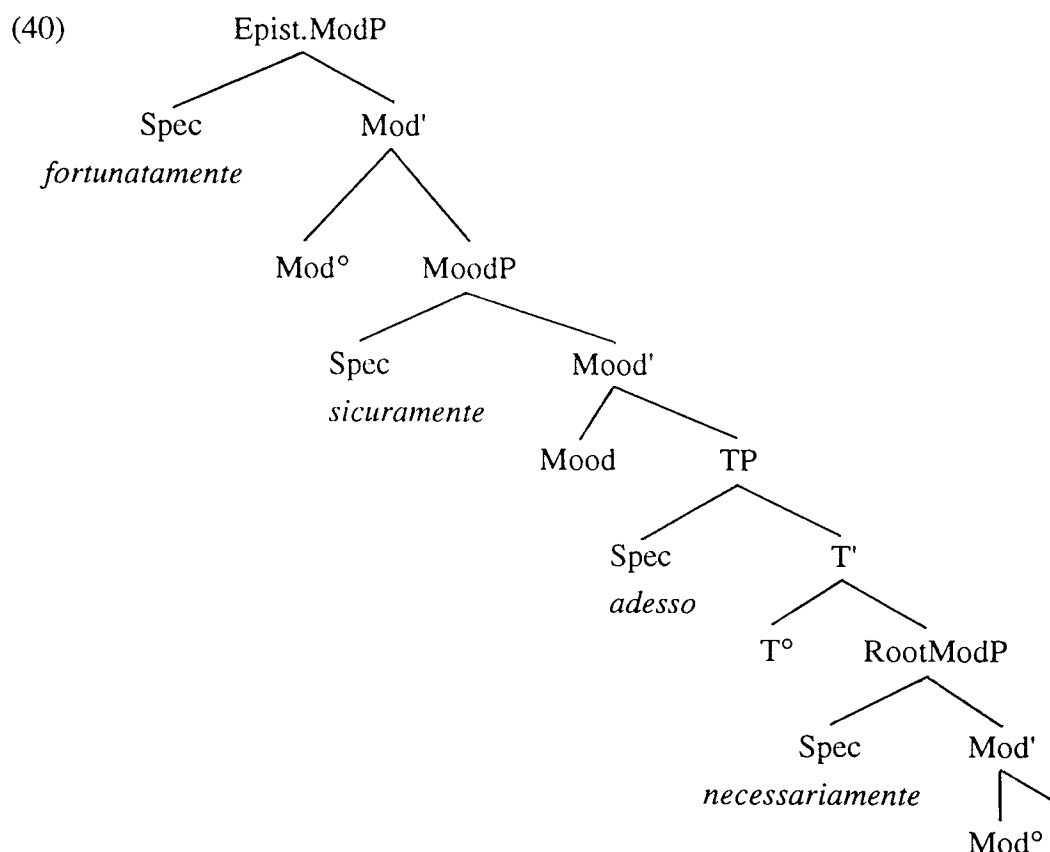
He also shows that we need the head positions of these FPs, as the inflected verb can be found in different varieties to the left of different types of adverbs, even though the relative order of adverbial classes never changes. The ordered series of adverbs that he observed is the following (using Italian items):

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13. However English has very poor person morphology and the difference noted here could be obscured by the fact that first and second person do not agree with the verb.

- (39) francamente (frankly) > fortunatamente (luckily) > sicuramente (surely) > adesso (now) > necessariamente (necessarily) > meramente (purely)

The structure of the sentence assumed by Cinque (1993) is very complex, and we will give here only the portion that is necessary to our purpose: <sup>14</sup>



Cinque (1993) presents evidence that there are three distinct modal phrases in the structure of the sentence. Two of them are located above TP and one is located lower than TP. The highest one hosts epistemic modality and its specifier position hosts adverbial elements like *fortunatamente* (luckily); this phrase does not concern us here directly. The second one is a MoodP that hosts a [+/-irrealis] feature

<sup>14</sup>. Cinque does not discuss AgrPs in his analysis, as they have different properties.

(connected in Romance to grammatical mood as subjunctive and conditional). Its specifier hosts adverbs like *sicuramente*.<sup>15</sup>

The third modal phrase is a "root modality" projection, whose specifier hosts adverbs like *necessariamente*.<sup>16</sup> Following Cinque's proposal, we will assume that a F<sup>0</sup> head can be marked as + or - strong in a given language, depending on the meaning of the sentence: for instance an aspectual head that defines the +/- perfective distinction will be marked as [+strong] if the tense of the sentence is a perfective one and as [-strong] if it is not perfective.

A verbal form that is marked as [+strong] for a certain feature in the lexicon must raise to check its feature on the corresponding functional head. Hence, a given verbal form that has strong features can only be selected in the lexicon if the corresponding functional head is also strong. This relation between +and - strong features of functional heads, verbal forms and meaning is crucial for our analysis of deontic modals.

## 5.2. *The analysis*

The central idea we want to exploit is that the deontic interpretation corresponds to the absence of a theta-grid. All modal auxiliaries that can have the deontic reading of "pure necessity" must lack a theta-grid.

Consequently, to this, modal auxiliaries are functional elements directly inserted into the head of a functional projection corresponding to their semantics. In other words, we propose that the deontic reading is provided by a purely functional element, such as modal morphemes.<sup>17</sup>

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15. Cinque notes that the order *fortunatamente sicuramente* is possible while *sicuramente fortunatamente* is not.

16. Note again that this type of adverb must necessarily follow the others seen above so that we get *fortunatamente sicuramente necessariamente* but not *necessariamente sicuramente* or *necessariamente fortunatamente*.

17. One could object that *bisogna* is an independent word, which does not need any morphological support: we are now familiar with functional elements that are independent words in one language while they are morphological elements in others. In this regard, we can recall that in a language such

Cinque's proposal gives us the more articulated structure that we need in order to derive the morphosyntactic properties of deontic auxiliaries from their semantics: modal auxiliaries are directly inserted into the Head of RootModP (cf.40).

If deontic modals are inserted under Rootmod<sup>o</sup>, what is the status of functional projections that occur lower than it in the structure of the sentence?

We can envisage two possibilities:

- a) the lower FPs could be present but all marked as [-strong];
- b) or they could be totally absent.

There is some evidence for the presence of a functional structure (but not the VP) lower than the root modality projection but higher than the embedded CP. It is provided by the fact that it is possible, also with *bisogna* and *toca2*, to have adverbs such as *mica, più, già* that are hosted, following Cinque 1993, in the specifier positions of functional projections lower than the root modality projection but clearly higher than VP:

- (41) a. *Bisogna già accendere il termosifone*  
'It is already necessary to turn on the heater'  
b. *Non bisogna più parlarne*  
'It is not necessary anymore to speak of it'

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as Classical Latin there is a morphological suffix *-ndum* which, added to the verb root, gives it deontic meaning:

- (i) a. *lege-re*  
'read (infinitive) '  
b. *lege-ndum*  
'to be read'  
c. *legendum est*  
'it is necessary to read'

For reasons of this kind, we chose to treat these verbs as pure functional elements. A possible alternative which deserves to be more extensively analysed and is for the momento equivalent to consider *bisogna* as generated under V<sup>o</sup> but only capable of moving directly to RootMod<sup>o</sup>, bypassing the intermediate head positions or, more precisely, passing through them vacuously.



- c. Toca zà impissare el termo  
'It is already necessary to turn on the heater'

This could mean that the structure is present, but the head positions are unavailable to a functional element such as a deontic modal auxiliary.

Whether the FPs lower than the root modality head are only inactive or not present at all is irrelevant for our theory as in both cases they cannot be marked with [+strong] features.

On the contrary we must assume that the VP of the modal auxiliary is not projected, as a consequence of the fact that deontic modal auxiliaries do not have a theta-grid.

Independent support for this assumption comes from the status of the CP embedded under modal auxiliaries such as *bisogna* or *toca*<sup>2</sup>. The embedded CP does not behave as a true thematic argument of the modal auxiliary. Some cases that can be revealing for our topic are analysed in this sense by Stowell (1981). He concludes that the different syntactic properties of the sentential complements of verbs such as *murmur* or *shout*, and near-synonyms such as *claim*, come from the fact that the latter but not the former thematically mark their sentential complement. It is possible to perform a simple test based on the observation that a noun morphologically related to the verb can have the same clause as its complement only if the clause is a thematic complement of the verb (see Stowell, 1981, 6.3). We can apply this test to our verb *bisogna* and see that the related noun *bisogno* - like the nouns *shout* or *murmur* in English - cannot have a sentential complement: <sup>18</sup>

- (42) a. \*[Bill's shout that I should get out of the way] surprised me  
(Stowell (1981):(51))  
b. 'Bill's claim that I should get out of the way surprised me'  
c. \*Il bisogno che tu parta è grande  
'The need that you leave is strong'  
d. La necessità che tu parta è grande

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18. The test is not applicable to *toca*<sup>1, 2</sup>, for which there is not in the language a related noun which have the deontic meaning (but only the transitive meaning).

The fact that the embedded CP does not behave as a thematic argument of the modal auxiliary confirms the hypothesis that a verb like *bisogna* or *toca2* does not have a VP.<sup>19</sup>

Our proposal tries to transpose an old idea about English modals (cf. Lightfoot (1979) and Roberts (1985)) in terms of a more precise theory of syntactic encoding of semantic features and exploits its potential to account for the subtle aspects of the syntactic and morphological behaviour of modals.

It is clear however, that our hypothesis must be different from that regarding English modals, as they seem to have a monoclausal structure, while Italian deontic modals can select at least two distinct syntactic portions: *bisogna* and *toca2* select a complete CP while *andare* and *vuole* select a passive past participle.<sup>20</sup>

We will now try to explain the observed properties of deontic modals on the basis of the hypothesis illustrated above.

### 5.2.1. Morphological gaps in the paradigm

Our hypothesis derives the ungrammaticality of some verbal forms from two distinct factors. Recall that the impossible forms are a) simple past b) past participle c) gerund d) infinitive.

We have proposed that deontic modals are directly inserted under the root modality head, leaving the lower FPs inert. From this it follows that verbal forms having a [+strong] specification for functional heads that are marked as [-strong]

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<sup>19</sup>. The new syntactic theory presented in Chomsky (1992) and (1994) gives us a new possibility to capture the connection between the morphological gaps and the absence of a thematic grid. Chomsky (1994) proposal about syntactic structure only admits that a set (a set of sets) of features are projected and then merged with others. Thus, it is not possible to have a totally empty  $V^{\circ}$  category, there must be at least a phonologically empty verbal head in order to project its features to the maximal node.

<sup>20</sup>. Our analysis still needs a refinement in order to account for intermediate cases where the absence of some FPs seems connected with the absence of some thematic role. An auxiliary like *andare* in its purely passive reading for instance, cannot have an agent expressed and at the same time cannot be inflected in the simple present form.

cannot be realized, as the features of the verbal form do not match the features of the corresponding functional head. Verbal forms, such as the past participle or the simple past, which have strong aspectual features, cannot thus be checked. Hence, our theory predicts that such forms are excluded for modal auxiliaries.

However, these two forms are not the only ones that are not available: the infinitive and the gerund are also impossible, but they are not marked with any strong feature on heads that are lower than the root modality head.

There are two ways to consider the problem: either look at the impossible forms and try to find out what they have in common, and then why they are excluded, or look at the possible forms and try to discover why they are permitted.

It is possible to find a common feature for the possible forms: they can be all marked with a [+irrealis] feature. The subjunctive and the conditional can have both an irrealis value, and the same is true for the future and the imperfect (see Bertinetto (1993)). Even the present tense form can be interpreted as irrealis (see Bertinetto (1993)). All these forms can thus mark the head of MoodP as [+strong] in the structure seen above, but this is not the case for the impossible forms, which can never mark Mood<sup>o</sup> as [+strong]. Hence, we can formulate the hypothesis that deontic modal auxiliaries can only be inserted under the root modality head if the higher Mood<sup>o</sup> head is marked [+strong], but not if Mood<sup>o</sup> has the default specification, as is the case for the impossible forms.

In other words, the root modality head can contain the deontic modal only if the higher Mood head is marked with strong features. Thus, all forms that cannot be specified as [+irrealis] or that must check a strong feature on weak functional heads are not grammatical with deontic modal auxiliaries.

Note that our analysis of impossible forms with modal auxiliaries contains two distinct explanations: some forms are excluded because they must check strong features on FPs that cannot be marked as [+strong] and thus remain with unchecked features, and other forms are excluded because they cannot be marked as [+irrealis] and deontic modal auxiliaries are only compatible with a strong Mood head.

Note also that it is only with modal auxiliaries that the set of missing forms remains constant. Other types of auxiliaries, which do not need a Mood head marked with the [+irrealis] feature, tolerate the infinitive and gerund, but can never be inflected for the past participle. The passive auxiliary *venire* "come" for instance can be inflected for the infinitive and the gerund but not for the past participle form:

- (43) a. Venire arrestati non è un'esperienza piacevole  
'To be arrested is not a pleasant experience'  
b. Venendo arrestato tutti i giovedì, ha assunto un avvocato  
'Being arrested every Thursday, he has hired a lawyer'  
c. \*E venuto arrestato ieri  
'(He) has been arrested yesterday'

This is predicted by our hypothesis that different verbal forms are excluded on the basis of different factors. It is not a problem that some tenses are excluded on the basis of their unchecked features and others because they do not have the “correct” value. On the contrary, we need this partition among impossible forms, since with other auxiliaries the impossible forms constitute only a subset of those seen with modal auxiliaries. This hypothesis also explains why a single argument is sufficient to “restore” the morphology that a modal auxiliary with no thematic grid lacks. If a verb has a thematic grid, (even though it contains only one argument), it must project a VP and is inserted under V°. Consequently all the FPs can be marked with [+strong] features and all verbal forms can be checked in the appropriate position.

### 5.2.2. *Restrictions on the presence of a subject and object clitics*

Let us now turn to the other two questions: why is it that the possibility of having a subject depends on the type of selected structure?

We will begin with the analysis of *bisogna* ‘it is necessary’ and *toca2* ‘touch’ neither of which can have a subject.

As deontic modal auxiliaries do not have a theta-grid, they cannot have a thematic subject.

However, one might hypothesize that they could have a raised subject. This question is connected to the other one, which regards the difference between *bisogna* and a raising verb.

From a purely descriptive point of view, it seems that the difference between *bisogna* and a raising verb lies in the presence of a thematic structure. A verb like *sembrare* always has an (explicit or implicit) experiencer theta-role. If this is really the discriminating factor that distinguishes between a raising verb and a non-raising one, we can treat raising as a non-primitive property. One could hypothesize that the

raising property depends on the presence of a VP. We will not go into the detail of this topic but will restate our observation in the form of a descriptive generalization:

- (44) A raising verb must have a thematic grid

As modal auxiliaries do not assign any thematic role, they do not have a VP. Hence, they cannot be raising verbs. The difference between *bisogna* and raising verbs can thus be derived from our assumption that deontic modals lack a VP.

The only possibility that remains open to *bisogna* is to have an expletive subject. Recall however the data illustrated in section 2.: *bisogna* cannot control a PRO, it lacks an Agreement morpheme in Sardinian and it lacks expletive subject clitics in the northern Italian varieties. It thus seems that the AgrS projection of *bisogna* and *toca2* is not available at all. In order to explain these facts, we will assume that the lack of a VP implies the lack of all AgrPs related to the arguments of the verb. This also explains why *bisogna* and *toca2* cannot host object clitics: as object clitics are also related to Agreement projections, they cannot occur.

The other two modal verbs that we have examined, namely *vuole* and *andare* tolerate a subject. However, their embedded structure is not a complete CP, as is the case for *bisogna* and *toca2*, but a passive past participle (probably a VoiceP, following Cinque's theory). We can hypothesize that verbs like *vuole* 'want' and *andare* 'go' are inserted under the root modality head but embed a [+strong] VoiceP (following Cinque (1993) the passive is the strong value for the Voice head) and not a complete CP as *bisogna* and *toca2*.

As the structure with verbs like *vuole* and *andare* is monoclausal, the AgrPs can be activated if they are parasitic on the VP of the embedded verb. Thus, the object of the embedded past participle can occur as the subject of the modal auxiliary. A more difficult question is the one regarding the features of the subject: why are only third person subjects permitted, while first or second person subjects are not possible?

In order to answer this question, we need a more articulated theory of the Agreement projection(s), which we do not have at present. A possible line of investigation could exploit Kayne's modular analysis of auxiliary verbs (cf. Kayne (1993)). He assumes the presence of an AgrS projection in the syntactic space of the past participle. This AgrS is clearly sensitive to person features, as it triggers syntactic differences according to the person feature.

We could advance the hypothesis that this AgrSP must be located higher than VoiceP but lower than the root modality head. In a highly speculative vein, it could be the case that the lower AgrSP cannot be activated as it is contained in the inactive portion of the sentence. This suggestion is clearly not a satisfactory answer to the facts that we have observed, but we hope that it can contribute to lead future research to explore the connections that exist between the structure of VP and functional projections.

## 6. Conclusion

Let us now sum up the analysis we have presented here. We have examined synchronic and diachronic instances of the process that changes a lexical item into a functional element. We have found out that the loss of a thematic grid is a necessary requirement for this transformation. Some deontic modal verbs that lack a thematic grid are characterized as functional heads by virtue of this property. They are directly inserted in RootMod<sup>o</sup>, where the higher functional head of Mood<sup>o</sup> is marked as [+irrealis]. The functional structure lower than Rootmod<sup>o</sup> is not activated.

While verbs like *bisogna* and *toca2* do not have access to any active VP, *va* and *vuole* can be parasitic on the VP of their participle complement and thus admit a third person subject.

It seems evident that English modals, with their morphological poverty and syntactic restrictions, are such as to permit the same type of analysis that we propose here. They could also be considered as inserted into the functional modal head corresponding to their semantic interpretation (as epistemic or as deontic). English modals, however, look more similar to the Italian *va* and *vuole* than to *bisogna* and *toca2* as the embedded FP is not a complete CP but a lower portion of the functional structure.

French *falloir* is also very similar to *toca*, and it could possibly be shown that the two behave in the same way if we were to succeed in isolating a *faut1* and *faut2* as we did with *toca*. In order to do this, however, very delicate operations involving subtle semantic interpretations are required, and these can only be performed by a native speaker. An interesting question regards the reason why most Italian varieties have developed a class of functional modal heads. We do not have an idea of other properties that may be related to this change in the history of Italian, but it is clear

that this cannot be related to the loss of verbal agreement morphology as seems to be the case for English.

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# On Pronoun Positions in Swedish and Italian, Antisymmetry, and the Person Phrase

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It is by now generally recognized that positions higher than IP and lower than Comp are available in the finite clause structure. Apart from the split of Infl into AgrS and T (e.g. Pollock 1989, Belletti 1990, Chomsky 1993), further evidence has been given for additional positions between AgrS and C. For some scholars, this evidence has been dealt with in terms of AgrS recursion (Belletti 1990, Cardinaletti & Roberts 1991, Roberts 1993, Poletto 1993, Zwart 1994, Cardinaletti 1994, and elsewhere), whereas others have argued for an Agr projection belonging to the Comp system, (e.g. Shlonsky 1992, Platzack 1994, Uriagereka 1995, Rizzi 1995). In the following pages, I will present parts of a work in progress based on Swedish and Italian data; some of these are new, most of them are well known. The novelty of this work therefore lies in the approach. I will show that certain word order patterns, concerning the distribution of subject and object pronouns and some adverbs, are substantially similar in Swedish and in Italian, and I will propose a unifying account for this parallelism. In particular, I will argue that the distribution of Swedish pronouns shows that there is a functional projection in the main clause, higher than AgrS but lower than Comp, which may be the target for pronouns and not for R-expressions. This difference in distribution between R-expressions and pronouns justifies the introduction in the theory of syntax of a semantic distinction, namely that between items that have *person* specification and those that do not, following a line of thought according to which the intrinsic third person specification of R-expressions is a default value rather than a person feature. I will suggest that this distinction is encoded in the syntactic component by the projection of a *Person Phrase* that may be the target only for items with a person specification, and that certain word order

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patterns are imputable to the checking process taking place here.<sup>1</sup> As the relevant data are available in some but not all languages, the syntactic presence of the Person Phrase is likely to be parametrized across languages, whereas the corresponding semantic distinction may be universal. Moreover, the hypothesis outlined below will be compatible with the restrictive approach to X'-Theory formulated by Kayne (1994).

In section 1, I will first present the Swedish data and point at some conclusions that can be drawn from them. In section 2, I will show how the hypothesis accounts for the distribution of pronouns and some adverbs in Italian finite and absolute clauses. In the last section, I will point at some consequences of the analysis for word order patterns in Old Italian topicalization structures.

## *1. Subject and Object Pronouns in Swedish Main Clauses*

### *1.1. Preliminary Observations*

Two general classes of Scandinavian pronouns are recognized in the recent literature and generally referred to as *weak* and *strong* (cf. Holmberg 1986, 1991, 1993; Josefsson 1992, 1993; Cardinaletti 1994, 1995; Cardinaletti & Starke 1995; Holmberg & Platzack 1995, among many others). Weak and strong pronouns are morphophonetically identical and the distinction between them is based on stress: weak pronouns are unstressed and strong pronouns are stressed. They differ with regard to distribution.

First and foremost, object R-expressions may not undergo A-movement (overt object shift) in Mainland Scandinavian including Swedish (Vikner 1990, Holmberg & Platzack 1995). Object pronouns, on the contrary, may appear in three different positions in a Swedish main clause hosting a simple tense (disregarding the sentence initial position, the Topic); the examples of (1a)-(1b) are from Josefsson (1992, 62). Positions 2 and 3 are distinguished by the presence of negation (henceforth, object pronouns are indicated with

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<sup>1</sup>. The idea of a split of the AgrS node is pursued by Poletto (1993, 90-97; Poletto makes a reference to unpublished work of Ur Shlonsky) and Bianchi & Figueiredo Silva (1993). A comment on the Person Phrase was made in Egerland (1996, 255) on the basis of data different from those that will be discussed in the present paper.

bold face):

(1)	<i>The distribution of object pronouns.</i>					
		<b>pos1</b>	Subject	<b>pos2</b>	Neg	<b>pos3</b>
(1a)	Varför hjälper	<b>mig</b>	Helge		inte?	
	why helps	<b>me</b>	Helge		not?	
(1b)	Varför hjälper		Helge	<b>mig</b>	inte?	
	why helps		Helge	<b>me</b>	not?	
(1c)	Varför hjälper		Helge		inte	<b>MIG?</b>
	why helps		Helge		not	<b>ME?</b>

The examples (from Josefsson) are wh-structures with V2 subject inversion. That positions one and two are actually distinct becomes obvious in a subject inversion clause, as they appear on each side of the inverted subject. The pronoun is weak in positions one and two, and strong in position 3.<sup>2</sup> Moreover, position one in (1) is not available in Norwegian and Danish. Thus, the data and the conclusions that follow are relevant only for Swedish.

Consider then the possible landing sites of a subject (disregarding as before the sentence initial position). Unlike R-objects, R-subjects are overtly moved and the subject positions that are of interest thus concern both pronominal and referential subjects. I call these positions A, B, and C in order to avoid confusion. Consider first the highest and the lowest of the subject positions (henceforth, subject pronouns are indicated with italics):

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<sup>2</sup>. For reasons I shall not discuss, object pronouns raise overtly only in simple tenses and finite main clauses, not in compound tenses, subordinates, and infinitives; see Holmberg (1986) and Jonas & Bobaljik (1993). The demonstration is limited to main clauses with simple tenses. As for those, there is a possibility for some speakers to use a weak pronoun in position 3, but this should probably not be interpreted in the sense that weak pronouns are generally allowed to the right of negation in Swedish; cf. Holmberg 1991, 156 and see further the examples (12) and (13) below.

(2) *The distribution of subjects*

		<i>posA</i>	Neg	<i>posC</i>	
(2a)	Varför kom why came	<i>hon</i> <i>she</i>	inte? not?		igår? yesterday?
(2b)	Varför kom why came		inte not	<i>HON</i> <i>SHE</i>	igår? yesterday?

As the object pronoun, the subject carries stress when it appears to the right of negation in position C, inside VP. There is a third possibility (cf. Holmberg 1993, 32-33), a position B distinct from A, that emerges when there is an intervening sentence adverb like *möjligen* 'possibly'. There is a difference in distribution between R-subjects and pronominal subjects:

(3) *The distribution of subjects*

		<i>posA</i>	Adv	<i>posB</i>	
(3a)	Har has	<i>Johan</i> <i>John</i>	möjligen possibly		inte kommit än? not come yet?
(3b)	Har has		möjligen possibly	<i>Johan</i> <i>John</i>	inte kommit än? not come yet?
(3c)	Har has	<i>han</i> <i>he</i>	möjligen possibly		inte kommit än? not come yet?
(3d)	*Har has		möjligen possibly	<i>han</i> <i>he</i>	inte kommit än? not come yet?
(3e)	Har has		möjligen possibly		inte <i>HAN</i> kommit än? not <i>HE</i> come yet?

As can be seen from (3a)/(3b) and (3c)/(3d) an R-subject may optionally appear on both sides of the adverb, whereas a pronominal weak subject may only be to the left of the adverb. Compare (3d) with (3e), which is grammatical, where the subject carries stress and stays to the right of negation (in position C).<sup>3</sup>

<sup>3</sup>. It should be pointed out from the beginning that the intonational properties of these constructions are

The analysis of these positions will depend on certain other assumptions about the status of pronouns and the structure of the finite main clause, generally and in Swedish. I will go through these in I-IV:

I. The so called weak pronoun in Swedish corresponds to certain criteria for clitic hood. It cannot be conjoined, modified or stressed (as we have already said) when it appears in positions 1 and 2; cf. Holmberg (1991, 156); Josefsson (1992, 62; 1993). Unlike the object pronoun, the subject pronoun may be either weak or strong when it appears to the left of negation or the VP-adverb. It is possible to conjoin and modify the subject pronoun in the relevant position:

(4a) Varför kommer *hon och Johan* inte ikväll?  
why come *she and John* not tonight?

(4b) Varför kommer *bara han* ofta och hälsar på?  
why comes *only he* often and visits us?

Furthermore, a Swedish pronoun, both subject and object, may take a PP as its complement:

(5a) *Hon med den röda klänningen* kom på festen igår  
she with the red dress came to the party yesterday

(5b) Känner du **henne med den röda klänningen**?  
do you know **her with the red dress**?

A subject pronoun with a PP complement can appear in the inverted subject position to the left of negation as in (6a). However, there is a contrast between (6b) and (6c), suggesting that an object pronoun with PP complement must stay in situ.

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sometimes hard to interpret. I will have little to suggest for focused pronouns. In many of the structures that follow, it is possible to focus the subject pronoun which in certain cases brings about an improvement of the examples. Presumably, focus makes available some positions in the clause structure that otherwise are not.

- (6a) Igår kom *hon med den röda klänningen* inte på festen  
yesterday came she with the red dress not to the party
- (6b) ??Jag känner **henne med den röda klänningen** inte  
I know her with the red dress not
- (6c) Jag känner inte **henne med den röda klänningen**  
I know not her with the red dress

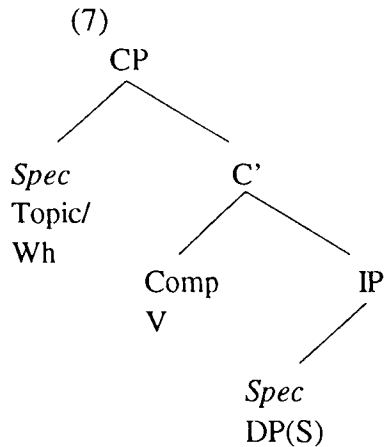
The subjects and the objects of (4)-(6) are strong pronouns and have undoubtedly XP status. However, opinions diverge on the X'-status of weak pronouns. Vikner (1990), Holmberg (1991, 1993), Holmberg & Platzack (1995), Cardinaletti & Starke (1995) assume that weak pronouns adjoin to maximal projections as an XP. Josefsson (1992, 1993) argues instead that the weak pronoun is a head cliticizing to heads. Against the clitic approach, it is argued by Holmberg (1993, 31 f.n. 3) that the weak pronoun needs not be adjacent to the V - it is not in position 2, for instance. This argument is not compelling, however. Kayne (1991, 1994) argues that clitic elements may have the property to cliticize to empty functional heads. In historical and dialectal Romance, we know that pronouns that are arguably clitic can be separated from the finite V by certain adverbs such as French *bien*, or Italian *pure*; cf. Kayne (1991, 1994, 42), Benincà & Cinque (1993, 2324-2325), Egerland (1996, 295-296).

It should be pointed out that the analysis outlined below is viable regardless of the X'-status of weak pronouns.

II. When a main clause is introduced by a topicalized element or a *wh*-expression, the finite verb moves to Comp, the Topic occupies the specifier of Comp and the inverted subject is placed in the specifier of Infl:<sup>4</sup>

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<sup>4</sup>. Note that this assumption does not depend on whether we assume a symmetric account of V2, based on V-to-Comp movement in all main clauses, or an asymmetric account, based on V-to-Comp movement only in topicalized structures or *wh*-questions; see Vikner (1990) and Holmberg & Platzack (1995) for the former view and Zwart (1993) for the latter.



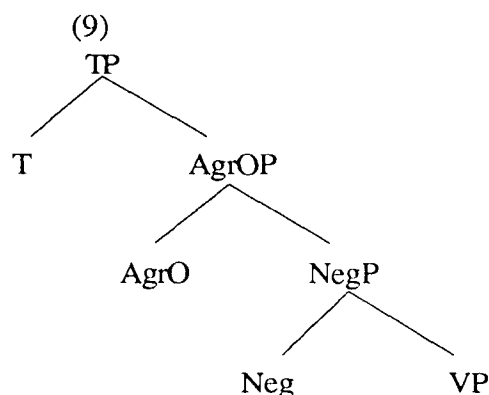
III. I will start my demonstration by assuming the sentence structure proposed by Chomsky (1993):

$$(8) \quad [CP C [AgrSP AgrS [TP T [AgrOP AgrO [VP V]]]]]$$

We will soon see that there are good reasons to modify the hypothesis expressed in (8). However, I will assume throughout that object pronouns in position 2 are in the domain of AgrOP.

Holmberg (1993, 33-34) assumes that both Spec T and Spec AgrS are available for the subject in Swedish, the difference being that weak subject pronouns must move to Spec AgrS whereas R-subjects move obligatorily to Spec T and may optionally continue to Spec AgrS. The sentence adverb *möjligen* in (3a)-(3e) adjoins to TP. Thus, in Holmberg's (1993) hypothesis, subject position A is Spec AgrS and subject position B is Spec T. I will formulate an alternative to this view below.

IV. It is generally held that the negation *inte* divides the VP from the functional portion of the clause. Thus, negation is on top of VP, either in the sense that it is adjoined to VP as an adverbial or that the projection NegP has its fixed position in the tree, being the complement of AgrOP and taking VP as its complement (cf. Holmberg & Platzack 1995, Vikner 1990, Josefsson 1992, among others).



If Antisymmetry is assumed, the analysis implies that elements appearing to the right of negation are under VP, whereas elements to the left of negation have moved out of VP.

The linear ordering of elements in relation to negation can thus be used as a criterion for establishing their positions in the tree. The same is presumably true for adverbs as *ofta* 'often' or *fullständigt* 'completely', that in a pre-antisymmetric frame work would be VP-adjoined (cf. the *lower adverbs* of Belletti 1990 in section 2 below, examples (50)-(52)).

(10) Han övertygade **henne** fullständigt. (weak pronoun in object position 2)  
he convinced **her** completely

(11) Han övertygade fullständigt **henne**. (strong pronoun in object position 3)  
he convinced completely **her**

However, Holmberg (1993, 33-34) diverges from the standard view by assuming that negation may adjoin as an adverb either to VP or to TP. In the following discussion, this idea cannot be followed. First, Cardinaletti & Guasti (1992) argue that there is a structural difference between *sentence negation* and *constituent negation*. Sentence negation, which appears in the finite clause, is a phrase projected by the verb and is dependent on the presence of Tense according to the Negation Criterion formulated by Zanuttini (1991). Constituent negation is adverbial and appears in certain types of small clauses which are tenseless (Cardinaletti & Guasti 1992, 28). It follows from this distinction that the sentential negation of Swedish as well as other languages cannot be adverbial and that the appropriate structure is (9).<sup>5</sup> Holmberg's (1993) suggestion may be natural if negation

<sup>5</sup>. For Scandinavian, at least. Cardinaletti & Guasti (1992, 4) assume a different ordering of the



behaves as an adverb, but ought to be ruled out by the hypothesis expressed in (9).

Furthermore, there are empirical doubts on the idea that negation optionally adjoins to TP. By this, Holmberg predicts that weak object pronouns could appear to the right of negation (namely if the negation adjoins to TP and the weak objects move to AgrOP). Consider now that, when there are two weak objects (one dative and one accusative), the linear ordering between them is free in many varieties of Swedish.

- |       |                                      |               |
|-------|--------------------------------------|---------------|
| (12a) | Hennes mor gav <b>henne den</b> inte | (dat-acc-neg) |
|       | her mother gave <b>her it</b> not    |               |
| (12b) | Hennes mor gav <b>den henne</b> inte | (acc-dat-neg) |
|       | her mother gave <b>it her</b> not    |               |

If we place negation to the left of these pronouns we obtain the following contrast:

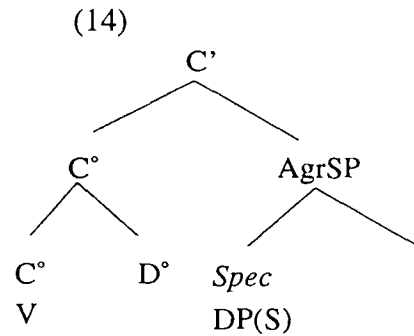
- |       |  |                |
|-------|--|----------------|
| (13a) | Hennes mor gav inte <b>henne den</b>   | (neg-dat-acc)  |
|       | her mother gave not <b>her it</b>      |                |
| (13b) | ??Hennes mor gav inte <b>den henne</b> | (*neg-acc-dat) |
|       | her mother gave not <b>it her</b>      |                |

Apart from the fact that there is a clear difference in intonation - in my opinion - between the pronouns of (13a) and those of (12a) and (12b) (preferably, the dative pronoun in (13a) carries stress), word order is evidently not free. More precisely, the dative pronoun in (13b) must be introduced by a preposition (... *inte den till henne* '... not it to her'), and I take this to be an indication that the dative pronoun in the final position is in its basic position.

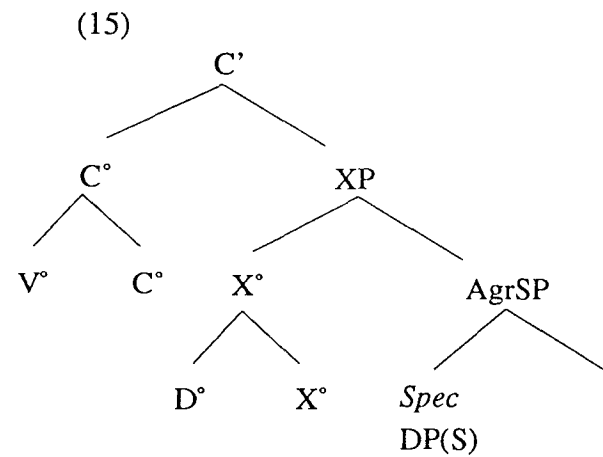
Summing up so far, I assume that object position 3 and subject position C are the basic positions inside VP. Object position 2 is either the specifier or the head of AgrO, depending on the X'-status of the weak object pronoun. It remains to be settled where the object pronoun is placed in position 1 and what the difference is between the subject positions A and B.

### 1.2. Defining Object Position 1 and Subject Positions A and B

Josefsson (1992, 70) reaches the conclusion that the object pronoun in position 1 has right adjoined to Comp, as in (14):<sup>6</sup>



The structure obviously violates Antisymmetry, but this problem could be circumvented if we assume that there is an additional position between CP and AgrSP onto which the weak pronoun can left adjoin:



Let us look closer on the properties of this construction. Consider (16a)-(16e) ((16a) and

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<sup>6</sup>. The proposal is reminiscent of Platzack (1986) who assumes that weak subject pronouns are right adjoined to Comp; this idea is rejected by Holmberg (1991, 1993) as well as by Cardinaletti & Starke (1995).

(16b) from Josefsson 1992, 66; (16c) from Josefsson 1993, 24).

- (16a) Förra veckan sände **mig** min fästman ett stort fång rosor.  
last week sent **me** my fiance a big bunch roses
- (16b) På stationen mötte **honom** morfar och mormor med en fin present.  
at the station met **him** grandpa and grandma with a nice present
- (16c) Därför ger **mig** Tutanchamons förbannelse inte någon ro.  
therefore gives **me** Tutanchamon's curse not any peace
- (16d) Varför oroar **sig** Kalle inte mer än så?  
why worry **himself** Kalle not more than that
- (16e) På sjukhuset besökte **mig** Maria ofta  
at the hospital visited **me** Mary often

There are certain restrictions on (16a)-(16e).<sup>7</sup> The subjects of Josefsson's examples are somewhat heavy (cf. her comment 1992, 66). In my opinion, acceptability does not actually decrease if the subjects are less heavy:

- (17a) Förra veckan sände **mig** Johan ett stort fång rosor.  
last week sent **me** John a big bunch roses
- (17b) På stationen mötte **honom** Johan med en fin present.  
at the station met **him** John with a nice present
- (17c) Därför ger **mig** Johan inte någon ro.  
therefore gives **me** John not any peace

More importantly, if the subjects of (16)-(17) are pronominal the acceptability decreases clearly (cf. Josefsson 1992, 80). There is a contrast between (18a)-(18g) and (16a)-(16e) above. Person and number specification of the pronouns does not seem to matter:

- (18a) \*Förra veckan sände **mig** *han* ett stort fång rosor.  
last week sent **me** *he* a big bunch roses
- (18b) \*Förra veckan sände **er** *vi* ett stort fång rosor  
last week sent **you** *we* a big bunch roses
- (18c) \*På stationen mötte **honom** *jag* med en fin present.  
at the station met **him** *I* with a nice present

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<sup>7</sup>. I will disregard the thematic restrictions Josefsson mentions in (1992, 65-67).

- (18d) \*På stationen mötte **henne** *hon* med en fin present  
at the station met **her** *she* with a nice present
- (18e) \*Därför ger **dig** *hon* inte någon ro.  
therefore gives **you** *she* not any peace
- (18f) \*Varför oroar **er** *ni* inte mer än så?  
why worry **you**[refl.] *you*[sub.] not more than that?
- (18g) \*På sjukhuset besökte **henne** *jag* ofta.  
at the hospital visited **her** *I* often

My judgments for all of (18a)-(18g) presuppose a weak, unstressed reading of the subject pronoun. They improve considerably if the subject is contrastively focused:

- (19a) Förra veckan sände **mig** *HAN* ett stort fång rosor (och ingen annan)  
last week sent **me** *HE* a big bunch roses (and no one else)
- (19b) På stationen mötte **henne** *HON* med en fin present (men jag kunde inte komma)  
at the station met **her** *SHE* with a nice present (but I couldn't be there)

In such cases, the subject is preferably to the right of the negation. I assume the subject in these constructions appears inside VP, position C of (2).

Furthermore, (20a)-(20c) are perfectly well formed with the subject pronoun preceding the object pronoun:

- (20a) Förra veckan sände *vi* **er** ett stort fång rosor  
last week sent *we* **you** a big bunch roses
- (20b) Därför ger *hon* **dig** inte någon ro.  
therefore gives *she* **you** not any peace
- (20c) Varför oroar *ni* **er** inte mer än så?  
why worry *you*[sub.] **you**[refl.] not more than that

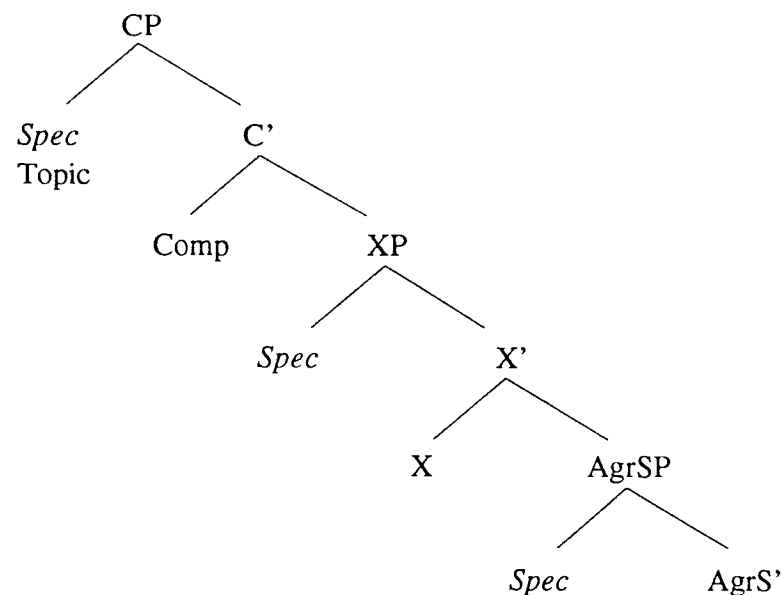
The most natural assumption is that in (20a)-(20c), the object has stayed under AgrOP, that is, position 2 of (1a)-(1b) above; an option which always appears to be available for a weak object pronoun.

There are several conclusions to be drawn from these data. First of all, consider that (18a)-(18g) cannot be excluded by any general ban on VOS word order in the Swedish main clause, given the grammaticality of (16) and (17) above. It is also unlikely that the heaviness of the subject plays a role, since there is no significant contrast between (16a)-

(16c) and (17a)-(17c). Moreover, it is difficult to ascribe the ungrammaticality of (18a)-(18g) to any restriction on two unstressed pronouns appearing together. The sequence <weak subject-weak object> is perfectly well formed in (20a)-(20c) and so is the sequence of <weak dative object-weak accusative object>, see (12a) and (12b) above. An explanation of the contrast between (16a)-(16e) and (18a)-(18g) in terms of Case Theory or Theta Theory appears to be difficult to find; it may therefore be a warranted move to ascribe the difference to a violation of principles of X'-Theory. This is the alternative I wish to explore.

Suppose that (18a)-(18g) are excluded because the weak subject pronouns and the weak object pronouns are in competition for the same position and that the position in question is not a target for R-expressions. Suppose this position is within the projection indicated as XP in (15) above, given here as (21).

(21)

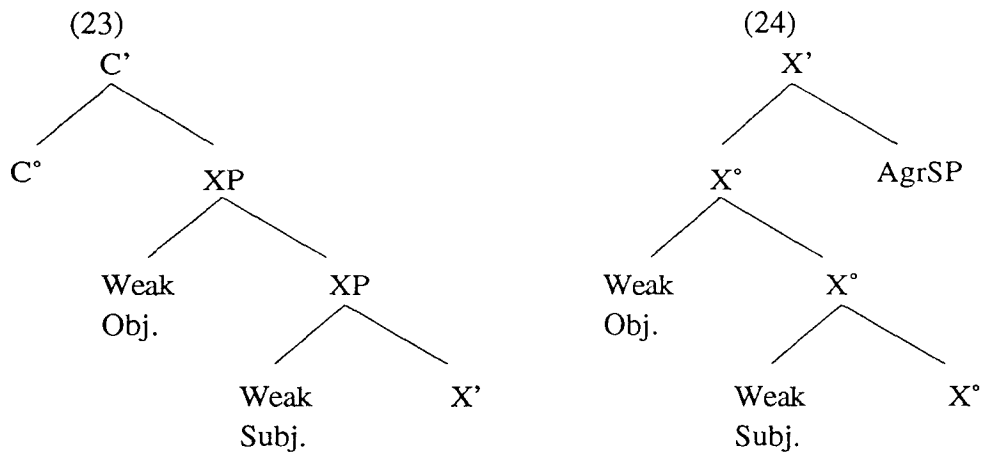


Judging from (21), it appears that XP may belong to the Infl system or to the Comp system. If we take the latter view, X may be, for instance, a Topic Phrase or a Focus Phrase in Rizzi's (1995) model. Both these options are excluded: the weak pronoun cannot be focused and in the main clause other elements cannot appear here as we would have expected if XP was a Topic Phrase. The temporal adverb is excluded as in (22a), the preposition phrase cannot be topicalized as in (22b), whereas a sentence adverb as

*förmodligen* ‘probably’ can appear here, witness (22c) (henceforth, the elements I assume to be topicalized are underlined):

- (22a) \*Därför mötte igår farmor och farfar honom inte på stationen.  
therefore met yesterday grandma and grandpa him not at the station
- (22b) \*Därför mötte på stationen farmor och farfar honom inte igår.  
therefore met at the station grandma and grandpa him not yesterday
- (22c) Därför mötte förmodligen farmor och farfar honom inte på stationen igår.  
therefore met probably grandma and grandpa him not on the station  
yesterday

If XP was a Topic phrase we would not expect any significant difference between (22a), (22b), and (22c), and we are thus in a position to conclude that the relevant position is not TopicP. I assume instead that XP is an agreement projection of some kind (though not AgrSP), in which the concomitant presence of subject and object pronoun is barred. There are two possibilities to consider: weak pronouns may either move as DP or as D°. In the former case, both subject and object adjoin to XP as in (23), in the latter they cliticize to X° as in (24).



Both of these configurations are ruled out by Antisymmetry, and the ungrammaticality of (18a)-(18g) could thus be accounted for on either of (23) and (24) (cf. Kayne 1994, 15-23). For our purposes, it is therefore not necessary to decide the X'-status of weak pronouns. The analysis could exclude (18a)-(18g) regardless of whether the weak

pronouns are heads or maximal projections.

In order to explain why (16)-(17) are well formed, suppose XP can be the target for pronominal arguments only. An R-expression stays in Spec AgrS, one step lower in the structure. There ought to be a principled reason behind such a difference. Consider that R-expressions carry  $\phi$ -feature specification for number and gender but not for person, whereas pronouns are specified also for the person feature. Suppose XP is an agreement projection specified for person, hence, XP is a *Person Phrase* (henceforth: PersP). If this is so, the fact that pronouns and not R-expressions move there receives a natural explanation. We can assume that a personal pronoun introduces a person feature in the numeration that has to be checked during the derivation. We will come back to this conclusion within short.

This assumption will immediately account for some further peculiarities of the linear ordering of pronominal elements. As noticed by Holmberg (1991, 157) and Josefsson (1992, 67-68), the weak object pronoun *den* 'it' may not appear in position 1 to the left of the subject:

- (25) \*Såg **den** *Anna* inte?  
saw **it** *Anne* not?

Furthermore, in a sequence <*den*-R-expression>, the only available interpretation is one where *den* is understood as a subject (cf. Josefsson 1992, 68).

- (26a) \*Varför sköt **den** *Lena*? (Obj. - Subj.)  
why shot **it** *Lena*? = why did *Lena* shoot it?
- (26b) Varför sköt *den* **Lena**? (Subj. - Obj.)  
why shot *it* **Lena**? = why did it shoot *Lena*?

These patterns receive a principled explanation on the following line of reasoning: if a pronoun in order to reach XP must carry a *person* feature, it is plausible that it is also carries the feature *human*. Suppose, in brief, that an item can be specified for *person* if and only if it is also specified *human*.<sup>8</sup> As the pronoun *den* 'it' cannot refer to human

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<sup>8</sup>. See, for a recent reference, Maling & Jónsson (1995) who argue on the basis of Icelandic data that the *human* feature has syntactic relevance.

beings, its presence in PersP would be excluded, and thereby also the possibility to understand *Anna* in (25) or *Lena* in (26) as subjects in Spec AgrS. The only interpretation will then be the one where *den* is a subject in Spec AgrS and *Anna* and *Lena* are objects left in their basic position.<sup>9</sup>

Furthermore, the impossibility of having a weak object pronoun in position one when immediately followed by a pronominal subject is probably not limited to the case where the subject pronominal is also weak. If we try to place a strong subject pronoun after a weak object pronoun in position 1, the result is still not perfect. The b-examples of (27), (28) and (29) are clearly better than the a-examples:

- (27a) ??På sjukhuset besökte **henne** *du och jag* inte  
at the hospital visited **her** *you and I* not
- (27b) På sjukhuset besökte **henne** inte *du och jag*  
at the hospital visited **her** not *you and I*
- (28a) ??Varför besökte **mig** *ni båda* inte?  
why visited **me** *you both* not?
- (28b) Varför besökte **mig** inte *ni båda*?  
why visited **me** not *you both*?

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<sup>9</sup>. In many varieties of colloquial Swedish the nominative form of the third person masculine singular pronoun *han* 'he' has replaced its accusative counterpart *honom* 'him'. Josefsson has noticed that in such varieties, the pronoun in a sentence like (i) can only be interpreted as subject - the interpretation of (ii) is not available - whereas *han* 'he' can have the function of an object elsewhere, as in (iii):

- (i) Varför sköt *han* **Lena**? (Subj. - Obj.)  
why shot *he* **Lena** = why did he shoot Lena?
- (ii) \*Varför sköt **han** *Lena*? (\*Obj. - Subj.)  
why shot **he** *Lena* = why did Lena shoot him?
- (iii) Varför sköt *Lena* **han** inte?  
why shot *Lena* **he**[Obj.] not?

I have no suggestions to make for this contrast. Presumably, the difference between (i)/(ii) and (26a)/(26b) in the text is related to the Case issue for which I have no ready analysis.



- (29a) ??På stationen mötte **honom** *hon med den röda klänningen* inte  
at the station met **him** *she with the dress* not
- (29b) På stationen mötte **honom** inte *hon med den röda klänningen*  
at the station met **him** not *she with the red dress*

At the S-structure of (27a), (28a), and (29a) the weak object pronoun would be in PersP, whereas the strong subject pronoun would target Spec AgrS. In my own variety of Swedish at least, the result of such a derivation is deviant, and I conclude from this that not only weak subject pronouns but also strong subject pronouns must reach PersP.<sup>10</sup>

Recall now Holmberg's (1993) hypothesis: 1. subject position A is Spec AgrS and subject position B is Spec T; 2. the adverb adjoins to TP; 3. the weak subject pronoun moves obligatorily to Spec AgrS, whereas the subject R-expression moves optionally to Spec AgrS. This is a way to derive the data summarized in (3a)-(3e), but there is no principled explanation at hand as for why AgrSP is associated with pronouns and TP with R-expressions, nor why movement to Spec AgrS is optional for R-expressions. For theoretical reasons, it is desirable to make the stronger assumption that subject pronouns obligatorily move to XP - and not lower - and R-expressions obligatorily to Spec AgrS - and not higher. This forces us to modify the description of (3a)-(3e) along the lines indicated in (30):

(30) *The distribution of subjects*

		<i>posA</i>	<i>posB<sup>1</sup></i>	Adv	<i>posB<sup>2</sup></i>	
(30a)	Har has		<i>Johan</i> <i>John</i>	möjligen possibly		inte kommit än? not come yet?
(30b)	Har has			möjligen possibly	<i>Johan</i> <i>John</i>	inte kommit än? not come yet?
(30c)	Har has	<i>han</i> <i>he</i>		möjligen possibly		inte kommit än? not come yet?

<sup>10</sup>. Recall that focused subjects make exception from this generalization. The a-examples of (27)-(29) improve slightly when the subjects carry focus, although the preferred position then is still to the right of negation in the author's opinion. I can only repeat my conjecture from footnote 2 that additional positions in the tree become available for focused elements.

I suggest that position A is within XP (specifier or head of PersP), and that position B is Spec AgrS. The optionality in word order attested for R-subjects may instead be derived if: 1. the adverb adjoins to AgrSP; 2. AgrSP is recursive. B<sup>1</sup> and B<sup>2</sup> in (30) are thus recursions of AgrS. The justification for this assumption, and its details, will be given when we turn to the discussion of Italian in section 2 (structure (37)). There, it will also be discussed how to formulate the hypothesis in Antisymmetry.

We are now in a position to make some general conclusions about PersP:

1. As said above, if there is a pronominal subject in the clause, this subject must reach PersP.

2. If there is no pronominal subject in the clause, but a weak object pronoun, this object pronoun can optionally move to PersP.

3. R-expressions do not move to Spec Pers but stay in Spec AgrS.

4. Since R-expressions do not reach the specifier of the Person Phrase, it is clear that the checking process taking place in PersP is dissociated from nominative Case checking. Since object pronouns move there optionally, it is clear that *person* checking is also dissociated from accusative checking which arguably takes place in AgrOP.

There are two possible interpretations of this last point. It could be that pronouns check nominative and accusative and then move on to check *person* in addition to their structural Case; obligatorily for the subject, optionally for the object. We could also assume that pronouns carry lexical Case and hence do not check nominative or accusative at all. I will leave this question open.

However, the conclusions of point 1 and 4 are somewhat paradoxical. On the one hand, subject pronouns are prominent; they prevail over weak objects when there are two pronouns in competition for PersP. Intuitively, the subject's precedence over the object may be related to the fact that Swedish is a Nominative-Accusative language; we leave open the possibility that in an Ergative-Absolutive language the state of affairs could be the opposite. On the other hand, PersP does not seem to be relevant for nominative Case checking. We will see below, however, that both of these conclusions can be independently justified.

Moreover, it is plausible that the presence of the PersP as well as its properties are subject to cross-linguistic variation, given that the relevant position is not a possible target for object pronouns in Danish and Norwegian. The Scandinavian languages thus differ on the points listed above.

The interest of these data is primarily that they show that the assumption of a richer functional structure is empirically founded also in a language like Swedish, where the finite V does not carry overt  $\phi$ -features. In the following sections, I will confront our conclusions based on Swedish with data from standard Italian. The purpose of the comparison is to show at parallel patterns in Swedish and Italian and to enlighten some of the properties of the projection under discussion.

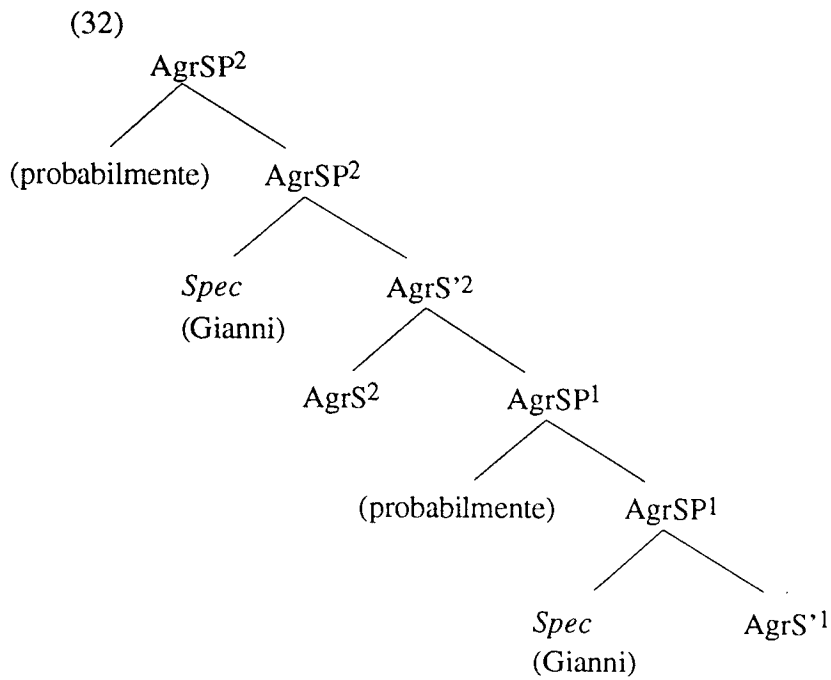
## 2. *On the Distribution of Pronouns in Italian*

I will begin this section with a comment on the distribution of subject pronouns in the Italian finite clause, after which I will turn to absolute small clauses.

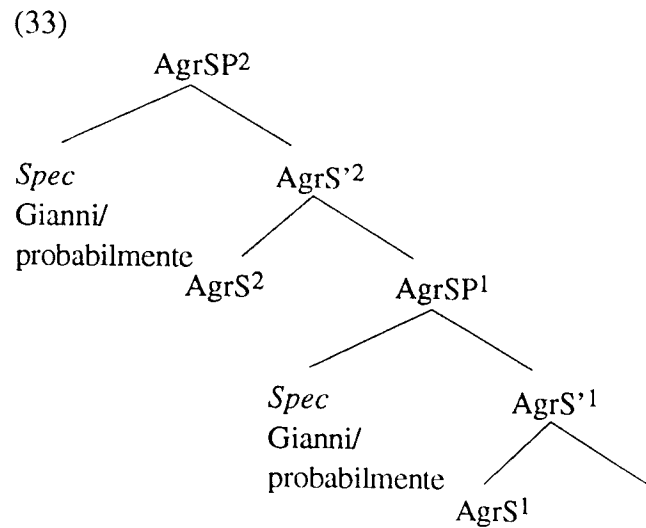
A sentence adverb like *probabilmente* ‘probably’ can typically occur both in sentence initial position (31a), and between the subject and the finite verb (31b) ((31a) and (31b) from Belletti 1990, 41):

- (31a) Probabilmente Gianni telefonerà alle 5.  
 probably Gianni will call at 5
- (31b) Gianni probabilmente telefonerà alle 5.  
 Gianni probably will call at 5

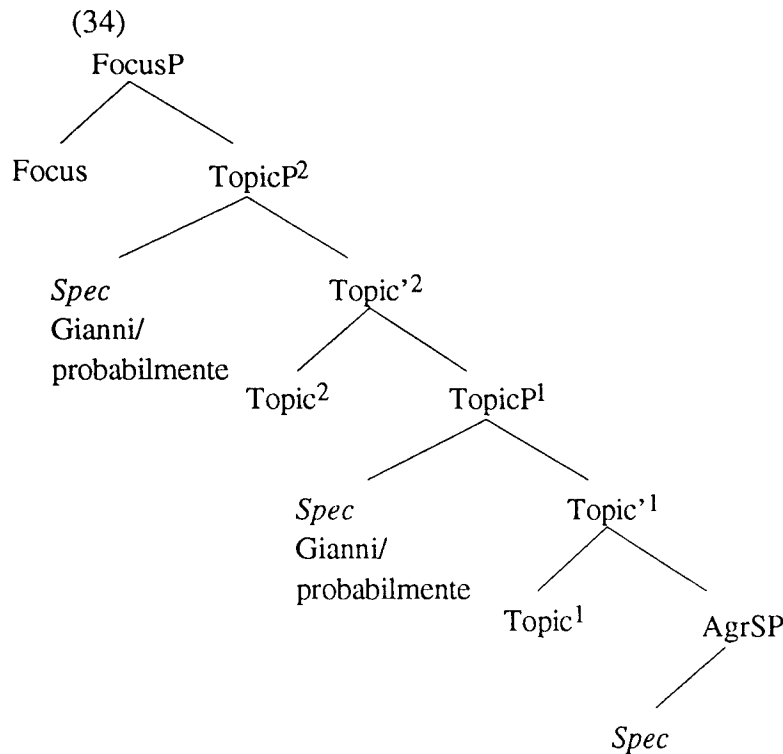
Belletti explains this on the assumption the finite AgrP (AgrSP in our terms) is recursive, and gives the following structure (cf. Belletti 1990, 54; see also Cardinaletti & Roberts 1991, Cardinaletti 1994, and Zwart 1994):



Belletti's approach is based on the recursion of AgrSP and adverbial adjunction to AgrSP. If Antisymmetry of Kayne (1994) is assumed, adjunction as illustrated in (32) will not be allowed. If we wish to maintain the intuition behind this analysis, we may then assume that the adverb may occupy the specifier of AgrSP rather than being adjoined to it, and the structure we arrive at is (33) in analogy with the proposal of Belletti (1990):



An alternative to (33) can be based on Rizzi's (1995) proposal for the Comp field. A case of optionality in word order such as ours could be analyzed in terms of recursion, but not of AgrSP. Rather, the adverb as well as the R-expression could end up in Topic projections in Rizzi's Comp field. The Topic Phrase is recursive and the word order of topicalized elements is not restricted in Italian (Rizzi 1995).



In both (33) and (34) the data are derived on the assumption of free recursion; in (33) AgrSP is recursive, in (34) the Topic Phrase is recursive. The obvious difference between these accounts is that (34) locates the subject and the adverb higher in the clause than (33); according to (34), these elements target a position in the Comp system, whereas for (33) they remain in the Infl system. Although a recursive Topic projection ought to be assumed in Italian for independent reasons (cf. Cinque 1990, Rizzi 1995), I will argue that (33) has advantages over (34) for the present issue. The reasons why we should prefer (33) are by and large two:

First, we wish to arrive at a unified account for certain word order patterns in Italian and Swedish. We have already seen that the Swedish subject and a sentence adverb have the same optionality in word order as the one we have attested in Italian. I repeat (30a) and (30b) from above:

- (30a) Har Johan möjligen inte kommit än?  
has John possibly not come yet

- (30b) Har möjligen Johan inte kommit än?  
has possibly John not come yet

But we have also seen that the relevant position is not a generally available target for topicalized elements. Consider again (22b) (and compare (22c) above):

- (22b) \*Därför mötte på stationen farmor och farfar honom inte igår.  
therefore met at the station grandma and grandpa him not yesterday

The recursive-Topic-analysis thus fails to capture the parallelism between Swedish and Italian.

The second reason why (33) should be preferred over (34) is that there are empirical counterarguments to (34) also in Italian. Consider the behaviour of personal pronouns. Cardinaletti (1994 and forthcoming) holds that *egli* 'he' is a weak subject pronoun in Italian. Unlike R-subjects, *egli* cannot be separated from the finite V by an intervening topicalized object (examples from Cardinaletti 1994, 76; topicalized object in bold face and underlined):

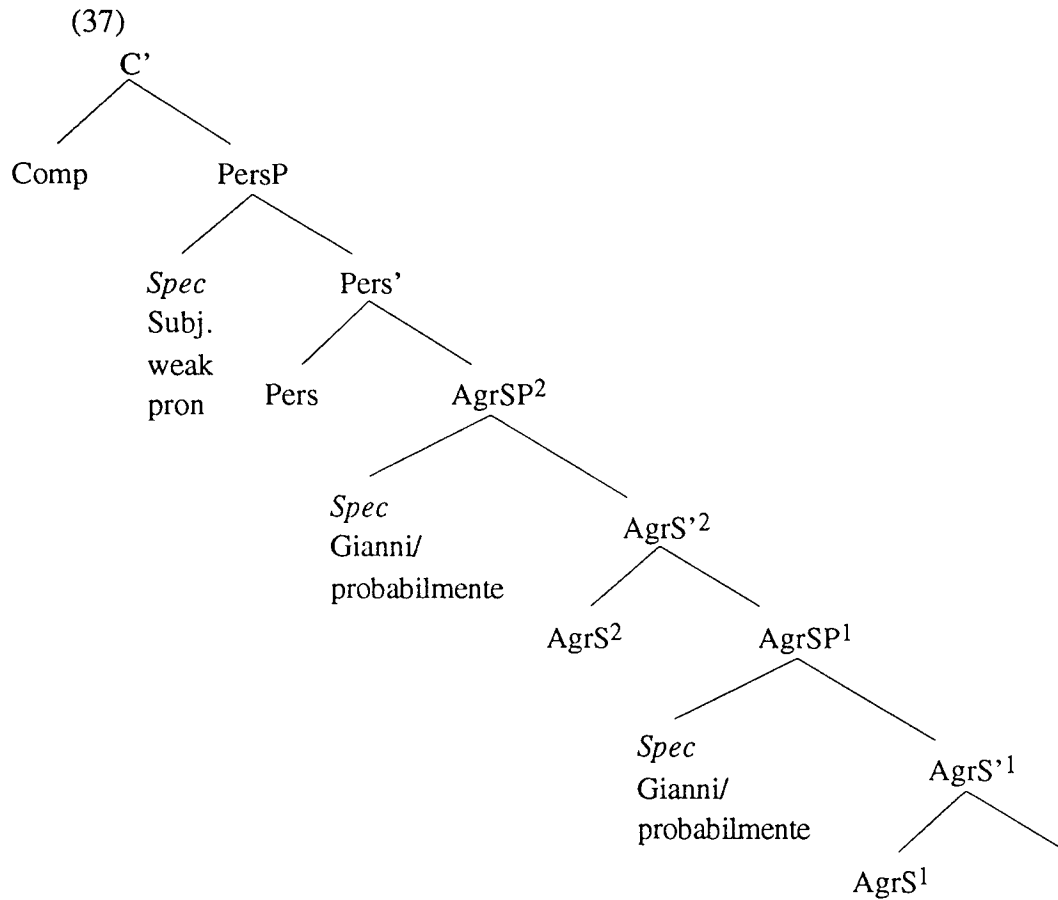
- (35a) \**Egli **questa iniziativa*** non l'appoggerebbe.  
*he **this initiative*** not it-would support  
(35b) *Gianni **questa iniziativa*** non l'appoggerebbe.  
*John **this initiative*** not it-would support

Thus, a weak pronoun as *egli* cannot be topicalized. If the topicalization approach to subject pronouns and adverbs is pursued as in (34), we thereby predict that *egli* could not be placed to the left of the adverb. The prediction is not carried out, witness (36a) and (36b) (Anna Cardinaletti p.c. and forthcoming).

- (36a) *Egli* probabilmente telefonerà alle cinque  
*he* probably will call at five  
(36b) Probabilmente *egli* telefonerà alle cinque  
probably *he* will call at five

(36b) can be taken care of in terms of topicalization of the adverb alone, assuming *egli* to be lower than the Topic Phrase. The crucial problem here is the contrast between (36a)

and (35a). Suppose that the R-subjects check or receive nominative in Spec AgrS, that AgrSP is recursive as suggested by Belletti (cf. (33)), and that the weak subject pronoun must move to PersP:



I assume with Rizzi (1995) that Topic Phrases are in the Comp field, hence above PersP. (37) expresses the same hypothesis that I proposed for the Swedish examples in (30) above. As in the previous case, (37) offers a principled explanation for the observation that weak subject pronouns generally occur in the highest Agr projection, if the highest Agr is to be identified with PersP (cf. Cardinaletti & Starke 1995, 46 f.n. 19; Rizzi 1995, 45 f.n. 21). I assume that R-subjects may appear higher than a weak subject pronoun only if dislocated. In (35a) and (35b), thus, both the subjects and the objects are topicalized, and the contrast between (35a) and (35b) derives from the possibility to topicalize the R-subject but not the weak pronoun. In (36a), the weak subject pronoun is



in Spec Pers and the adverb in some recursion of AgrSP. In (36b) finally, the weak pronoun is in Spec Pers and the adverb is topicalized

We have thus reached an analysis where pronominal subjects, R-subjects, and adverbs have their specific, designated positions. The differences in word order patterns are derived on the assumptions that: 1. pronominal subjects reach PersP and R-subjects AgrSP; 2. sentential adverbs occupy the specifier of AgrS; 3. AgrSP is recursive. This explanation has the advantages of giving a unified account to Swedish and Italian data, and of being compatible with Antisymmetry. The observation (made in Holmberg 1991, 1993; Cardinaletti 1994; Cardinaletti & Starke 1995, and elsewhere) that pronominal subjects move higher in the clause than R-subjects has received a principled account.

We are now in a position to repeat, for Italian, three of the conclusions that were reached for Swedish:

1. If there is a pronominal subject in the clause, this subject must reach PersP.
2. R-expressions do not move to Spec Pers but stay in Spec AgrS.
3. Since R-expressions do not reach the specifier of PersP, the checking process taking place in PersP is dissociated from nominative Case checking.

Consider the last point: I speculated in section 1.2. that the prominence of subjects in PersP is somehow related to the Nominative-Accusative character of the languages under discussion. An interesting piece of evidence in this connection comes from the distribution of pronouns in Italian participial absolute small clauses (henceforth PASC). The construction in question is illustrated in (38) and (39). In (38) an ergative past participle is followed by a subject to which it arguably assigns nominative (witness the contrast (39a)/(39b)), and in (40) a transitive past participle is followed by an object to which it assigns accusative (witness the contrast (41a)/(41b)) (examples from Belletti 1990, 89, 97, 103):

(38) Arrivata Maria, Gianni se ne andò.  
arrived Mary, John left

(39a) Arrivata io, ...  
arrived I[nom.], ...

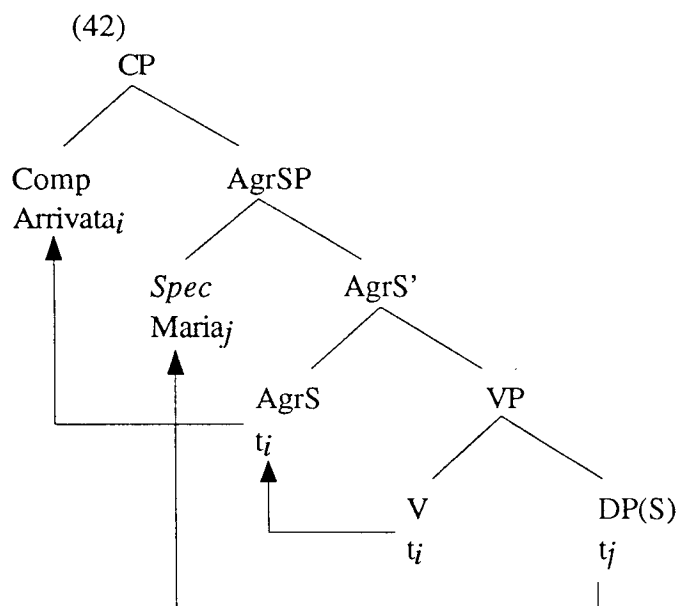
(39b) \*Arrivata me, ...  
arrived me[acc.], ...

(40) Conosciuta Maria, Gianni ha cambiato il suo stile di vita  
known Mary, John has changed his lifestyle

- (41a) Conosciuta me, ...                      (41b) \*Conosciuta io, ...  
 known me[acc.], ...                      known I[nom.], ...

A salient feature of Nominative-Accusative languages is the prominence of nominative over accusative; if in a given clause structure there is only one argument to Case mark, this argument will be marked nominative. In this sense, the transitive PASC of (40) displays an unusual pattern as the single argument carries accusative.<sup>11</sup>

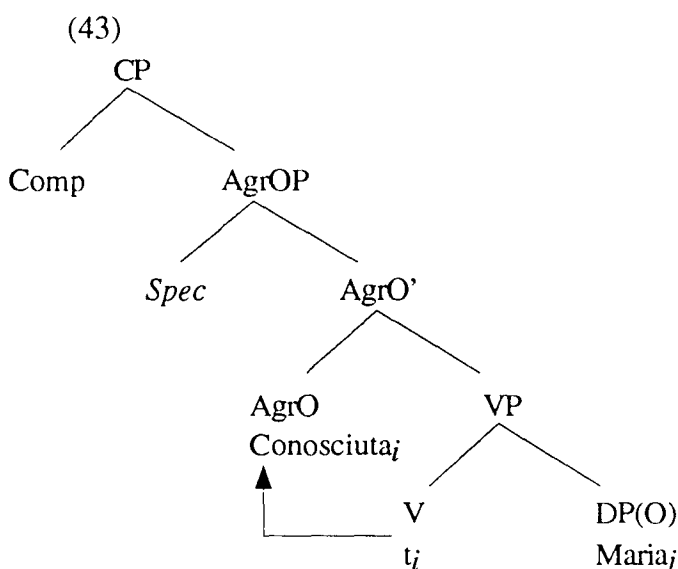
As for the derivation of such constructions, there are mainly two approaches in the literature that I will refer to as the *asymmetric* and the *symmetric* account. Belletti (1990) holds that the ergative participial V overtly moves to a Comp node inside the participial clause in (38), and the subject carrying nominative to the specifier of an Agr node, that I take to be AgrS since nominative is assigned:



In the transitive PASC (40), Belletti suggests that the participle moves overtly to the Agr

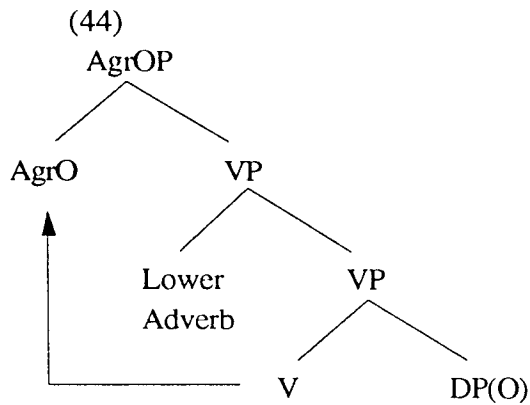
<sup>11</sup>. Rita Manzini (Class Lectures, 1994) put forth the idea that these constructions could be considered a fragment of an Ergative-Absolute Case system in the Italian grammar which is otherwise clearly of the Nominative-Accusative kind. On the syntax of PASC and a remark on Ergative-Absolute Case systems, see Cocchi (1995, 20-22, esp. f.n. 11).

head - which will be AgrO in this case - whereas the object stays in situ. V raises to C and the object to Spec Agr in LF.



Belletti's account is asymmetric in the sense that it proposes two different derivations in overt syntax for (38) and (40). According to the symmetric account the participle V raises overtly to C and the lexical argument to Spec Agr in both (38) and (40); this is the view taken in Kayne (1989), Cinque (1990), and Egerland (1996).

Considering the distribution of pronouns and adverbs, there are some empirical reasons to question an asymmetric analysis of transitive and ergative PASCs. Belletti makes a distinction between different classes of adverbs in Italian and identifies a group she calls *lower adverbs*. An adverb like *completamente* 'completely' belongs to this category, and in Belletti's model this implies that it is adjoined to VP (Belletti 1990, 60-67). Such an adverb can be added to the transitive PASC. Since the noun carrying accusative stays in situ according to Belletti's asymmetric account, it is predicted that *completamente* can appear between the participle (in AgrO) and the object (in the complement of V), but not to the right of the object unless it right adjoins to VP.



The data do not carry out this prediction, however, and there is an interesting difference between pronominal objects and R-objects. Consider first that there is a contrast between (45a) and (45b) and that the contrast is the opposite to what the asymmetric account predicts:

(45a) Rovinato **me** completamente, ...  
ruined **me** completely, ...

(45b) \*Rovinato completamente **me**, ...  
ruined completely **me**, ...

When the object is an R-expression, its placement appears to be optional:

(46a) Rovinata **Maria** completamente, ...  
ruined **Mary** completely, ...

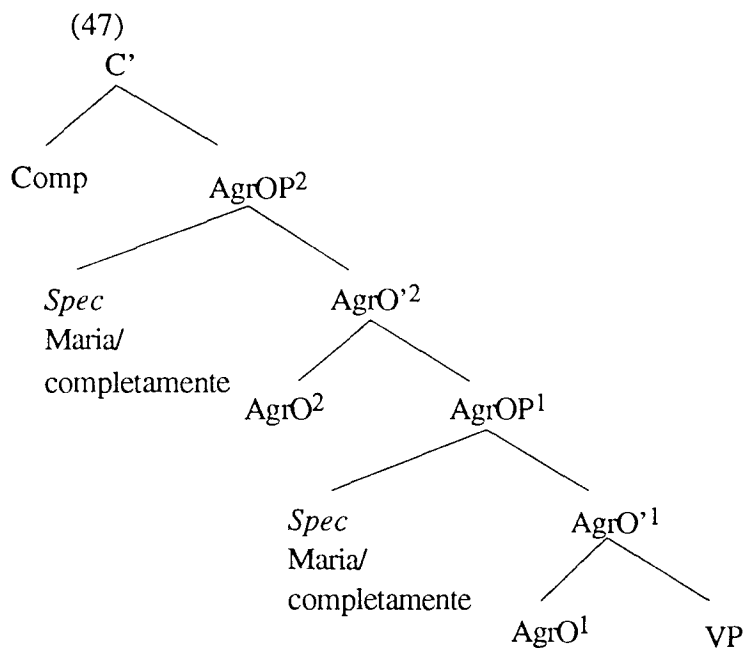
(46b) Rovinata completamente **Maria**, ...  
ruined completely **Mary**, ...

The first conclusion to be drawn is that the object pronoun in (45a) has indeed moved in overt syntax to a position higher than the adverb.<sup>12</sup> Consider first that the optionality

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<sup>12</sup>. Anna Cardinaletti (p.c.) accepts both (i) and (ii), which are comparable to the examples (45a) and (45b) given in the text, with the difference that the pronoun must be stressed when it appears in rightward position:

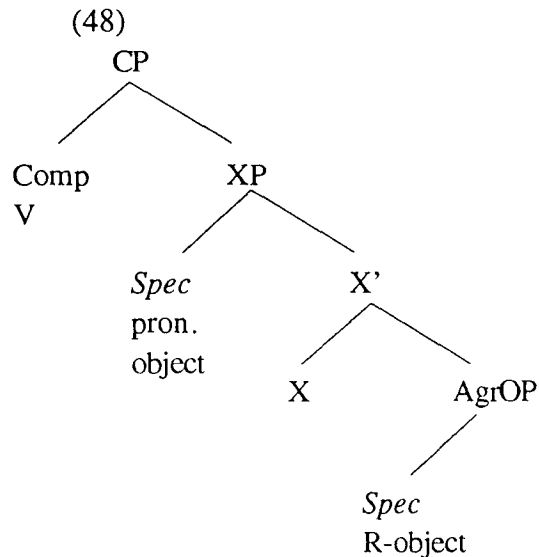
illustrated in (46a) and (46b) may readily be explained on the assumptions Belletti makes for 'sentence adverbs' in the finite clause; they adjoin to AgrSP which is recursive. If the Italian AgrS has this property, we might of course assume that the same thing holds for AgrO in Italian participial clauses. The analyses of sentence adverbs and lower adverbs would be maximally unified if the lower adverb *completamente* is not adjoined to VP but occupies the specifier of (a recursion of) AgrOP. The analysis of (37) above would then carry over to (46a) and (46b):



- 
- (i) Conosciuta me completamente, ...  
known me completely, ...
- (ii) Conosciuta completamente ME/\*me, ...  
known completely ME/\*me, ...

This state of affairs strongly resembles the difference between weak and strong pronouns in Swedish. Note that there is no such difference in reading associated with (46a) and (46b), when the object is an R-expression. The grammaticality of (i), (45a), and (46a) is already a compelling argument for an overt movement analysis if Antisymmetry is assumed.

The account of Belletti, reformulated in Antisymmetry, enables us to capture these patterns along the lines already suggested. Suppose that the R-expression as well as the adverb are in the specifier of a recursive Agr, and that the object pronoun and the participial V move higher in the structure:



The syntax of Italian past participles thus lends further support to the idea of a position in the tree higher than the Agr phrase but lower than Comp. The word order patterns attested are familiar from the above discussion, and I suggest that our previous conclusions carry over to this case. As before, PersP is the target for pronouns and not for R-expressions. The curiosity of the transitive PASC is that the patterns are attested with accusative marked objects. The transitive PASC hosts a single lexical argument which obligatorily moves to PersP if pronominal. Since R-objects do not move to Spec Pers, the checking taking place here is dissociated from accusative Case checking.

That the Person Phrase introduces a checking procedure in principle independent of Case checking is supported by a further, somewhat surprising data: it is commonly held that two lexical arguments are ungrammatical in the transitive PASC, regardless of word order:

(49a) \*Salutata **Maria Gianni**, ...  
greeted **Mary John**, ...

(49b) \*Salutata *Gianni Maria*, ...  
greeted *John Mary*, ...

However, it has been noticed by Rita Manzini (Class Lectures, 1994) that two lexical arguments are possible in a structure such as (50):<sup>13</sup>

- (50) Restituiti *io* i libri, ...  
 returned[participle] *I* the books, ...

The lexical subject of (50) must be pronominal. Acceptability decreases if *io* is replaced by an R-subject:

- (51) \*Restituiti *Maria* i libri, ...  
 returned *Mary* the books, ...

If we accept that the ungrammaticality of (49a)/(49b) and (51) is due to a violation of the Case filter, it follows that the pronoun in (50) may escape the Case filter. This conclusion gives support to the idea that pronominal subjects may be endowed with lexical Case and therefore do not have to check structural nominative, unlike R-subjects. One might ask of course why this is not always possible, that is, why it is not possible to insert nominative pronouns in any structure in violation of the Case filter. In most cases however such insertion of a nominative subject would be ruled out as a violation of the  $\theta$ -criterion. This goes for active structures with a lexical argument carrying nominative such as \**He the man is coming tonight* (which is independently excluded by binding theoretic conditions), and in the verbal passive, \**He the letters were written*, under the assumption that the external argument is assigned to the passive morphology; then, the lexical subject and the passive morpheme will be in competition for the same  $\theta$ -role. As for the lexical pronominal subject of (50), I conclude that it is not ruled out by  $\theta$ -Theory. This implies that the external argument of the participial predicate in (50) is neither given to the participial morphology, nor to PRO or any other empty category in the subject position of the small clause.<sup>14</sup>

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<sup>13</sup>. See also Cocchi (1995, 20 f.n. 9). The example of (50), and the contrast with (49a)/(49b) and (51), raise a problem for the accounts of Belletti (1990) and Egerland (1996). The issue was left unexplored in Egerland (1996, 186, 244 f.n. 7).

<sup>14</sup>. This analysis is coherent with the suggestion made in Egerland (1996, 269-270), that the external argument of the transitive PASC is presyntactically suppressed, and must be so because of the incapacity of the participle to structurally Case mark two lexical arguments. If, however, the external argument carries lexical Case, nothing in principle would block its being projected in syntax.

In order to exclude structures such as \**it is important he to understand* it must be assumed here that the

### 3. *The Person Phrase, Verb Second, and Resumptive Clitics*

The last section of this paper is dedicated to the relevance of the Person Phrase for the analysis of Verb Second phenomena and so called Clitic Left Dislocation or Topicalization, discussed by Cinque (1990) and Rizzi (1995). More precisely, I will show that there are data from historic stages of Italian that point at the presence of a projection that was the target for pronominal subjects and which had properties distinct from the canonical subject position. First, I will present some background to the problem of Clitic Left Dislocation and its properties in Old Italian as analyzed by Benincà (1994). Then I will present some new data and discuss what implications they have for the general analysis.

A well-known property of Modern Italian, and other Romance varieties, is that left dislocated or topicalized objects must be repeated by a resumptive clitic as in (52). Omission of the clitic as in (53) yields an ungrammatical structure:

(52) Questo libro, lo leggo.  
This book, (I) it[cl.]-read

(53) \*Questo libro, \_ leggo.  
This book, (I) read

The construction is studied by Cinque (1990; ch. 2) and Rizzi (1995) to whom the reader is referred. I will henceforth make reference to the construction as *topicalization*. Topicalization is different from a contrastive Focus, which does not involve a resumptive clitic:

(54) QUESTO LIBRO, leggo (e non quell'altro)  
THIS BOOK, (I) read (and not the other one)

Cinque suggests that the difference between Focus and topicalization, is that only Focus

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relevant projection that hosts *io* in (50), the PersP, is not available in the infinitival clause. I will not speculate about this structural deficiency of the infinitive.



involves DP movement, and hence an Operator in Spec C. Topicalization constructions are not derived through movement of the dislocated DP, but through base generation of the DP in some Topic position to the left of AgrSP. In the Focus case (54), the empty category is A'-bound by the Operator and licensed as a variable. In (52) it is not, and the clitic is therefore needed, turning (52) into a clitic-trace dependency. The dependency in (53) is excluded since it can neither be interpreted as clitic-trace nor as Operator-variable.

Old and Modern are different on this point, as the resumptive clitic was not needed in Old Italian topicalization structures. In (55) (early 14th century) three topicalized nouns are not repeated by resumptive clitics:

- (55) ... gli occhi non ti \_ pote' chiudere; le ferite non ti \_ pote' lavare;  
*your eyes I could not close (them); your wounds I could not clean (them)*  
 e le tue membra, che giacciono nude in terra, non ti \_ pote' ricoprire...  
*and your limbs, that lies naked on the ground, I could not cover (them)'*  
 (I fatti di Enea; XXXVII)

The lack of resumptive clitics in Old Italian is brought up by Benincà (1994; ch. 10) who relates the phenomenon to the fact that Old Italian shows verb second tendencies. Benincà makes a distinction between V2 languages of a strict kind, to which Old French belongs together with many modern Germanic languages, and V2 of a broader type under which enter some historic Italian varieties (her study deals with Old Piedmontese, Old Venetian and Old Florentine). Assuming that Old Italian, as V2 languages generally, has V-movement to C in topicalization structures, the crucial difference consists in the fact that Old Italian varieties also had the property of multiple topicalization, hence a recursive Topic node. This property does not seem to be present in Old French and Modern Germanic V2 languages. Benincà proposes the following structure to capture the V2 properties of Old Italian:

- (56) ([TOP ... ][CP *Spec* [C V] ... ]]

The availability of the leftmost (recursive) TOP position is parametrized; in Old Italian varieties it was present, in Old French and Modern Germanic it is not. The crucial observation supporting Benincà's thesis is the following: in the Old Italian texts where a preposed object does not require a resumptive clitic, the preposed object is the only

constituent preceding the verb, or at least strictly adjacent to the verb; in either case the subject is in postverbal inverted position. If the preposed object is not adjacent to the verb, the resumptive pronoun is again found. Thus Benincà has attested structures of the kind (57a), with the object preposed and immediately adjacent to the verb, the subject in inverted position, and with no resumptive clitic. This corresponds by hypothesis to the structure (57b):

- (57a) DP(O), Verb, DP(S) ...  
 (57b) [CP DP(O)<sub>i</sub> [C V] [AgrS DP(S)...<sub>t<sub>i</sub>]]</sub>

The preposed DP(O) is in Spec C, a position from which it obviously A'-binds its trace, and triggers the V2 effect. In the Old Italian dialects, preposing of the object can be of the type illustrated in (57), in which case V2 is triggered. Alternatively, the object may be in a Topic position external to CP. In this case, the V2 effect is not realized (Spec C is free to be occupied by the subject); the topicalized object cannot A'-bind its trace and the resumptive object pronoun is therefore obligatory, so as to make it possible to interpret the dependency as a clitic-trace dependency. A string such as (58a) corresponds to the structure (58b):

- (58a) DP(O), DP(S), clitic, Verb ...  
 (58b) [TOP DP(O) [CP DP(S) [C cl+V] ...]]

There are data that in an interesting way contradict the generalization expressed in (57b) and (58b). In Tuscan texts from the late 13th to the mid 14th century, constructions such as (59a)-(59g) are attested, where an object has been preposed without being copied by resumptive clitic and without triggering subject inversion. In these cases, however, the subject is pronominal.

- (59a) Queste parole *io* \_ ripuosi ne la mente con grande letizia ...  
 these words I put in my mind with great joy  
 (Vita Nuova; XVIII)
- (59b) le tue valentie *tu* \_ hai sempre nella tua lingua ventosa e nelli piedi ...  
 your qualities you have always in your windy tongue and in the feet  
 (I fatti di Enea; XLVII)

- (59c) La tua figliuola, o ottimo padre, *io* \_ accetto ...  
 your daughter o great father, I accept ...  
 (I fatti di Enea; LIX)
- (59d) Cari e fedeli cittadini, le vostre profferte *noi* \_ riceviamo volentieri ...  
 dear and faithful citizens, your offerings we receive gladly  
 (Cronica; II:5)
- (59e) ... ma il convito e le vivande *ella* sola \_ volle ordinare.  
 but the dinner and the food she alone wanted to order  
 (Decameron; I: 5)
- (59f) ... e però la vostra profferta *io* \_ accetto volentieri, ...  
 and therefore your offer I accept willingly  
 (I fioretti di San Francesco; V)
- (59g) ... e questo ch'io ho ora, *voi* \_ avrete ancora.  
 and the one that I have now, you will have again  
 (I fioretti di San Francesco; VI)

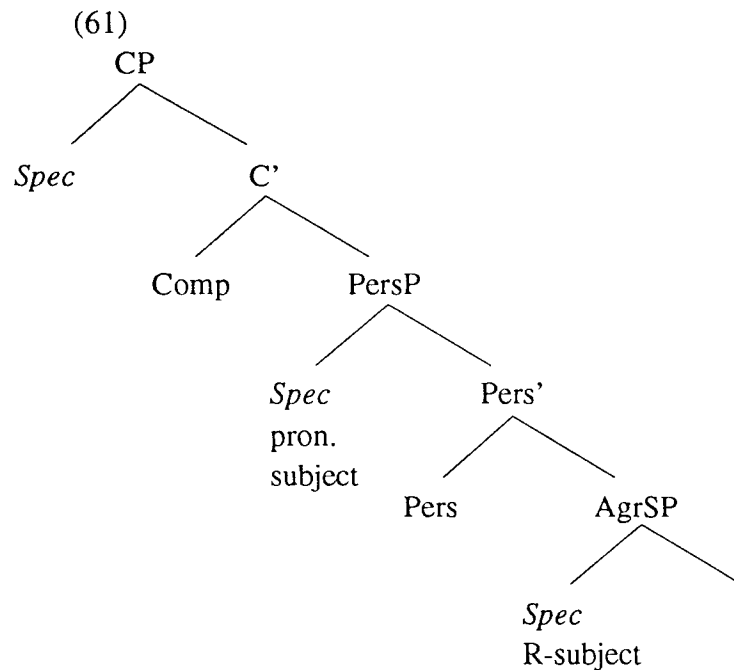
Benincà's generalization thus holds when the subject is an R-expression, not when it is pronominal. I believe this difference between R-expressions and pronouns gives further support to the analysis proposed above.

It follows from my above argumentation that Swedish is a modern verb second language where the Person Phrase is structurally present. It is therefore of interest to know that structures such as those in (59) are ungrammatical in Swedish, see (60):

- (60) \*Ert anbud jag accepterar gärna.  
 your offer I accept gladly

In the previous theoretic framework, it was assumed that overt verb raising could apply either to Infl or to Comp and that various cross-linguistic variations in word order could be explained on this difference. When proliferated structures are assumed in the Infl field as well as in the Comp field, we must accept that the target for V-raising may vary cross-linguistically between any of the heads contained within these two portions of structure,

that is, to any of the projections contained within the Infl field and the Comp field. Certain differences in superficial word order have been attested between Old and Modern Italian, on the one hand, and also between Old Italian and a modern V2 language such as Swedish, on the other. The most straightforward way of accounting for these differences appears to be that of assuming that V-raising is triggered to three different positions in the three grammars under discussion. Consider (61):



Suppose that the Swedish finite verb in a main clause raises to Comp in the structure (61) and that a topicalized element goes to Spec C. It then follows that a weak subject pronoun cannot appear to the left of the finite V in a topicalization structure.<sup>15</sup> As for the finite V in Modern Italian, I assume that it generally targets AgrS. I thus follow the classical analysis

<sup>15</sup>. Presumably, there is at least one Topic position external to CP available also in Swedish. A construction such as (i) is possible, where the topicalized object is repeated by a weak pronoun inside the clause:

- (i) Ert anbud, jag accepterar det gärna  
your offer, I accept it gladly

The pattern is perfectly parallel with the Old Italian one as discussed by Benincà.

of differences in word order between those grammars that display verb second phenomena and those that do not. It appears that the finite verb in Old Italian targets an intermediate position, which in the present framework is likely to be the head of PersP. If this is so, the data of (59) follow. If in Old Italian an element is topicalized so as to appear in the highest portion of structure in (60) and the verb targets the head Pers, a pronominal subject that reaches the specifier of Pers will appear to the left of the verb; this is what we have attested in (59). Referential subjects are correctly predicted to remain in Spec AgrS, that is, superficially to the right of the finite V. The analysis is only adumbrated, however; it remains to be established if and how Rizzi's (1995) analysis of the Comp field carries over to Modern Swedish and Old Italian. This issue goes far beyond my present aims.

### ***Conclusion***

The hypothesis of the Person Phrase permits a unified treatment of certain facts of pronominal distribution in two grammars as different as Italian and Swedish. If the result of my demonstration is interesting when a broader array of languages are taken into consideration remains to be seen. I conclude by stating that the proposal - if it would prove tenable when faced with other cross-linguistic data - would shed some light on the principles underlying pronominal syntax and the parameters of functional structure distinguishing between grammars.

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# Is there a FocusP and a TopicP in the Noun Phrase structure? <sup>1</sup>

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## 0. *The "defective" character of Noun Phrase structure*

In studying the parallelisms between clausal and nominal structure, researchers have often noticed the "defective" character of the latter both in their argument structure and in their functional structure.

With reference to the functional structure of the noun phrase, the Determiner Projection has been compared sometimes to IP (Abney (1987)), sometimes to CP (Szabolcsi (1994)). A Tense Projection in the Noun Phrase has been argued for in Somali (Lecarme (1996)) but very few other languages display it. In his work on adjectives and adverbs Cinque (1995a and 1995b respectively) makes the hypothesis that they have a strict order and that this order is in many respects parallel. But these parallelisms are not as systematic as one would like them to be.

In the view of the recent work by Rizzi (1995) on the fine structure of the left periphery of the clause, it would be interesting to wonder whether the DP also has a finer structure than is generally assumed. This will be the focus of the present paper. I will claim that there is some fine structure in DP but this is, once again, "defective"

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<sup>1</sup>. This paper was read at the "Inside DP" Conference at D.I.P.S.C.O., Milan, June 27-28, 1996. The Albanian data and their analysis in section 2. was presented in a paper read at the XIX Incontro di Grammatica Generativa, Bergamo, February 22-24, 1996. The Bulgarian data and their analysis in section 5 is part of joint work with Mila Dimitrova-Vulchanova and was presented in a seminar at the University of Trondheim on January 10, 1996. I wish to thank all the participants of those meetings for helpful comments.

both from the crosslinguistic and from the language internal points of view. In other words, not all languages have a fine DP-structure and, furthermore, each single position is not found in all languages. This is actually expected considering that even for clauses we find a high degree of cross-linguistic variation in the syntactic representation of Focus/Topic constructions.

The structure of the paper is as follows: Section 1 offers a brief review of the defective character of noun phrases with respect to A and A-bar movement and clitic movement. There, I will point out some problems for current theories on the parallel structure of noun phrases and clauses, but I will not attempt a solution. In the rest of the paper I will discuss some data that show that it is reasonable to assume a FocP and a TopP inside the noun phrase structure, parallel to Rizzi's proposal for clausal structure. In particular, in section 2 we will see the case of prenominal adjectives and possessives in Albanian which supports the assumption of a FocP immediately lower than DP. The same position will be proposed for Serbo-Croatian in section 3, to host adjectives with the so-called "indefinite morphology". In section 4, I will suggest that some apparently unexpected order among prenominal adjectives in Italian can be analysed as derived by movement to a SpecTopP immediately lower than DP, exactly as the one mentioned for Albanian and Serbo-Croatian. In section 5 we will go back to the Balkans and observe the behaviour of preposed possessors in Bulgarian. We will follow the proposal formulated in joint work with Mila Dimitrova-Vulchanova that the Bulgarian noun phrase has a TopP which is the highest projection in the nominal structure.

### ***1. Landing sites inside the noun phrase***

One important difference between sentential and nominal structure is the presence in the former of landing sites (or triggers) for A and A-bar movements, while in the latter little material is usually taken to be moved and there is a more restricted number of positions available as landing sites (or as triggers) for movement.

With respect to landing sites for A and A-bar movement, the noun phrase structure is highly "defective". A noun phrase cannot check a wh-feature in SpecDP, only some languages have NP-movement, and we see very restricted instances of Clitic movement in some languages.

### 1.1. *A-bar movement*

SpecDP can only be an escape hatch for a wh-element:

- (1) a. *Conosco il presidente di questa associazione.*  
I-know the president of this association.  
b. *Di che associazione conosci il presidente?*  
Of which association do-you-know the president?  
c. *\*Di che associazione conosci questo presidente?*  
Of which association do-you-know this president?

(1a) gives the basic structure, (1b) show that a wh-element can move out of a DP. This is presumably done in two steps, for various reasons. An intermediate landing site must be in DP. In independent research Campbel (1991) for English and Giusti (1993) for Italian have proposed that the escape hatch in the DP is SpecDP, parallel to SpecCP. When this position is filled by a demonstrative, as in (1c), extraction is blocked.

Despite the fact that there is a landing site for wh-elements, a wh-feature cannot be checked inside DP. Let us consider (2). In (2a) we see that the predicates *non sapere / non conoscere* can take a clausal wh-complement. In (2b) it is shown that the same predicates can take a nominal complement. (2c) shows that the nominal complement cannot check a wh-feature in its SpecDP:

- (2) a. *Non so/?conosco di che associazione Gianni sia il presidente*  
I don't know of which association G. is the president  
b. *Non ?so/conosco l'associazione/il presidente*  
I don't know the association/the president  
c. *\*Non so di quale associazione il presidente*  
I don't know of which association the president

**1.2. A-movement**

Let us now consider a case parallel to A-movement to check nominative case for the subject of a clause. Case checking inside DP is very rare in Italian. Let us start from a basic word order such as that in (3a) where the genitive is realized by a PP. In (3b) we see the case of the genitive relative pronoun *cui*. Cinque (1988) observes that it can only appear immediately right adjacent to an article. This suggests that it must check its morphological case into a position governed by a filled D. The same is possibly the case of the pronoun embedded into a PP in (4a). Notice that this position is the same as the position of possessive adjectives in Italian (4b).

- (3) a. il famoso ritratto di Aristotele  
       the famous portrait of Aristotel  
       b. Aristotele, [<sub>DP</sub> il [<sub>XP</sub> cui<sub>i</sub> [<sub>VP</sub> famoso [ritratto t<sub>i</sub>]]]] ...  
       Aristotel, the whose famous portrait ...
- (4) a. il di lei consorte  
       the of her husband  
       b. il suo ritratto  
       the his/her portrait

Italian also has a very restricted instance of construct state with the noun *casa* "home", as argued by Longobardi (1991) and following work. In (5a) the noun *casa* has moved to D and the genitive has moved to the immediately lower specifier. In all other cases, however, the construct state is not allowed (5b):

- (5) a. casa Rossi  
       house Rossi  
       b. \*\*il (di) Maria figlio  
       the of Mary son

Semitic languages allow the construct state very generally. Let us take the seminal work by Ritter (1988) as an example:

- (6) Hebrew, Ritter (1988):
- |    |                                  |                     |
|----|----------------------------------|---------------------|
| a. | ha-bayit ha-gadol shel ha-mora   | Art-N > Adj > genPP |
|    | the-house the-big of the-teacher | ("free" state)      |
| b. | *ha-bayit shel ha-mora ha-gadol  |                     |
|    | the-house of the-teacher the-big |                     |
- 
- |        |                           |                   |
|--------|---------------------------|-------------------|
| (7) a. | *beyt ha-gadol ha-mora    | N > GenDP > Adj   |
|        | house the-big the-teacher | (construct state) |
| b.     | beyt ha-mora ha-gadol     |                   |
|        | house the-teacher the-big |                   |

(6) shows the basic word order, the "free" state. The genitive PP is after the adjective. The noun has not moved as high as D. In (7) the noun is in D, since no article can appear, the possessor is a DP (not a PP), and checks its genitive case by moving in the Spec immediately lower than the D filled by the lexical N.

The construct state reminds us of the V/2 in Germanic: V-to-C is parallel to N-to-D. Nominative case is checked in the Spec immediately lower than C (as suggested by Tomaselli (1990), for instance, parallel to genitive case in the construct state.

In English, however, DP is more parallel to IP than to CP, if we look at the position where case is checked. In (8) we see the case of an inanimate possessor, which we could take as the basic position, while in (9) we see the case of a Saxon genitive, possibly a derived position. Abney (1987) suggests that genitive is assigned in SpecDP:

(8) [DP [D the] [ ... leg [PP of the table]]

(9) [DP John's [D] [ ... leg]] (Abney (1987))

Notice that in the clause the subject never A-moves to SpecCP.

### 1.3. *Clitic-movement*

In Italian there is no landing site for clitics inside the noun phrase even if genitive third person clitics can be extracted out of noun phrases and land onto the verb:

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- (10) a. l'autore del libro  
the author of the book  
b. \*\*\*l'autore ne  
the author CL-gen  
c. \*\*\* il ne autore  
the CL-gen author
- (11) a. conosco l'autore del libro  
I-know the author of the book  
b. ne conosco l'autore  
CL-gen I-know the author

Another question is why no other clitic can be extracted:

- (12) a. ho visto la tua lettera a Gianni (sul tavolo)  
I-have seen the your letter to Gianni (on the table)  
b. \*\* $t_i$  ho visto [la  $t_i$  lettera a Gianni] (sul tavolo)  
CL-2nd.s. I-have seen the letter to G. (on the table)  
c. \*\* $gli_i$  ho visto [la tua lettera  $t_i$ ] (sul tavolo)  
CL-3rd.s.-dat I-have seen the your letter to G. (on the table)

A possible answer is that the escape hatch for the clitic is an XP where only genitive pronouns (or better possessive adjectives) can land. This is on line with Cinque's (1980) generalization that the possessivization hierarchy is the same as the extractability hierarchy and with Longobardi's (1990) analysis in terms of NP structure. But this analysis does not take into account the impossibility of (12b) where a second person possessor is extracted.<sup>2</sup>

In some Balkan languages it is possible to have a dative possessive clitic inside the noun phrase. The position of this clitic is second immediately after the definite article

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<sup>2</sup>. As far as I know, the contrast between (12a) and (12b) has neither been adequately explored nor explained. Since it is not the topic of the present paper I will not attempt here to make up for this gap in the understanding of extraction phenomena from DPs.

in Rumanian (13a) and in Bulgarian (13b). In modern Greek the dative possessive clitic can be after any lexical head (13c):

- (13) a. *carte+a-i nouà*  
           book+the-his/her new  
       b. *nova+ta mu kniga*  
           new+the his book  
       c. *to oreo mou to vivlio, to oreo to vivlio mou, etc.*  
           the good my the book, the good the book my,

Up to now, I have reviewed the defective character of the clause-like functional structure of noun phrases. I have also pointed out that even some actual parallelisms between clauses and noun phrases are not complete. I have limited the discussion to some empirical problems without giving any new proposal to solve them. This short discussion should serve as the background of what follows, in which Topic ad Focus positions inside the noun phrase are dealt with.

## 2. *FocP inside the noun phrase: The case of Albanian*

In Albanian the relative order of postnominal adjectives is fixed, as expected under Cinque's (1995) hypothesis. For example, *tjetër* "other" precedes *i bukur* "beautiful" both in indefinite noun phrases (14) and in definite noun phrases (15). The only difference between Italian and Albanian is the position of the head noun which is higher in Albanian. However, not so high as D, since the indefinite article which is not enclitic must precede N and, as we will see in a moment, there is no difference in the word order of definite and indefinite noun phrases:

- (14) a. *një grua tjetër e bukur* (Alb.)  
           a woman other the nice  
       b. *un'altra donna bella* (Ital.)  
           another woman nice  
           "another nice woman"

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- (15) a. gruaja tjetër e bukur (Alb.)  
 woman-the other the nice  
 b. l'altra donna bella (Ital.)  
 the other woman nice  
 "the other nice woman"

(16) shows that the inverted order of the adjectives is excluded both in Albanian and in Italian, confirming Cinque's hypothesis:

- (16) a. \*një grua e bukur tjetër (Alb.)  
 b. \*una bella donna altra (Ital.)
- (17) a. \*gruaja e bukur tjetër (Alb.)  
 b. \*la bella donna altra (Ital.)

In (18)-(19) we see the case of an event nominal. The thematic adjective must be lower than the descriptive adjective. Once again, in Albanian the noun precedes both adjectives, while in Italian the noun is between the high adjective and the low one:

- (18) a. pushtimi i vetëm italian i Shqipërisë  
 invasion-the terrible Italian the of-Albania  
 b. la terribile invasione italiana dell'Albania  
 the terrible invasion Italian of Albania  
 "the terrible Italian invasion of Albania"
- (19) a. \*pushtimi italian i vetëm i Shqipërisë  
 invasion-the Italian the terrible the of-Albania  
 b. \*l'italiana invasione (terribile) dell'Albania  
 c. the Italian terrible invasion of Albania

It is possible in Albanian (at least for some speakers) to have a prenominal adjective. In this case the adjective is emphasised, not necessarily contrastively focused:

- (20) a. një grua e bukur  
 a woman the nice  
 "a nice woman"



- b. një e bukur grua  
a the nice woman  
"a *nice* woman"
- (21) a. një grua tjetër  
a woman other  
"another woman"
- b. një tjetër grua  
a other woman  
"*another* woman"
- (22) a. gruaja e bukur  
woman-the the nice  
"the nice woman"
- b. e bukura grua  
the nice-the woman  
"the *nice* woman"
- (23) a. gruaja tjetër  
woman-the other  
"the other woman"
- b. tjetra grua  
other-the woman  
"the *other* woman"

Notice, once again, that there is no difference in word order between indefinite noun phrases (20)-(21) and definite noun phrases (22)-(23). This clearly shows that the enclitic nature of the article is irrelevant to AP-movement: It neither triggers nor blocks it.

Interestingly, the prenominal position is available for either adjective, irrespectively of the hierarchy:

- (24) a. *tjetra* grua e bukur  
other-the woman the nice

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- b. *e bukura* grua tjetër  
the nice-the woman other

This suggests that the prenominal position is derived by movement of the AP. Furthermore this movement is a sort of A'-movement (if such a distinction should be shown to make sense for adjectives at all).

The AP-movement hypothesis is supported by the observation that thematic adjectives that are usually only postnominal in some languages such as in Italian, can also be prenominal in the emphatic position in Albanian, although marginally:

- (25) a. ?*italiani* pushtim ?(i vetëm) i Shqipërisë  
b. \**l'italiana* invazione terribile dell'Albania  
the Italian invasion terrible the of-Albania

If AP-movement is to be assumed in these cases, we must now inquire what the target position is.

The focus position follows the demonstrative which I take, for parallelisms with other languages, to be in SpecDP (cf. Giusti (1993), Brugè and Giusti (1996)). A Focused AP cannot precede the demonstrative:

- (26) a. *kjo* (shumë) *e bukur(a)* grua tjetër  
this the (very) nice woman other  
b. \**e bukur(a)* *kjo* grua  
the nice(-the) this woman  
c. \**tjetra/tjetër* *kjo* grua  
other(-the) this woman

This focus position is also available for genitive DPs:

- (27) a. *ky* libër i Benit  
this book the of-Ben  
b. *ky* i Benit libër  
this the of-Ben book  
c. \**i* Benit *ky* libër

The fact that it can host elements of various categorial nature strongly supports the proposal that it is a derived position of the A'-type.

The structure I propose for Albanian is (28):

(28) [DP D [FocP [Foc N(+Art)<sub>i</sub>] [... t<sub>i</sub> ...]]]

In definite noun phrases, the article is generated as a morpheme in Foc for reasons which I will not investigate here. The lexical head N may move to Foc and further check the article in D. It may also be the case that an AP is focused: AP moves to SpecFocP. In this case, the enclitic article in Foc is encliticized onto the adjacent adjective. The checking will be done at LF in SpecDP. If SpecDP is filled by a demonstrative, the definiteness features of DP are fulfilled. The article we find in (26a) is to be taken as a (pleonastic) agreement morpheme which is not checked in neither position in DP at LF.<sup>3</sup>

Russian, a language with no article, presents a similar phenomenon.<sup>4</sup> The order of demonstratives and adjectives is fearily fixed as shown in (29a-b). It is however possible to find a different order of adjectives, provided that the preposed adjective is emphasised (29c). The focused adjective must follow and cannot precede the demonstrative (29d):

(29) a. eta staraja amerikanskaja knjiga o lingvistike  
this old american book on linguistics

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<sup>3</sup>. Alternatively, it is possible to believe that if no FocP is needed, no FocP is projected. In this case, the article is directly generated and checked in D triggering N-to-D movement at SPELLOUT.

Another instance of minimizing the number of the projections is when no demonstrative is inserted. In this case DP and FocP may be taken to conflate in a theory à la Haider (1988). D and Foc would be one and the same position where the article is inserted in definite noun phrases. This article would not trigger N-to-D/Foc because it can encliticize onto the AP in SpecFocP/DP. If we take movement as a last resort, the possibility for the article to encliticize onto the AP would dispense with N-movement.

<sup>4</sup>. I thank Michael Yadroff for the data and a discussion on them.

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- b. \*eta amerikanskaja staraja knjiga
- c. eta *amerikanskaja* staraja knjiga
- d. \*amerikanskaja eta staraja knjiga

### 3. *TopP inside the noun phrase. The case of Serbo-Croatian*

Serbo-Croatian provides evidence for a Topic position for adjectives following the demonstrative. Consider the examples in (30)-(34) discussed in Leko (1988):<sup>5</sup>

- |      |  |                    |
|------|--|--------------------|
| (30) | a. siromasan djecak<br>poor-indef boy<br>"a poor boy"      | (Leko (1988))      |
|      | b. siromasni djecak<br>poor-def boy<br>"the poor boy"      |                    |
| (31) | a. siromasan, bolestan djecak<br>poor-indef sick-indef boy | A-indef, A-indef N |
|      | b. bolestan, siromasan djecak                              |                    |
| (32) | a. siromasni bolesni djecak<br>poor-def sick-def boy       | A-def A-def N      |
|      | b. bolesni siromasni djecak                                |                    |
| (33) | a. siromasan, bolesni djecak                               | A-indef, A-def N   |
|      | b. bolestan, siromasni djecak                              |                    |
| (34) | a. *siromasni bolestan djecak                              | *A-def A-indef     |
|      | b. *bolesni siromasan djecak                               |                    |

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<sup>5</sup>. I thank Nedžad Leko for discussing with me this data.

The cooccurrence of a definite and an indefinite adjective shows that the so-called definite/indefinite inflection of the adjective is not directly relevant to the interpretation of the noun as the glosses in (30) would make one believe at first sight. This observation is confirmed by the fact that a sequence such as (33) can be preceded by a demonstrative, as in (35):

- (35) a. onaj siromasan, bolesni djecak           (Leko (p.c.))  
           this poor-indef sick-def boy  
       b. onaj bolestan, siromasni djecak  
           this sick-indef, poor-def boy

Leko also observes that the "indefinite" form of the adjective is the one used as a predicate and in postnominal position (secondary predication), independently of the definiteness interpretation of the noun phrase it refers to:

- (36) a. onaj djecak je siromasan/\*siromasni  
           this boy is poor-indef/\*def  
       b. onaj djecak, siromasan i bolestan  
           this boy, poor and sick

I would like to propose that the indefinite adjective in (31), (33), is in a sort of topic position. This is why it does not agree for definiteness with the noun. In other words it is external to the functional structure which triggers agreement with the noun. The topic interpretation is confirmed by the comma intonation which is obligatory even if what follows is another indefinite adjective as in (31). This comma intonation is not found between adjectives inflected for definiteness, as in (32).

Interestingly, the topic (left dislocated position) is parallel to a "predicate" right dislocated position, much in the same way as in the Italian clause structure.

The position of this adjectival topic inside the noun phrase is lower than the demonstrative (37). Furthermore, its presence blocks the presence of a fronted focused adjective:

- (37) a. onaj siromasan, bolesni djecak  
           this poor-indef, sick-def boy

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- b. \*siromasan, onaj bolesni djecak (Leko (p.c.))  
 poor-indef this sick-def boy

- (38) a. \*SIROMASAN, onaj bolesni djecak  
 b. \*BOLESNI onaj siromasan djecak  
 c. onaj siromasan, BOLESNI djecak

I tentatively propose the structure in (39) for Serbo-Croatian:<sup>6</sup>

- (39)  $[_{DP} \text{ (dem) D } [_{TopP} \text{ Top } [_{FocP} \text{ Foc } [_{AgrP} \dots \text{ N} ]]$

#### 4. Italian AP Topicalisation

Consider now the Italian examples in (40):

- (40) a. i suoi capelli bianchi  
 the his/her hair white  
 b. i suoi bianchi capelli  
 the his/her white hair  
 c. i bianchi, suoi capelli  
 the white his/her hair  
 "his white hair"

(40a) can either mean that all his hair is white or that he has some white hair. With a prenominal AP as in (40b-c), the only interpretation we have is that all his hair is white. (40c) is acceptable only with some kind of pause between *bianchi* and the possessive adjective. In (40c) the whiteness of his hair must already be given in the discourse or as shared information.

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<sup>6</sup>. The head N does not move, or moves to a very low Agr position. This alleged movement is irrelevant to our topic.

This correlates to what is noted by Zamparelli (1993). According to him, prenominal adjectives are best i) if they express a prototypical property of the noun (41), ii) if the noun itself is maximally specified (42)-(43):

- (41) a. la bianca neve / le verdi colline  
the white snow / the green hills  
b. ??la nera neve / ??le azzurre colline  
the black snow / the blue hills
- (42) a. il prode Garibaldi  
the brave Garibaldi  
b. queste pigre giornate  
these lazy days
- (43) a. la nera bandiera che penzolava dalla sua finestra  
the black flag that hung from his/her window  
b. \*voglio una nera badiera  
I-whant a black flag

I would like to suggest that in all these cases the prenominal adjective refers to shared knowledge in the discourse. In fact, (41b) become acceptable if we have already introduced the hearer in a world where, say, snow is black and hills are blue. In (42a) it is certainly shared knowledge that Garibaldi was brave. In (42b) the presence of the demonstrative gives us a maximally specified referent whose character (of being lazy) is already given. In (43a) the relative clause specifies the referent, and once again my intuition is that the modifier "black" is already given in the discourse. This would be impossible in (43b), where the noun phrase is new information.

Considering the relative order of adjectives in Italian, we see that descriptive adjectives are rather low in the structure, immediately higher than thematic adjectives (as in 44b) or even in complementary distribution with them (as in 44c):<sup>7</sup>

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<sup>7</sup>. In (44) I depict a well known fact about Italian adjectives recently discussed at length by Cinque (1995). Only one can follow the noun, if there is a thematic adjective like *Martian* in (44b,c) this must follow the noun. I admit, however, that when things get complicated, even (44c) does not sound as bad as to assign it a star. The contrast with (44b), however, is clear. It is also clear to my

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- (44) a. La loro ultima vera aggressione brutale al pianeta sarà nel prossimo secolo.  
 (The) their possible last real aggression brutal to the planet will be in next century.
- b. La ultima vera brutale aggressione marziana al pianeta sarà nel prossimo secolo.  
 The probable last real brutal aggression Martian to the plane will be in next century.
- c. ??La ultima vera aggressione brutale marziana al pianeta sarà nel prossimo secolo.

Let us now provide a context in which we all know that last Martian invasion of the planet was brutal. We could either have (44b) above, in which we see *brutale* in the basic position, or (45a), in which *brutale* has been moved to a higher position, immediately lower than the DP:

- (45) a. Sappiamo tutti che la brutale ultima vera aggressione marziana al pianeta è la causa della distruzione dei dinosauri.  
 We all know that the brutal last real aggression martian to the planet is the cause of the destruction of the dinosaurs.
- b. Sappiamo tutti che la brutale loro ultima vera aggressione al pianeta .....  
 We all know that the brutal their last real aggression to the planet ...
- c. ... ?\*la loro brutale ultima vera aggressione ...
- d. ... \*la loro ultima brutale vera aggressione ...

---

intuition that the interpretation of *brutal* is not necessarily topical in this case.

It is not clear to me whether *brutale* is in the same position (44a,c) If this is the case, it is necessary to explain why the noun can move across it in (44a) but not in (44c). In other words it is unclear why (44b) is excluded. A possible solution is to relate N-movement to the presence of an adjective, no matter what class of adjective this is. The limitation of one postnominal adjective could then be related to the possibility for the lexical N in the immediately higher Agr to licence it, and the impossibility for a trace of a further moved N to have the same effect. Nothing of this kind has been proposed in the literature as far as I know. Unfortunately this topic is only tangential to ours and cannot be developed here.



e. ... \*l'ultima brutale vera aggressione marziana ...

(45) shows that the TopP in the Italian DP is the highest position in the nominal functional structure below DP, exactly like what has turned out for Albanian and Serbo-Croatian in the preceding sections. In fact, nothing except the article can precede the topicalized adjective, as shown by the impossibility of (45c-e).

Italian does not have a FocP:

- (46) a. \*i BIANCHI suoi capelli, non (quell)i neri  
           the white his/her hair, (not the black ones)  
       b. \*i suoi BIANCHI capelli, non (quell)i neri  
       c. i suoi capelli BIANCHI, non quelli neri

The impossibility of (46b) supports the hypothesis that prenominal adjectives in general are topics, since they cannot be focused even in situ.

To summarize: In Italian prenominal descriptive adjectives are always topic, shared knowledge, given, etc. Their given nature can be emphasised by fronting into a position immediately lower than DP. No FocP is present in the Italian noun phrase:

- (47) [DP Art [TopP AP<sub>j</sub> Top [AgrP POSS [AgrP .....t<sub>j</sub> ...[AgrP N<sub>i</sub> [...t<sub>i</sub> ]]]]]]

## 5. *Bulgarian*

For Albanian we have shortly seen that the genitive DP can also be fronted to TopP. I will now present the case of Bulgarian, studied in joint work with Mila Dimitrova-Vulchanova (cf. Dimitrova-Vulchanova and Giusti 1996, from now on DV&G) which clearly shows the possibility of fronting a dative possessor PP, with some interesting restrictions.

Bulgarian has a unique preposition: *na* (glossed as "to") which expresses both dative and genitive case. The *na*-DP can either follow the head noun or be first in the sequence:

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- (48) a. vsicki tezi novi knigi na Ivan  
 all these new books to Ivan  
 b. ?na Ivan vsicki tezi novi knigi

D-V&G propose to take (48a) as the basic structure and (48b) as derived via movement not only on general theory internal and cross-linguistic considerations but also on the language internal fact that the structure with the preposed possessor is better, as a matter of fact perfect, if the possessor is doubled by a clitic. Notice that doubling is also possible although not perfect, when the possessor is in place.

- (49) a. na Ivan vsickite mu tezi novi knigi  
 to Ivan all-the CL-dat.3.s. these new books  
 b. ?visckite mu tezi knigi na Ivan  
 all-the CL-Dat.3.s. these new books to Ivan

The clitic is only present in definite noun phrases and follows the element with the definite article (which is the head of the first constituent in the sequence, disregarding the preposed possessor) or the demonstrative:

- (50) a. tezi mu novi knigi  
 these CL-dat.3.s. new books  
 b. novite mu knigi  
 new-the CL-dat.3.s. books  
 c. knigite mu  
 books-the CL-dat.3.s.

It cannot be present if a definite article or a demonstrative is missing:

- (51) a. edna (\*mu) nova knjiga  
 a/one (CL-Dat.3.s.) new book  
 b. \*vsicki (\*mu) novi knigi  
 all (CL-dat.3.s.) new books  
 c. nova (\*mu) knjiga  
 [a] new (CL) book  
 d. knjiga (\*mu)  
 [a] book (CL)

Fronting of the possessor is allowed in indefinite noun phrases. In this case it is not doubled by the clitic:

- (52) a. *na Ivan edna nova kniga*  
           "a new book of Ivan's"  
       b. *na Ivan mnogo knigi*  
           "many new books of Ivan's"

Notice that the fact that the preposed possessor does not count as the first element of the noun phrase w.r.t. the article and the possessive encliticization confirms our hypothesis that the preposed position of the possessor is derived.

Given the relatively free word order in the Bulgarian clause, it is very difficult to establish whether the preposed possessor is really in a position inside the DP or "scrambled" out of the DP. However, the following considerations may suggest a DP-internal hypothesis.

The fronted possessor can appear string adjacent to the DP from which it originates in object position (53a), in the Clause front position (53b) and in predicate position (53c):

- (53) a. *Ceta na Ivan knjigata na studentite*  
           I read to Ivan book-the to students-the  
       b. *Na Ivan kniga vcera ja procetox na studentite*  
           To Ivan book yesterday I read to students-the  
           "Yesterday I read a book of Ivan's to the students"  
       c. *Tova e na Ivan kniga*  
           This is to Ivan book  
           "This is a book of Ivan's"

(53c) is the most stringent data in favour of the hypothesis that there is a landing site inside the DP for the fronted element.

Of course the *na*-DP can be further moved to the Clause front position (54a) or as a wh-element (54b):

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- (54) a. Na Ivan ja procetox kniga(ta mu) na studentite  
 To Ivan I read book(the his) to students-the  
 b. Na koj izvesten gruzki filisof kupi portet(ut) (\*mu)?  
 "Of which famous Greek philosopher did you buy [a]/the portrait?"  
 c. Na IVAN kupi portret(ut) (\*mu)!  
 "Of IVAN I bought the/a portrait!"

If it is fronted as a wh-element, or focalized, the clitic cannot appear.

Only possessors can be fronted (55). For this reason event nominals do not allow fronting (56):

- (55) a. na Aristotel portret (mu) (\*theme)  
 to A. portret-the (CL)  
 b. na Rembrandt potretut (mu) (\*agent)  
 c. na Ivan potretut (mu) (possessor)

- (56) a. unistozavaneto na grada  
 destruction-the to the city  
 "the destruction of the city"  
 b. unistozavaneto mu  
 destruction-the CL  
 "its destruction"  
 c. \*na grada unistozavaneto (mu)

This restriction to possessors, once again suggests a parallelism with the predication construction:

- (57) a. portretut bese na Ivan  
 "the portret was of Ivan"  
 b. \*unistozavaneto bese na grada  
 "the destruction was of the city"

The restriction to possessors does not hold for wh-movement and parallel focus movement outside the DP. In this case the clitic cannot appear:

- (58) a. na koj grad opisa unistozavaneto (\*mu)?  
of which city did you describe the destruction?  
b. na RIM opisax unistozavaneto (\*mu)!  
of ROME I described the destruction!

I propose, slightly reformulating the proposal of D&G (1996) that the Bulgarian noun phrase structure is as in (59):

- (59) [TopP Top [CIP CL [DP ..... ]]]

That Spec of TopP is different from SpecCIP is shown by the following examples:

- (60) a. na Ivan novata mu kniga  
of Ivan new-the his.CL book  
b. na Ivan tazi mu (nova) kniga  
of Ivan this his.CL (new) book  
c. na Ivan negovata si (nova) kniga  
of Ivan his-the self.CL (new) book

On independent grounds, I have proposed in Giusti (1993) for other Balkan languages and in joint work with Mila Dimitrova-Vulchanova (cf. Giusti and Dimitrova-Vulchanova 1994) that adjectives that host the clitic are neither in D nor in their basic position, but in SpecDP. In order to host the clitic in cases such as (60a) D-V&G. (1996) proposed that they move to SpecCIP. In independent work on demonstratives, I have claimed that they are in SpecDP, so they must be in SpecCIP in (60b). Finally notice that in (60c) there is a further element which part of the CHAIN constituted by the preposed possessor and the Clitic, namely the possessive pronoun *negov*, which certainly is a maximal projection.

Bulgarian clearly shows a parallelism between clause and sentence as pointed out by DV&G (1996). The Bulgarian sentence structure allows multiple fronting with clitic doubling. The noun phrase turns out to be "defective" once again, since the fronting is much more restricted and cannot be multiple at all.

The analysis given to Bulgarian, opens up the possibility of analysing parallel structures as instances of movement of possessive DPs to SpecTopP, thereby explaining the doubling effect which does not seem to violate the projection principle:

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- (61) German: a. das Buch von Johann  
the book of J.  
b. dem Johann sein Buch  
the.dat J. his Buch
- (62) West Flemish: a. de boek van Valere (Haegeman (p.c.))  
the book of V.  
b. Valere zen boek  
Valere his book
- (63) Norwegian: a. bilen til Per (Fiva (1987))  
car-the of P.  
b. Per sin bil  
P. his car
- (64) Hungarian: a. a Mari kalapja (Szabolcsi (1994))  
the M.nom. hat.poss.3.s.  
b. Marinak a kalapja  
Mari.dat. the hat.poss.3.s.

Notice that in the two languages where morphological Case is present, the possessor is in dative, parallel to the Bulgarian case discussed above. But I will leave this for future research.

## 6. *Conclusions*

In this paper, I have tried to draw a further parallelism between Noun Phrases and clauses, in view of other well-known ones. In particular, I have argued that in Noun Phrases a FocP and/or a TopP are to be assumed at least for some languages.

Considering that in a very general sense, Noun Phrases are "defective" with respect to the functional properties found in clauses, we are not surprised to find out that also the FocP and the TopP are not necessarily present in Noun Phrases in all languages.

These two functional projections represent the "fine" structure of the DP, in the sense that Rizzi (1995) proposes for CPs. And, as a matter of fact, they are situated either immediately below or immediately above it.

The assumption of these two new functional projections in the Noun Phrase structure not only does not complicate the general approach, since they have been proposed for clauses, but also can explain a certain number of otherwise unexpected word orders. Every section has motivated the assumption of these projections independently of theory-internal questions.

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