Remarks
and
Replies

“Postverbal” Subjects and the Mapping Hypothesis

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Superficially postverbal subjects of free inversion languages such as Italian are argued to be able to meet two distinct structural analyses: they may occupy either a VP-internal position, as more traditionally assumed, or a higher (preverbal and, actually, left-peripheral) position, with the remnant of the clause crossing leftward over them by dislocation or focus movement. These are all and only the possibilities expected under recent restrictive theories of phrase structure, like the one advocated by Kayne (1994), and are exactly those empirically realized. Evidence for this conclusion is based primarily on the (existential/generic) interpretation of bare nouns and overt indefinites and is reinforced by extraction considerations. The whole analysis, based on the interpretation of Romance indefinites, is likely to support some version of Diesing’s (1992) Mapping Hypothesis even more strongly than previous types of evidence did, including the original data from Germanic languages.

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Postverbal subjects in so-called free inversion languages have normally been thought of as occupying a position structurally different from that of preverbal subjects. This is not logically necessary, though. Even if, along the lines advocated by Kayne (1994), we exclude the option of rightward movement rules, the current theory of grammar still admits the possibility of two (and only two) different derivations for verb-subject order: in principle, it could result either from base generation (to the right of the surface position of the verb) or from leftward movement of the predicate across the (actually preverbal) subject. Thus, in the absence of specific evidence to the contrary it should be expected that postverbal subjects may be structurally ambiguous—one would hope, with distinguishable properties.

In this article it will be suggested that this sort of “null hypothesis” (given the current theory) is likely to be correct: contrary to classical assumptions, surface verb-subject sequences like those in (1) in Italian can precisely be argued to meet two structural descriptions, and the

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distinction seems to completely ignore and crosscut the unergative versus unaccusative/passive split.¹

(1) a. Ha telefonato uno studente.
   telephoned a student
b. E’ visibile uno studente.
   is visible a student
c. E’ stato chiamato uno studente.
   was called up a student

In fact, if the lexical subject is a bare noun in structures like (1), the distribution of its main readings, generic and existential, will reveal the plausibility of a structurally ambiguous analysis. Ultimately, the proposal will provide new direct evidence in favor of a part of Diesing’s (1992) Mapping Hypothesis.

The argument will first be developed for unaccusative/passive constructions, where the subject is an internal argument and is likely to have been base-generated in a postverbal slot anyway; then it will be extended to subjects of unergative predicates; and, finally, some conclusions will be drawn regarding the interpretation and position of objects.

1 Inversion as Covert Overt Movement

1.1 Preverbal Subjects

Italian bare nouns (BNs) in preverbal subject position are subject to two constraints:

1. They must be accompanied by a (relative, adjectival, PP) modifier.²
2. They are interpreted as existentials or generics, roughly according to the following pattern (see Longobardi 1998, to appear):
   a. only the existential reading arises with episodic predications;
   b. only the generic reading arises with a subset of individual-level (I-level) predicates;
   c. a potentially ambiguous interpretation arises with stage-level (S-level) nonepisodic (i.e., gnomic or characterizing) predicates.

The basic facts, which are quite general, are well exemplified by the following passive and unergative predicates:

Episodic

(2) a. *Medici sono stati chiamati spesso, ieri, in questo ospedale.
   doctors were called up often yesterday in this hospital

¹ I will (simplistically) take the ne-extraction test (see Burzio 1986) as the relevant one for classing predicates as unaccusative or unergative.
² See Delfitto 1997 among others for discussion.
b. Medici del reparto di pronto intervento sono stati chiamati spesso, ieri, doctors of the first aid department were called up often yesterday in questo ospedale. (Ex) in this hospital
‘Yesterday in this hospital it was often the case that doctors of the first aid department were called up.’

I-level

(3) a. *Linguisti diventano subito famosi.
linguists become immediately famous.
b. Linguisti capaci di scrivere il Mémoire o LSLT
diventano subito famosi. (Gen)
immediately become famous

Characterizing S-level

doctors are called up often
b. Medici del reparto di pronto intervento vengono chiamati spesso. (Ex/Gen)
‘It is often the case that doctors of the first aid department are called up.’
or
‘Doctors of the first aid department have the property that they are called up often.’

The first constraint appears to be related to the fact that Romance unmodified BNs, unlike modified ones and normal, overtly determined DPs, have the same distribution as wh-traces and wide scope quantifiers; that is, they must be lexically ‘‘governed’’ (however this descriptive notion may be ultimately formalized in the theory). In fact, the constraint can perhaps be related to the actual presence of an empty category, understood as a syntactic (i.e., nonpronominal) variable, in the D position of BNs (Contreras 1986, Longobardi 1994). Preverbal subject positions in several languages have been known for many years to be insufficiently ‘‘governed’’ in this sense. Modification, unnecessary for clearly lexically governed BNs such as direct objects, seems to somehow remedy the violation.3

The second constraint seems to be one of semantic compatibility with an aspectual morpheme and more generally to depend on the possibility of sentence-level genericity, not on the internal structure of the nominal argument; as such, it applies largely to overt indefinites as well (e.g., DPs introduced by a visible indefinite determiner, such as the indefinite article, a partitive or numeral determiner) in the same environments (see Longobardi 1998, to appear).

3 This licensing effect of modification on BNs is, strictly speaking, still unexplained, but the need to resort to it will anyway be taken as a diagnostic for the presence of an ungoverned null D. See Delfitto and Schrotten 1992 for an insightful proposal, though one at odds with other current solid assumptions about empty determiners.
1.2 Inverted Subjects

Rather uncontroversially, postverbal subject positions have been argued to be lexically ‘‘governed’’ with respect to wh-movement and wide scope quantification in Italian (Brandi and Cordin 1981, Rizzi 1982). Therefore, one could easily expect the effects of the first constraint on BNs to be completely inactive in postverbal position, and those of the second to be preserved, if due to the semantic nature of the lexical predicate or the verbal aspect.

To some extent both predictions turn out to be correct: many unmodified BNs are possible as postverbal subjects, and the distribution of the two readings with respect to the type of predicate (S-level/I-level, episodic/characterizing) basically remains the same. But the modification constraint does not completely fade away.

Indeed, the fact is that in postverbal position a surprising interaction between the two conditions holds: unmodified BNs are possible, but the generic reading (whenever contextually allowed, of course) is available only to the modified ones. In other words, lack of modification provides disambiguation: unmodified BNs retain only the existential interpretation with characterizing S-level predicates and are straightforwardly ungrammatical where the existential reading was lexically unavailable (I-level predicates). Compare (5) and (6), corresponding to (3) and (4).

   become immediately famous linguists

  b. Diventano subito famosi linguisti capaci di scrivere il Mémoire o LSLT. (Gen)
     become immediately famous linguists capable of writing the Mémoire or LSLT

(6) a. Vengono chiamati spesso medici. (Ex)
   are called up often doctors

  b. Vengono chiamati spesso medici del reparto di pronto intervento. (Ex/Gen)
     are called up often doctors of the first aid department

The pattern of (6) is also confirmed by predicates that are easily lexically ambiguous between an episodic and a characterizing reading, like be visible.

(7) a. Sono visibili insetti. (Ex)
   are visible insects

  b. Sono visibili insetti di grandi dimensioni. (Ex/Gen)
     are visible insects of large size

Thus, unmodified BNs are only existential as postverbal subjects.

Crucially, an additional condition holds of these constructions: in postverbal position the generic reading, whenever possible, always implies a detectable intonational break between the predicate and the postverbal subject, and a distinctly either ‘‘given’’ (topic) or ‘‘new’’ (focused) reading of the former. This is never required with the existential interpretation, which is perfectly compatible with a flat intonation and an internally unarticulated informational content of the sentence.

In the subcase in which the predicate preceding the inverted subject is ‘‘new’’ and the subject
itself is ‘‘given,’’ the properties of the structure seem to resemble those usually ascribed to the
construction labeled ‘‘right-dislocation.’’ However, it is important to stress that reducing the
phenomenon under consideration as a whole to the concept of right-dislocation cannot be correct,
since, as noted, the other subcase in (5b), (6b), and (7b) also exists, where the predicate is ‘‘given’’
and the inverted subject is ‘‘new.’’ The latter informational configuration is known to be sharply
incompatible with at least the clearest traditional case of right-dislocation, that of an object with
a resumptive clitic.4

(8) a. Lo chiamano spesso, Gianni.
   him they call up often Gianni
b. Li individuano facilmente, insetti di grandi dimensioni.
   them they identify easily insects of large size
c. *Lo chiamano spesso, GIANNI.
   him they call up often GIANNI
   d. *Li individuano facilmente, INSETTI DI GRANDI DIMENSIONI.
      them they identify easily INSECTS OF LARGE SIZE

Thus, (6b) and (7b) can be generic only if, so to speak, a ‘‘comma’’ intonation (and the
associated interpretation) is interposed immediately after spesso or visibili. Correspondingly, such
intonation is required for (5b) to be grammatical.

Notice conversely that the occurrence of the intonational break and the associated informa-
tionally marked reading of the predicate (whether as ‘‘new’’ or ‘‘given’’ information) do not
disambiguate between the generic and existential interpretations of BNs.

The facts can be plausibly interpreted in the following way: generic (as opposed to existential)
postverbal subjects occur in a lexically ungoverned position exactly like the preverbal one, and
some major phrasal boundary, with intonational and interpretive consequences, separates them
from the preceding predicate.

Applying Occam’s razor to the set of lexically ungoverned positions, it should be concluded
that superficially postverbal generic subjects actually occur in the independently best known of
all such positions, precisely that of preverbal subjects.5 On this view the whole remnant portion
of the clause, call it the ‘‘predicate,’’ would be moved to their left, perhaps as the result of the
occurrence of some Topic or Focus feature, along lines suggested by Zubizarreta (1998). Since
the topic and focus interpretations are all and only those assigned in Italian to phrases Ǻ-preposed
to a left-peripheral position and the latter are normally followed precisely by an intonational
break, this hypothesis would be explanatory with respect to all the explicanda of the phenomenon.

4 A further difference between instances of the postverbal subject construction in question and right-dislocation
proper is suggested by Cecchetto (1999), who argues that right-dislocated nonsubject phrases essentially display non-
VP-external properties. However, as Carlo Cecchetto himself (personal communication) suggests, it is in fact possible
that right-dislocation of subjects, with its VP-external properties discussed in this article, is a different process from right-
dislocation with nonsubject XPs.
5 A similar line of reasoning is pursued by Moro (1997) for the subject positions of copular constructions.
In sum, Italian postverbal subject BNs are characterized by two distinct clusters of properties: they either

(9) a. require no preceding intonational break,
    b. do not force a focus/topic reading of the predicate,
    c. can never be generic,
    d. can occur unmodified,

or

(10) a. require a preceding intonational break,
    b. force a focus/topic reading of the predicate,
    c. can be either generic or existential,
    d. cannot occur unmodified.

This pattern may be taken to suggest that some superficially postverbal subjects are really postverbal and others are not, in the sense of being regularly promoted to [Spec, I] (or [Spec, T], if one prefers this name) and only then being crossed over by the whole ‘‘predicate.’’ Generic BNs have access only to the latter strategy. Compare the structures in the following representations, corresponding to the string in (7b):

(11) a. \[ IP pro [sono visibili [DP insetti di grandi dimensioni]] \] (only Ex)
    b. [[X sono visibili] [IP[DP insetti di grandi dimensioni] tX]] (ambiguous)

The intonational break could be explained as being associated with the right edge of the constituent labeled X⁶ (the ‘‘predicate’’) or with the stacking of adjacent left brackets arising in (11b).

1.3 Unergatives

Identical patterns appear to hold for subjects of unergative predicates, in both pre- and postverbal position. (12)–(14) correspond to (2)–(4).

Episodic

    doctors telephoned often yesterday in this hospital
    
    b. Medici del reparto di pronto intervento hanno telefonato spesso, ieri,
    doctors of the first aid department telephoned often yesterday
    in questo ospedale. (Ex)
    in this hospital

I-level

    linguists are certainly intelligent

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⁶ Such a constituent is necessarily a Topic or a Focus, lying in the specifier of perhaps distinct left-peripheral projections.
b. Linguisti capaci di scrivere il *Mémoire* o *LSLT* sono sicuramente intelligenti. (*Gen*)
linguists capable of writing the *Mémoire* or *LSLT* are certainly intelligent

**Characterizing S-level**

(14) a. *Medici telefonano spesso.*
doctors telephone often
b. *Medici del reparto di pronto intervento telefonano spesso.* (*Ex*/*Gen*)
doctors of the first aid department telephone often

(15)—(16) correspond to (5)—(6).

(15) a. Telefonano spesso medici. (*Ex*)
telephone often doctors
b. Telefonano spesso medici del reparto di pronto intervento. (*Ex*/*Gen*)
telephone often doctors of the first aid department

(16) a. *Sono sicuramente intelligenti linguisti.*
are certainly intelligent linguists
b. *Sono sicuramente intelligenti linguisti capaci di scrivere il *Mémoire* o *LSLT.* (*Gen*)
are certainly intelligent linguists capable of writing the *Mémoire* or *LSLT*

According to current theories of phrase structure (Kayne 1994, Chomsky 1995), noninternal arguments (i.e., subjects of unergative predicates) are still base-generated in a position lower than [Spec, I] (Koopman and Sportiche 1991), but to the left of the base position of the verb (presumably [Spec, V]). In either type of “inverted” construction, then, at least V alone must cross over this position, in any event. Modulo this difference, the same analysis applies as before. Therefore, superficially inverted subjects of all sorts in Italian could actually occupy two distinct positions, most likely inside and outside VP.

**1.4 Inversion and Null Subject**

One fact still to be accounted for is that non-null-subject languages such as English lack the inversion option (in either case).

(17) a. *Often arrive late doctors.*
b. *Often call up doctors.*

Ever since Taraldsen 1980, the lack of inversion has been attributed to a difference in the licensing of an empty pronominal to satisfy the Extended Projection Principle (EPP) in [Spec, I]. But in the present analysis some inverted subjects might actually occur in [Spec, I], thus already satisfying the EPP. Yet the possibility of this new type of “inversion” is likely to be typologically related to the more classical one, hence to null subject.

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7 For more recent discussions of inversion in null subject languages, see especially Ambar 1987, Delfitto and Pinto 1992, Pinto 1997, and Zubizarreta 1998; and for approaches to null subject properties in general, see among others Barbosa 1996 and Alexiadou and Anagnostopoulou 1998.
The problem is solved considering that, according to movement theory (or the theory of
dislocation, if technically not falling under movement proper), the so-called predicate crossing
over the subject has to be a maximal phrase, that is, an entire IP or an even larger constituent,
necessarily containing the subject position. Hence, if the latter is phonetically null, it is likely to
be resumptive or expletive pro, with the overt subject already leftward moved or left-dislocated,
an option allowed to a full extent only by null subject languages.

(18) [[IP pro sono visibili t] [[DP insetti] C [IP e]]]

It becomes natural, then, to attribute the ungrammaticality of (17) to the fact that the pro of (18)
would necessarily be replaced by an unlicensed trace in a non-null-subject language.8

In sum, the present proposal agrees with the spirit of Kayne’s (1994) approach to seemingly
rightward rules and might suggest a more general line of analysis for right-dislocation of subjects
as a whole.9 For, given the above remarks about right-dislocation, it is not inconceivable that the
proposed analysis may be available to all cases of right-dislocated subjects in Italian (i.e., including
definities, as in (8)).

1.5 The Mapping Hypothesis

Now, what obligatorily drives generic, but not existential, subjects out of their base position,
subjecting them to the lexical government requirement? It has been proposed, as a generalization
that is part of Diesing’s (1992) Mapping Hypothesis (MH), that generically bound, but not existen-
tially bound, DPs cannot occur inside VP. Actually, the two main theorems of the MH read as
follows:

(19) a. Gen only binds variables outside VP.
    b. Ex only binds variables inside VP.

In a phrase structure theory governed by Kayne’s (1994) Linear Correspondence Axiom, subject

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8 The problem of the failure of such a trace to be licensed has several ramifications and intricate consequences for
the notions of chain, proper binding, covert movement, and reconstruction, all too complex to be explored here. For the
time being, suffice it to tentatively suppose that the corresponding analysis for English, based on topicalization of the
subject and potentially rescuing (17), can be blocked by appealing to the lexically ungoverned status of the subject trace
(as opposed to Italian pro) when removed from its adjacent and c-commanding antecedent.

(i) [[IP t often arrive late] [[DP doctors] C [IP e]]]

In this sense the English/Italian contrast is reminiscent of the one Rizzi (1981) points out between raising and control
and precisely attributes to an Empty Category Principle effect.

(ii) a. *[IP t dormire] [Gianni sembra [XP e]]
    to sleep Gianni seems
    b. [[XP PRO dormire] [Gianni vuole [XP e]]]
    to sleep Gianni wants

The same reasoning would apply if the moved constituent were a CP rather than an IP, since a CP as well would be
likely to begin with a similarly unlicensed trace.

9 It must be assumed that such a peripheral position for subjects is itself “lexically ungoverned” or that reconstruction
for the purpose of a generic interpretation can be to the pro subject position, for reconstruction into a lower (VP-internal)
position should in any event yield just an existential reading, if the general analysis is correct.
phrases external to VP must necessarily precede it. Therefore, theorem (19a) of the MH can predict the state of affairs suggested above and in turn be confirmed by it, more convincingly than by any previous type of evidence.

Notice that no theory dispensing with the notions of *structure* and *displacement* could account in a principled way for the data presented here. Moreover, no theory allowing for fewer than the two assumed positions of subjects could do so; and no theory allowing (contra Kayne 1994) for more than these two (empirically motivated) positions would be optimally simple and equally explanatory.

2 More Evidence

If this approach is on the right track, three empirical consequences will follow, discussed in sections 2.1–2.3.

2.1 Overt Indefinites

First, even generic inverted subjects instantiated not by BNs but by DPs with *overt* indefinite determiners should actually occupy the *preverbal* position; thus, they should share the intonational and informational restriction, but not the one concerning modification, which affects only BNs.

In fact, this is correct: overt indefinites are subject to the intonational/informational constraint but seemingly not the modification constraint.

(20) a. Viene chiamato spesso un medico. (*Ex/Gen*)
   is called up often a doctor
b. E’ visibile un insetto. (*Ex/Gen*)
   is visible an insect
c. Sono sicuramente intelligenti dei linguisti. (*Ex/Gen*)
   are certainly intelligent PART.ART linguists

The subjects of (20a–c) can only be existential with a normal (flat) intonational/informational pattern, but they can also be generic with a presupposed or focused predicate and the associated break.

2.2 Extraction

The second prediction is that only *existential* (BN or overtly indefinite) subjects (i.e., those that can actually be structurally postverbal) of unaccusative predicates will allow extraction, in particular *ne*-extraction, a process normally prohibited in Italian from preverbal phrases. The prediction is essentially borne out, to judge from examples like the following, where the (a) sentences are

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10 This is true, of course, in languages deprived of a process of ‘‘en-avant’’ in Ruwet’s (1972) sense. I am indebted to Tarald Taraldsen, Adriana Belletti, and Mike Jones for suggestions on this point.
fully ambiguous (abstracting away from intonation, of course) and the (b) sentences tend to admit just the existential reading:

(21) a. Diventano subito famose traduzioni italiane delle opere di Chomsky.
   become immediately famous Italian translations of Chomsky’s works
   b. (A proposito delle opere di Chomsky,) ne diventano subito famose
      (speaking of Chomsky’s works) of-them become immediately famous
      traduzioni italiane.
      Italian translations

(22) a. Di solito, diventano subito famose delle traduzioni
   usually become immediately famous PART.ART translations
   delle opere di Chomsky.
   of Chomsky’s works
   b. (A proposito delle opere di Chomsky,) di solito,
      (speaking of Chomsky’s works) usually
      ne diventano subito famose delle traduzioni.
      of-them become immediately famous PART.ART translations

Hence, the extraction behavior in these two cases constitutes a fifth contrastive dimension to be added to the cluster in (11).

2.3 Generic Objects

The third expectation, given the MH, concerns generic BNs as direct objects: under (19a) they should be possible only if analyzable as VP-extracted and then crossed over by the relevant portion of the VP/clause. At least in principle, this analysis could have detectable properties: for example, effects of the modification constraint on generic BNs, if the VP-external position is itself lexically ungoverned, and intonational/informational differences from the existential direct object BNs and from other regular postverbal objects. Some such properties definitely show up. Consider the modification constraint.

I-level

(23) a. *Amo/Adoro arance.
   I love/I adore oranges
   b. Amo/Adoro arance di grandi dimensioni. (Gen)
      I love/I adore oranges of large size

Characterizing S-level

(24) a. ?La vecchia legge era così restrittiva che escludeva (perfino) cittadini
   the old law was so restrictive that it excluded (even) citizens
   dall’elettorato passivo. (Ex)
      from right to candidacy
   b. La vecchia legge escludeva cittadini senza figli/di età inferiore ai 25 anni
      the old law excluded citizens without children/aged less than 25
The facts are quite general: the same effect is found with objects “generically” quantified by means of adverbs of quantification.

(25) a. Gianni mangia sempre patate. (Ex)
Gianni always eats potatoes
b. Gianni mangia sempre patate di grandi dimensioni. (Ex/Gen)
Gianni always eats potatoes of large size

Thus, objects basically behave like postverbal subjects (i.e., observe the modification constraint when generic). Therefore, objects may easily be taken to comply with the expectation that in order to be generically interpreted, they must raise to a (necessarily ungoverned) VP-external position. Whether or not this position is the same as the left-peripheral one attributed above to subjects is not completely clear. The prosodic/informational conditions are perhaps slightly less systematic than in the case of subjects, but still detectable and rather similar: in the generic reading there is a strong tendency to either defocus the object BN, contrastively focusing the immediately preceding word (particularly salient, for example, in the case of amo/adoro in (23) or sempre in (25)), or focus the BN, treating all the preceding material as “given” information.

Even here, overt indefinites escape the modification constraint (but not the more sporadic prosodic/informational constraint).

(26) a. La legge esclude solo un residente dall’obbligo di presentarsi
the law only excludes a resident from the obligation to show up
in person
b. ?Amo/Adoro/Mi piacciono delle arance. (Ex/Gen)
I love/I adore/please me PART.ART oranges
c. Gianni mangia sempre una patata. (Ex/Gen)
Gianni always eats a potato

Thus, the generally correct hypothesis is likely to be that in order to be bound by generic operators (appropriate aspect or adverbs) any VP-internal DP, including objects, must move to some external position.

2.4 The MH and Empirical Evidence

If the above observations are correct, the driving principle might precisely be some version of Diesing’s MH (19a). Given the argument developed in Longobardi 1998, to appear (also see Longobardi 1994) that Germanic BNs, as opposed to Romance BNs, are freely capable of being referential generics (kind-denoting names) and not necessarily quantificational generics (variables bound by a Gen operator), it is likely that they can prove less about the correctness of a condition on quantificational binding like the MH (19a). Thus, the present set of facts from Romance BNs, which have been argued in the references cited to be unequivocally quantificational expressions,
along with the behavior of overt indefinites, becomes one of the most relevant pieces of evidence to support this part of the MH.

References


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