1. Introduction

The study of the initial periphery of the clause is a central component of the research program referred to as “the cartography of syntactic structures”. This program is prompted by the observation that syntactic representations are complex objects consisting of sequences of hierarchically organized functional elements: drawing detailed maps of such complex representations and studying how they interact with computational principles is a large descriptive endeavor and a line of inquiry potentially interacting with much research in theoretical and comparative syntactic.

The analysis of the left periphery was one of the first topics of cartographic research in the mid 1990’s, and has been consistently pursued in the following years. The strategy initially adopted has been to analyze in great detail the left periphery in a language, Italian, in which this clausal zone presents an obviously rich and highly articulated structure; then, the initial map based on one language was used as a benchmark for pursuing a comparative analysis, starting the comparison with closely related languages and dialects, and progressively extending it to typologically and historically more distant languages and language families.

In this case study we will retrace this development, starting from the presentation of the initial map based on Italian, in the context of the early cartographic studies. We will then move to extensions and modifications, addressing specific points in which the cross-linguistic evidence has played a key role in establishing the cartographic analysis. Then, we will dwell on a computational mechanism which has proved to be instrumental for cartographic research: the criterial approach, according to which the left periphery of the clause is populated by a sequence of functional heads (Top, Foc, Q, etc.) attracting phrases with matching features, and guiding the interpretation of such configurations at the interfaces with sound and meaning. We will then address some interpretive properties of topic and focus structures at
the interfaces in connection with the assignment of the prosodic contour and the proper use in discourse. The case study will be concluded by a discussion of the parametrisations which must be assumed, of the observed invariant properties, and of the prospects of tracing them back to deeper explanatory principles of syntactic computation.

2. The study of the left periphery in the context of cartographic research.

2.1. The cartography of syntactic structures.

In the course of the 1980’s it became clear that certain grammatical specifications, previously treated as simple morphosyntactic features associated to lexical categories, could be advantageously analyzed as defining independent syntactic heads. This trend, in fact going back to Chomsky’s (1957) analysis of the English tense-agreement system, received a major impulse with Pollock’s (1986) Split-Infl hypothesis, which, through much related work on Romance and Germanic, eventually led to Cinque’s (1999) detailed map of the structure of the IP. Motivations for this research path ranged from straightforward comparative evidence based on the fact that in some languages such grammatical specifications are independent words (e.g. English future marker *will*), to the possibility of elegantly capturing invariance and variation in the position of the verb through head movement in the inflectional space (Pollock, op cit., Belletti 1990), to the capacity to offer insightful analyses of adverb syntax (Cinque, op. cit.). These considerations led to an increased emphasis on the study of the functional lexicon, and of the configurations that functional structures could assume in clauses and phrases. This trend, pursued under natural assumptions of cross-linguistic uniformity, gave rise to the cartographic projects: it could be advantageously hypothesized that functional structures are complex syntactic objects, consisting of richly articulated and cross-linguistically stable sequences of functional elements. It was then justified to pursue a line of inquiry focusing directly on the detailed description of such complex entities through structural maps. Cartographic maps would offer a novel tool for comparative syntax, and would interact with the fundamental study of UG principles offering new technical devices for formal analysis and explanation. In turn, cartographic work would uncover new empirical generalizations, for instance on the ordering properties of the functional sequence, which would raise new questions and trigger theoretical work aiming at finding deeper explanations for the observed properties (see Cinque & Rizzi 2010, Shlonsky 2010, Rizzi 2013a for overviews of cartographic studies).

2.2. The initial map for Italian.

The study of the left periphery of the clause was among the initial topics of cartographic analysis. In Rizzi (1997) the research strategy was to initially study in great detail the properties of the left periphery in one language, Italian, and then enrich the analysis by bringing in comparative considerations, always trying to adhere as much as possible to uniformity guidelines. We will retrace this path in the following presentation.

In the traditional generative approach, stemming at least from Bresnan (1970), the clause is introduced by a single node C expressed in English by such morphemes as *that, if, for.* Nevertheless, simple positional evidence suggested that the complementizer space has a richer articulation. For instance, looking at the relative order of complementizer particles and topics expressed in the Romance Clitic Left Dislocation construction (Cinque 1990), one observes that the finite declarative complementizer *che* (that) in Italian precedes the topic (this is the only possible order in some varieties, while other varieties also admit the order Top *che*, an
ordering systematically attested, e.g., in Modern Greek: Roussou 2000), whereas the infinitival complementizer *di*, introducing control infinitives (Kayne 1983, Rizzi 1982) necessarily follows the topic:

(1) Ho deciso che, la macchina, la comprerò quest’anno
   ‘I decided that, the car, I will buy it this year’

(2) Ho deciso, la macchina, di comprarla quest’anno
   ‘I decided, the car, of to buy it this year’

Assuming the topic position to remain constant across such constructions, we are then led to postulate a partial map like the following:

(3)   che … Top … di …

Simple positional evidence of this sort led Rizzi (1997) to generalize the map in (3) by also taking into account the role that the relevant positions have in syntax and at the interfaces. In the proposed approach, the C-system appears to be delimited by two heads, Force and Fin(iteness). Force expresses the illocutionary force, or clause-type (declarative, question, exclamative,…: Cheng 1991), the kind of information which must be accessible to a higher selector in case of embedding (a main verb like *think* would select a declarative, *wonder* an interrogative, and so forth). Fin expresses the finite or non-finite character of the clause, agreeing in finiteness with the finite or non-finite morphology of the clause-internal predicate. So we have:

(4)    Force … Top … Fin …

In fact, both *che* and *di* simultaneously express declarative force and the finiteness (or non-finiteness) properties of the clause. But they differ positionally, as (1)-(2) show. Clearly, languages differs as to whether or not, and how, a given position is lexicalized. So, one complementizer particle (*che* in Italian, *que* in French, Spanish and Portuguese, *that* in English, *dass* in German, etc.) lexicalizes the Force position in finite clauses, while prepositional complementizers like *for, di, de*, etc.in English and Romance typically lexicalize the Fin position. Presumably such preposition-like complementizers must remain in the lower position as they participate in Case assignment (or checking) to the subject, possibly the assignment of overt Case by English *for* and of null Case to PRO by Romance *di, de*, etc. (Chomsky & Lasnik 1993), hence they must remain structurally local to the subject position (Rizzi 1997, sections 6 and 7). The fact that *che* expresses both properties of declarative force and finiteness may be technically characterized through movement (external merge in Fin and further movement to Force), or through selection throughout the C-system, or through a Search relation between Force and Fin (Rizzi 2013b).

If Romance and Germanic typically lexicalize Force in finite clauses, other languages may opt for different lexicalization choices. So, in Modern Irish the element translated with *that* occurs after the string of topics, foci, and preposed adverbials, hence in our terms it lexicalizes Fin (Roberts 2004:(7)):

(5)    Is doíche [ faoi cheann cúpla lá [ go bhféadfaí imeacht ]]
       is probable at-the-end-of couple day that could leave
Another Celtic language, Welsh, uses two overt particles *mai* and *a* delimiting the space in which topics, foci and other left-peripheral entities can occur, thus providing straightforward evidence for a configuration like (4) (Roberts 2004: (16)):

(6)  Dywedais i *mai* fel arfer y dynion *a* fuasai’n gwerthu’r ci.
     "I said that it's as usual the men who would sell the dog."  

In the first shot at a systematic map of the left periphery, the other crucial position which was taken into account was Focus. Romance languages typically use a left peripheral focus position to express what has been called contrastive, or corrective, focus (on these notions see section 6 below, and on a different derivational analysis of clause initial focus see Samek-Lodovici 2006). Such a position, always unique, can be preceded and followed by topics in Italian:

(7)  Credo che, al presidente, QUESTO, nella riunione di domani, gli dovreste dire
     ‘I believe that, to the president, THIS, in tomorrow’s meeting, you should say to him’

In fact, all the orders Top Foc Top, Top Top Foc, Foc Top Top are possible, with a unique focus and any number of topics on either side of Foc. This led to the following general map (Rizzi 1997):


where Top* means that a recursion of topics is possible (on the exact mechanism see section 7). This map, largely motivated by Italian data, was the initial basis for much cross-linguistic work on the left periphery in the following years. Additions and modifications of (8) were determined by the deepening of the cartographic analysis of certain positions, or by cross-linguistic observations.

3. Extensions

3.1. Int.

An important addition came from the study of interrogative complementizers corresponding to English *if*. The Italian equivalent, *se*, differs from *che* and *di* in that it can be both preceded and followed by a topic, and surrounded by topics:

(9)a  Mi domando, la macchina, se potrà comprarla quest’anno
     ‘I wonder, the car, if I will manage to buy it this year’

   b  Mi domando se, la macchina, potrà comprarla quest’anno
     ‘I wonder if, the car, I will buy this year’

   c  Mi domando, a mio figlio, se, la macchina, gliela compreremo quest’anno
     ‘I wonder, to my son, if, the car, we will buy it to him this year’

It is also consistent with a Focus position, but with a strict order *se*-Foc:

(10)a  Mi domando se LA MACCHINA gli potremmo regalare (non la moto)
‘I wonder if THE CAR we could give to him (not the motorbike)’

b * Mi domando LA MACCHINA se gli potremmo regalare (non la moto)
‘I wonder THE CAR if we could give to him, not the motorbike’

These considerations led to the postulation of an independent position Int(errogative), hosting se in the head position, and also wh elements like perché (why) and other reason adverbials in the specifier position, as they can also be surrounded by topics and can co-occur with a following focus position (see Rizzi 2001a, and the revision in Shlonsky & Soare 2011), both in main and embedded questions:

(11) A Gianni, perché, la macchina, gliela volete regalare?
‘To Gianni, why, the car, you want to give it to him?’

(12)a Perché LA MACCHINA gli volete regalare, e non la moto?
‘Why THE CAR you want to give to him, and not the motorbike?’

b * LA MACCHINA perché gli volete regalare, e non la moto?
‘THE CAR why do you want to give to him, and not the motorbike?’

A topic can also occur between Int and Foc:

(13) Perché, a Gianni, LA MACCHINA gli volete regalare, e non la moto?
‘Why, to Gianni THE CAR you want to give to him, and not the motorbike?’

The integration of Int thus gave rise to the following map:


3.2. Mod

Certain adverbials can be highlighted by being preposed to clause initial position:

(15)a Gianni ha trovato rapidamente la soluzione
‘Gianni found rapidly the solution’

b Rapidamente, Gianni ha trovato la soluzione
‘Rapidly, Gianni found the solution’

Even though the intonational contour may be indistinguishable from the one of topicalisation, both the syntax and interpretation of adverb preposing are different from topicalisation (and focalization). Interpretively, preposed adverbs are distinct from topics: the latter require some kind of connection to the background, while the former do not, hence (15)b doesn’t (necessarily) mean “as for rapid manners of doing things that are contextually salient, Gianni found a solution in such a manner”; they are also clearly distinct from contrastive focus, both intonationally and interpretively: indeed, preposed adverbials can also be genuine topics (“I thought Gianni would act rapidly, and, in fact, rapidly he found the solution”) and foci (“RAPIDLY you should react, not slowly”), but in neutral context they are neither: the adverb is simply highlighted in (15)b, interpretively it is not a topic nor a (contrastive) focus.
Also the syntax of adverb preposing differs from topic and focus movement.

First, (non-topical, non-focal) adverb preposing is clause bound: the following only allows the higher construal of *rapidamente* (Cinque 1999) with the main clause (Mario said something rapidly):

(16) Rapidamente, Mario ha detto (--) che Gianni ha trovato (*__) la soluzione
    ‘Rapidly, Mario said that Gianni found the solution’

By contrast, topicalisation and focalization (of adverbials as well as of arguments) is not clause bound. For instance, contrastive focalization of *rapidamente* allows both the local and distant interpretation:

(17) RAPIDAMENTE Mario ha detto (__) che Gianni ha trovato (__) la soluzione, non lentamente
    ‘RAPIDLY Mario said that Gianni found the solution, not slowly’

Second, any intervening adverb gives rise to an intervention (Relativized Minimality) effect on adverb preposing, as in (18), while it doesn’t similarly affect topicalisation or focalization (this is illustrated through contrastive focalization in (19): Rizzi 2004 building on Rizzi 1990 and Koster 1978):

(18) * Rapidamente, Gianni ha probabilmente trovato ___ la soluzione
    ‘Rapidly, Gianni probably found the solution’

(19) RAPIDAMENTE Gianni ha probabilmente trovato ___ la soluzione, non lentamente
    ‘RAPIDLY Gianni probably found the solution, not slowly’

A third syntactic property which clearly distinguishes adverb preposing from argument topicalisation is that the former, but not the latter, alleviates that-trace violations, the so-called “adverb effect”, or “anti-adjacency effect” (Bresnan 1977, Culicover 1993, Browning 1996, Rizzi 1997, 2014b):

(20)a * This is the man who I think that __ will sell his house next year
    b This is the man who I think that, next year, __ will sell his house
    c * This is the man who I think that, his house, __ will sell next year

In short, both syntax and interpretation of adverb preposing set it apart from left-peripheral topic and focus structures. For these reasons, it was proposed in Rizzi (2004a) that adverbs can be highlighted by being attracted to a clause-initial dedicated position, dubbed Mod(ifier): they have this extra option in addition to the other familiar options of being topicalized and focalized, which (at least some) adverbs share with arguments.

As for the cartographic properties of Mod, it clearly must be confined to the lower part of the C-zone: it can be higher than the lowest Top position, as in (21), but it definitely must be lower than Int, as shown by (22)a-b:

(21) Rapidamente, i libri, li hanno rimessi a posto
    ‘Rapidly, the books, they put them back in place’
Mi domando se, rapidamente, Gianni potrà trovare la soluzione
‘I wonder if, rapidly, Gianni will manage to find a solution’

* Mi domando, rapidamente, se Gianni potrà trovare la soluzione
‘I wonder, rapidly, if Gianni will manage to find a solution

The judgment of the respective order with Focus is more difficult:

Rapidamente, I LIBRI hanno rimesso a posto, non gli articoli
‘Rapidly, THE BOOKS they put back to place, not the articles’

This sounds acceptable, but it appears to invite an interpretation of *rapidamente* as a topic; i.e., it would be felicitous as a reply to the following (24)a:

So che hanno rapidamente rimesso a posto gli articoli...
‘I know that they have rapidly put back the articles in place…’

No! rapidamente, I LIBRI hanno rimesso a posto, non gli articoli
‘No! rapidly, THE BOOKS they put back to place, not the articles’

in which the adverb receives a topical interpretation (“No! As for rapid manners of acting that were just made contextually salient, THE BOOKS…”). If this (rather subtle) judgment is correct, Mod is confined to the lower part of the CP structure, admitting only the lowest Top position to occur under it:


3.3. Qemb

In Italian main questions, a wh-element and a contrastive focus are incompatible in any order:

A GIANNI che cosa hai detto, non a Piero?
‘TO GIANNI what did you say, not to Piero?’

Che cosa A GIANNI hai detto, non a Piero?
‘What TO GIANNI you said, not to Piero?’

A natural interpretation is that wh-elements and contrastive foci compete for the same unique position, so that they cannot co-occur. This interpretation is supported by the observation that *perché* can co-occur with a lower focus, as in (12)a: here *perché* occupies a position distinct from and higher than Foc, Spec of Int, so that in this case the two elements can co-occur in a fixed order (the well-formedness of this example also shows that there is no inherent incompatibility between a wh-element and a contrastive focus). Things are different in embedded questions. Here the co-occurrence is at least marginally possible in the order Foc – Wh (the opposite order sounds more degraded:

Mi domando A GIANNI che cosa abbiano detto, non a Piero
‘I wonder TO GIANNI what they said, not to Piero’
b * Mi domando che cosa A GIANNI abbiano detto, non a Piero’  
‘I wonder what TOP GIANNI they said, not to Piero’

If the impossibility of (26) is positional (a single position targeted by contrastive focus and wh-movement), the marginal possibility of (27)a in Italian leads us to assume a special position for wh-elements only in embedded clauses, distinct from and lower than the contrastive focus position.

Call this position “Q_{emb}” (Q in embedded contexts), in the lack of a better term (the position was called Wh in Rizzi 2004). The fact that this additional position is only licit in embedded questions suggests that it is somehow licensed through selection from the main verb. The Q_{emb} position is lower than focus, and not necessarily adjacent to it, as at least some adverbials (possibly in the Spec of Mod, or in a low topic position) can be interpolated:

(28) ? Mi domando A GIANNI, ieri, che cosa abbiano detto, non a Piero  
‘I wonder TO GIANNI, yesterday, what they said, not to Piero’

So, Q_{emb} must be in a low position in the CP map. Even though judgments quickly become extremely delicate, (28) seems to suggest that Q_{emb} is very low, perhaps immediately higher than Fin. So let us very tentatively revise (25) by integrating this position:

(29) [Force [Top* [Int [Top* [Foc [Top* [Mod [Top* [Q_{emb} [Fin [Ip … ]]]]]]]]]]]]]

In main clauses, as the special Q_{emb} position cannot be licensed via selection from the main verb (through a mechanism which we will not discuss here), the only option for a wh-element is to move to Focus, whence the incompatibility with contrastive focalization, as in (26) (except for wh elements having access to the dedicated position Int, such as perché). So, (26)-(27) seems to be another case of main-embedded clause divide, perhaps a case in the same family as the familiar root/non-root asymmetries involving the use of the left periphery of the clause (Haegeman 2012).


Poletto 2009), and on Classical languages and diachrony (Salvi 2005, Danckaert 2012, Benincà 2006, Franco 2009), etc. Volumes 1, 2, 3, 5, 7, 8, 9 of the subseries “The Cartography of Syntactic Structures” of the Oxford Studies in Comparative Syntax are devoted in part, or entirely, to the cartography of the left periphery. See Cinque & Rizzi 2010, Shlonsky 2010, Rizzi 2013a for general overviews.

The broad cross linguistic evidence now available has, on the one hand, confirmed the general validity of the backbone of the map arrived at in the first empirical studies, and on the other hand has shown aspects of cross-linguistic variation which in part can be deduced from independent parameters <FN 1> and in part require an appropriate parametrisation.

If we think of (29) as a sequence of functional heads (see below for discussion of this assumption), the evidence for the sequence in the initial studies was often indirect, based on the ordering of the respective specifiers, as per our previous discussion. Some particular configurations in individual languages may offer more direct evidence by allowing more heads to co-occur in a fixed order. For instance, our conclusion that *che* is higher than *se* in Italian is based on the indirect evidence provided by the respective ordering with a topic. But some languages offer direct evidence by permitting the two C particles to co-occur in a sequence. This is the case in the “reported question” construction in Spanish:

(30) Me preguntaron **que si** tus amigos ya te visitaron en Granada
    ‘They asked me that if your friends had already visited you in Granada’
    Plann (1982), Suñer (1994)

The sequence *que si* clearly is not a single complex C particle, as a topic can interpolate between the two elements (data from Rizzi 2013, thanks are due to M.Lluïsa Hernanz for useful discussion of this construction).

(31) María preguntó **que** el lunes **si** había periódicos
    ‘Maria asked that the Monday if there were newspapers’

This particular use of *que* is also consistent with a lower wh-element:

(32) Le pregunté **que** Juan **cómo** cocinaba
    ‘I asked him/her that Juan how cooked’

Plann (1982) observes that such indirect questions are interpreted as “reported questions”: I can ask someone “How did John cook?” and then report this speech event to somebody else by uttering (32). In fact, the construction is only possible with verbs which take an indirect question and are also verbs of saying (ask, say, etc.). Other verbs which are not verbs of saying (forget, remember,…) do not admit this construction. So, *que* (close or identical to the normal marker of declarative force) marks the reported character, while *si* in Int in (31) or the head hosting the wh-element as its Spec in (32) mark the interrogative force. As for the fact that the main verb must be able to select an indirect question here, but the marker of interrogative force is not local enough to permit selection from the verb, one must presumably assume that the relevant featural specification can circulate within the C-system, e.g., the Force head enters into an agree-like Search relation with Int which endows it with the relevant
interrogative feature, so that the highest head is specified both as a report and as an interrogative, and can be selected as such (Rizzi 2013b).

Saito (2010) analyzes the syntax of reported questions in Japanese underscoring the similarity with the Spanish construction:

(33a) Taroo-wa Ziroo-ni [CP dare-ga kare-no ie-ni kuru ka to] tazuneta
     T.-TOP Z.-DAT who-NOM he-GEN house-to come ka to asked
     ‘Taroo asked Ziroo that who is coming to his house’ (Saito 2010: (3))

The hierarchically higher head to expresses the reported character, while the head ka expresses the interrogative force. The linear order is the mirror image of the Spanish order, as a consequence of the head final nature of Japanese (whatever analysis one may adopt of the headedness parameter, whether it is an external merge property, or an internal merge property, as in antisymmetric approaches, Kayne 1994, or a property of linearization, as in Berwick & Chomsky 2011). The mirror image property is further stressed in embedded sentences involving three complementizer particles, adding to ka to the particle no, which Saito analyzes as a marker of finiteness, in the fixed order no ka to:

(34) Taroo-wa [CP kare-no imooto-ga soko-ni ita (no) ka to] minna-ni tazuneta
     T.-TOP he-GEN sister-NOM there-in was no ka to all-DAT asked
     ‘Taroo asked everyone if his sister was there’ (Saito 2010: (41))

Saito thus hypothesizes a (right) clausal periphery which is the mirror image of the one proposed and motivated for Romance:

                     |          |          |
                     no ka to

  |          |          |
  che se di

Similarity and differences are fully expected here: the hierarchical structure of the functional sequence is the same, while the linear order in Japanese is the mirror image of the one found in Romance, as one should expect under a strong universalist view, combined with independently necessary parameters of variation such as the one determining the surface order between heads and complements (see also Endo 2014 and other papers in Cardinaletti, Cinque, Endo, eds., 2014).

5. Computational mechanisms: The criterial approach.

The left periphery of the clause involves numerous kinds of movement from clause internal positions to the peripheral zone, basically the core cases of A’-movement. Such instances of movement appear to share the functional role of determining configurations for the expression of what is often called “scope-discourse” semantics (Chomsky 2004): the scope position and scope domain of different kinds of operators (interrogative, relative, exclamative…), and
articulations relevant for the expression of informational properties such as topic – comment, focus – presupposition, and other discourse-related functions. The “criterial approach” to scope-discourse semantics (Rizzi 1997, 2006, 2010, Rizzi & Shlonsky 2007) puts forth the hypothesis that such configurations are created by a simple and uniform syntactic device: the left periphery is assumed to be populated by a variety of functional heads, such as Top, Foc, Int, etc., occurring in the space delimited by Force and Fin. Such heads have a dual function: in the syntax, they attract a phrase from a clause internal position with matching features (so, Top attracts a phrase specified +Top, etc.), thus creating a Spec-head configuration with terms agreeing in the relevant feature, the criterial feature <FN 2>; at the interfaces, the criterial heads and features activate the relevant interpretive routines of semantic-pragmatic interpretation, and determine the appropriate prosodic contour assignment, respectively (for a different approach, see Neeleman & van de Koot 2008, Szendrői 2002).

For instance, a topic head, e.g., in the Clitic Left Dislocation constructions (Cinque 1990) attracts a phrase to its Spec <FN 3>, and determines the interpretation of its Specifier as “topic” and of its complement as “comment”, as well as the assignment of the appropriate intonational contour.

\[(36)\] [ Il tuo libro ] [ Top ] [ Gianni lo leggerà domani ]

‘Your book, Gianni will read it tomorrow’

Topic = Il tuo libro
Comment = Gianni lo leggerà domani

A focus head determines the interpretation of its Spec as “focus” (with further specifications varying parametrically: see below), and of its complement as “presupposition <FN 4>”:

\[(37)\] [ IL TUO LIBRO ] [ Foc ] [ voglio comprare ___ ] (non il suo)

‘YOUR BOOK I want to buy, not his’

Focus = IL TUO LIBRO
Presupposition = voglio comprare ___

This structural approach has sometimes been looked at as part of a program of “syntactization of scope discourse-semantics” (Cinque & Rizzi 2010), in which syntactic configurations are assumed to provide a simple and homogeneous format (Specifier – Criterial Head – Complement) which is exploited by interface routines, thus giving rise to a system with fully transparent interfaces of syntax with semantic and pragmatics.

A straightforward kind of comparative evidence for this structural approach is provided by the observation that in some natural languages certain criterial heads are overtly expressed. Familiar cases are the following:

\[(38a)\] Ik weet niet [ wie of [ Jan ___ gezien heeft]](Dutch varieties, Haegeman 1994)

‘I know not who Q Jan seen has’

\[(38b)\] Un sè [ do [ dan lo yà [ Kofi hu î ]]] (Gungbe, Aboh 2004)

‘I heard that snake the TOP Kofi killed it’

\[(38c)\] Un sè [ do [ dan lo wè [ Kofi hu ___ ]]] (Gungbe, Aboh 2004)
Certain Dutch varieties overtly mark the Q feature as of (if) in (38a); Gungbe overtly marks topic and focus through particles yà and wè, respectively, as in (38)b-c; Bavarian marks the relative complementizer as wo, as many Germanic varieties (38)d; Italian allows an occurrence of complementizer che to immediately follow an exclamative phrase as in (38)e, the only case in Standard Italian of a legitimate “doubly filled Comp” structure (whether che actually lexicalizes the exclamative criterial head or lexicalizes Fin when the C-system has an active exclamative head remains an open question: see Benincà 1996, Zanuttini & Portner 2003).

Under natural uniformity assumptions (Chomsky 2001), the facts of (38) support the view that other languages may use the same structural devices to express scope-discourse properties, except that the relevant criterial heads are phonetically null, a familiar (and trivial) parametric difference. For instance, the English equivalents would have the following representations:

(39)a Which book Q should you read <which book> ?
   b This book TOP you should read <this book>
   c THIS BOOK FOC you should read <this book> (, not that one)
   d The book REL that you should read <the book> (is here)
   e What a nice book EXCL I read!

The criterial heads are null here, but their presence may be detected indirectly, e.g., through the selective triggering of I to C head movement (in questions, but not in exclamatives in English).

While the original work on the criterial approach did not attempt to express the mechanism in terms of the minimalist technology on features and movement, Aboh (2010) developed this aspect by phrasing the triggering of movement by the criterial head through a Probe-Goal relation and a feature checking mechanism <FN 6>. See also Bayer and Grosu (2000) for an earlier reflection on the relation between criteria and minimalist feature checking.

One recent development of the criterial approach is the study of freezing effects which typically characterize criterial positions. For instance, a wh phrase satisfying the Q criterion in an indirect question cannot be further attracted to the main C-system (as in (40)a-b, Lasnik & Saito 1992), not even if the second movement could be attracted by a different feature, e.g., a contrastive focus feature on the lexical restriction in (41)a-b (Rizzi 2006):

(40)a Bill wonders which book Mary read
   b * Which book did Bill wonder __ Mary read

(41)a Bill wonders which BOOK Mary read, not which article
   b * Which BOOK Bill wonders __ Mary read, not which article

So, there are freezing effects of the following kind (Rizzi 2006, Rizzi & Shlonsky 2007, Rizzi 2011):
(42) Criterial freezing: A phrase meeting a criterion is frozen in place

See Lohndal (2010), Gallego & Uriagereka (2007) for discussion of these effects, and Bošković (2008), Rizzi (2014a) for attempts to connect the freezing effects, respectively, to feature inactivation and to properties of the labeling algorithm.

The system of criteria, typically expressing properties of A’-constructions, has recently been extended to A-constructions terminating in subject positions, in order to capture the interpretive properties associated to such positions, and that-trace effects, analysed as particular cases of criterial freezing. This led to the postulation of a Subject Criterion, the A-equivalent of core A’-criteria like Topic and Focus criteria (Rizzi 2005, 2006, Rizzi & Shlonsky 2007, Rizzi 2014c, building on Cardinaletti 2004).

6. Some interface properties of topic and focus.

In this section we will first briefly characterize the interpretive properties of topic-comment and focus-presupposition, and then the prosodic patterns associated to them. As in previous sections, the discussion will be primarily based on Italian data, with extension to other languages.

Starting with focus, it should be noticed first that the left peripheral focus position in Italian (and other Romance languages) is associated with certain interpretive peculiarities. It is generally said that the position expresses contrastive focus (Kiss 1998, Rizzi 1997, among others), as opposed to simple new information focus, i.e. focus in answers to wh-questions (see Section 7; for a different view, see Brunetti 2004).

But this should be qualified. In the alternative semantic framework (Rooth 1992 and much related literature), the notion of contrastive focus is quite broad and is basically related to the idea that contrastive focus evokes alternatives salient in the context (see also Krifka 2008). Such a wide definition, however, does not capture the interpretive specificity of the left peripheral focus in Italian. As discussed in Bianchi (2013) and Bianchi & Bocci (2013), in certain cases in which the contrast is internal to the utterance, movement to left peripheral focus position is not felicitous. A speaker uttering (42)a can felicitously continue with a right peripheral focus as in (42)b, while a continuation with a left peripheral focus would not be appropriate:

(42)a. Maria era molto elegante ieri sera.
   ‘Maria was very elegant last night.’

    b. Si era messa un Armani, non uno straccetto da quattro soldi.
       ‘She wore an Armani dress, not a cheap dress paid 4 pennies’

So, a mere contrast is not enough to licence the left peripheral focus. On the other hand, in a contrast across utterances by different speakers with a corrective import, left peripheral focus is natural. An example like (43)B can be totally felicitous in a context like (43)A:

(43) Speaker A: L’altra sera a teatro, Maria si era messa uno straccetto da quattro soldi...
   ‘Yesterday evening at the theatre, Maria wore a cheap dress paid 4
    pennies…’
Speaker B: No, UN ARMANI si era messa, non uno straccetto da quattro soldi.
‘An ARMANI DRESS she wore, not a cheap dress from H&M.’

Other cases show that an explicit correction is not necessary to license a left-peripheral focus. As discussed in Cruschina (2012) and Bianchi et al. (2014), left peripheral focus in Italian is also licit when it expresses what is sometimes called a “mirative” import (Cruschina, op. cit.).

Consider the discourse context provided by sentence (44)a followed by sentence (44)b:

(44)a. ... e io che pensavo che non avessero nemmeno un soldo...
‘...and I that thought that they didn’t have a cent…

b. Indovina un po’?! ALLE MALDIVE sono andati in viaggio di nozze!
‘Guess what?! TO THE MALDIVES hey went on honeymoon.’

Notice that the presupposition of this “mirative” focus is not necessarily discourse-given (in the sense of Schwartzchild 1999): left peripheral focus can felicitously occur in contexts like (44), where the alternative propositions are based on expectation. (44) shows that discourse-givenness of the background is not a necessary condition for focus movement.

Corrective and “mirative” focus seem to have in common the fact that the fronted position introduces new information falling outside the range of natural expectation imputed to the interlocutor (Rizzi 2013c), and/or previously assumed by the speaker. Both interpretations could thus be associated to a unique left peripheral position. Alternatively, the mirative and the corrective import could be grammaticalized as defining two distinct types of foci (see Bianchi et al. 2014 for discussion), possibly associated with distinct cartographic positions. Consistent with this hypothesis is the observation, discussed below, that corrective and mirative focus have distinct prosodic contours. Anyway, whatever the right cartographic and interpretive analysis turns out to be, the previous discussion suggests that focus movement to the left periphery cannot be viewed as a ‘stylistic’ phenomenon that merely affects the PF branch of the derivation, as focus movement is clearly sensitive to subtle interpretive properties of the kind we have illustrated. Simultaneous effects on both interfaces with sound and meaning are expected under the criterial approach which assumes abstract syntactic features to be accessible, and interpreted, at both interfaces. Other approaches would require to postulate additional sound-meaning relations, independent from syntax.

A different type of focalisation, with a clearly distinct syntax, is offered by the cleft construction, with the focused element following a copula, and the presupposed part expressed by a relative-like clausal constituent:

(45) E’ con Gianni che Maria ha trovato la pace
‘It is with Gianni that Maria found peace’

The focus in clefts differs from a left-peripheral corrective focus in that it does not require an immediately precedent utterance to be corrected and, contrary to the mirative focus, the new information it introduces does not necessarily fall outside the (previous) natural expectations of the participants in the discourse situation. On the “exhaustivity” properties of focalization in clefts see Kiss (1998). As for the syntax of clefts, Belletti (2009, chap. 10) argues for a biclausal left peripheral analysis: the copular verb selects a reduced clausal structure terminating at a dedicated FocP (the analysis also postulates a distinct kind of cleft restricted
to the focalization of the subject position, with distinct syntactic and interpretive properties). On the extensive literature on the syntax and interpretation of clefts see also Haegeman, Meinunger and Vercauteren (2014, Belletti (2014), Karssenberg and Lahousse (2014), among many other references.

Consider now topic interpretation. According to a prominent view (Reinhart 1981, Vallduví 1992, but see also Büring 1997, and related work, Roberts 1996) topics are characterized by the “aboutness” interpretation: a referent is selected, and a comment is made about it.

Topics must also be part of the background, so that a topic (e.g., in the Italian Clitic Left dislocation construction in (46)A’), cannot be felicitously used in an out of the blue “all new” context, contrary to preverbal subjects (as in (46)A: Rizzi 2005, 2014c).

(46)Q: che cosa è successo?
‘What happened?’
A: Un camion ha tamponato un autobus
‘A truck bumped into a bus’
A’ # Un autobus, un camion lo ha tamponato
‘A bus, a truck bumped into it’

What is not felicitous in (46)A’ is not the indefinite character of the topic per se: there is nothing wrong (in Italian) with an indefinite topic, provided that it is connected to the previous context; i.e., if buses have been introduced in previous discourse, (46)A’ becomes felicitous: <FN 7>

(47)Q: Sai perché il traffico degli autobus è così perturbato stamattina?
‘Do you know why the bus traffic is so perturbed this morning?’
A: Mah, io so solo che un autobus, un camion lo ha tamponato mentre usciva dal garage
‘Well, I only know that a bus, a truck bumped into it while it was going out from the garage’

So, a topic is presupposed, and is connected to the comment via an aboutness relation. In the original map of the left periphery discussed in Rizzi (1997), topic projections were treated as interpretatively homogeneous. More recent analyses, however, have argued in favour of a refined typology of topics: see Benincà & Poletto ( 2004), and Frascarelli & Hinterhölzl (2007), Bianchi & Frascarelli (2009) for different proposals. Interestingly, different interpretative categories are argued to pattern with hierarchical and positional differences (as well with distinct kinds of prosodic contours) in the references quoted.

Topic and focus constructions are associated with distinct prosodic properties in Italian. Consider focus first. At the intonational level, the focus element bears a prominent nuclear pitch accent and its right edge associates with a low phrase accent (L-), while the presupposition is realized with a low and flat contour or special compressed pitch accent. Consider (48)B, which illustrates a case of a left-peripheral focus endowed with corrective import. As the reader can observe in Figure 1 the focus element is realized with a clear rise starting on the stressed syllable onset and culminating in a peak aligned within the stressed
vowel. After the low phrase accent (i.e. L-) associated with the right edge of the focus constituent, no full-fledged pitch accent is visible on the presupposition.

(48) Speaker A: Se ho capito bene, sono andati alle isole Vergini.
‘If I understood correctly, they went to the Virgin Islands.’

Speaker B: Ti sbagli! ALLE MALDIVE sono andati in viaggio di nozze!
‘You are wrong! TO THE MALDIVES they went on honeymoon!’

Consider now Figure 2, reporting the pitch contour of a realization of (44)b, an example of mirative focus:

As illustrated in Figure 2, an initial focus endowed with the mirative import is realized with a high plateau that results from the interpolation between different tonal specifications: a high tone boundary (%H) associated with the left edged of the focus constituent and a nuclear H*
pitch accent associated with the stressed syllable. The occurrence of the high boundary and
the type of pitch accent associated with focus oppose mirative and corrective focus, as
emerges from the comparison of figures 1 and 2. <FN 8>

Clitic left dislocated topics in Romance languages are generally reported to form independent
prosodic constituents, mostly identified as intonational phrases, and to be associated with
prominent pitch accents that qualify as nuclear. Although roughly correct, this simple
characterization may fail to capture more subtle prosodic properties. See, among others, Frota
(2000) for European Portuguese; Doetjes & al. (2002) for French; Feldhausen (2010) for
Catalan; Frascarelli (2000), Brunetti et al. (2010), Bocci (2013) for Italian).
Still, independently of their fine intonational properties, topic-comment configurations
contrast with focus-presupposition configurations in one crucial prosodic respect: the prosodic
realization of the comment, as opposed to the presupposition. Consider the following
example.

(49) A: Secondo me non avranno mai il coraggio di partire da soli per le Maldive...
‘According to me, they will never have the courage of traveling alone to the
Maldives…’

B: Beh, alle Maldive, ci sono andati in viaggio di nozze.
‘Well, to the Maldives, they went (there) on honeymoon.’

Figure 3

Figure 3 shows the pitch contour of the clitic-left dislocated structure (49)B. The topic is
phrased as an independent prosodic constituent and bears a prominent H* pitch accent.
Crucially, however, the comment of the sentence is not realized with a low and flat pitch
contour as the presupposition in fig. 1 and 2. Unlike the presupposition, the comment is
assigned full-fledged pitch accents and its rightmost constituent bears a nuclear pitch accent.
According to the Focus Prominence Rule proposed in Truckenbrodt (1995), focus must
associate with the highest degree of phonological prominence within its domain. This implies
that left peripheral focus necessarily triggers subordination of the presupposition, and
inversion of the default prosodic pattern. Topics are part of the background and thus non-
focus by definition: as such, they cannot trigger prosodic subordination of their comment. In
this way, the Focus Prominence Rule allows us to capture in a principled way the prosodic differences opposing left peripheral focus and topics (see Poletto and Bocci 2014 for further details on the prosodic properties of topic and focus).

7. Principles, parameters, and further explanation.

The comparative study of the left periphery reveals that certain properties remain constant, while other properties are variable across languages. For instance, it seems to be the case that languages using an explicit left peripheral position to express focus always use a single such position. On the other hand, languages may vary in the number of left peripheral topic positions permitted. In some cases, the topic position is unique (Gungbe, Aboh 2004); in other cases topics can be freely reiterated, as is the case in Romance (with differences in the fine interpretive properties depending on the position: Frascarelli & Hinterhoelzl 2006, Bianchi & Frascarelli 2011). Concerning the languages in which a proliferation of topics is possible (notated as Top* in maps like (29)), the question arise of whether they are amenable to a single Top head admitting multiple specifiers (an option typically assumed in minimalist studies for other kinds of functional heads, see Chomsky 1995 and much related work), or they involve a possible recursion of the Top head, each occurrence admitting a single specifier (as would be expected in approaches such as Kayne 1994, and as is currently assumed in cartographic analyses). Significant empirical evidence for the Top recursion approach comes from Abidji, a language which has the overt Top marker èké, and which permits a proliferation of topics, each one followed by the Top marker (Hager – Mboua 2014, which is the source of the following data):

(50) a. kòfì è pipjé èkòkò è
Kofi MA peel.RES banana Def.
‘Kofi peeled the banana.’

b. èkòkò èkè kòfì è pipjé nì
banana Def. Top Kofi MA peel.RES pron.i
‘The banana, Kofi peeled it.’

c. kòfì èkè èkòkòx èkè tì è pipjé nì
Kofi Top banana Def. Top tì MA peel.RES pron.j
‘Kofi, the banana, he peeled it’

These data, of course, do not exclude that other languages may use a different device, but provide evidence that Top recursion is a UG option (see also Rizzi 2013a on evidence that overt Top or Foc markers are optimally analysed as independent criterial heads, rather than as case-like affixes attached to the topic or focus phrase). Under usual uniformity assumptions, we may hypothesize that languages allowing multiple topics all use the device of Top recursion, until evidence to the contrary is found.

One distinct aspect of parametrisation involves the possibility of one (or more) positions(s) for the topic under the Foc head. Abiji imposes a strict order Top Foc (much as Gungbe), while Italian permits such a lower position, in addition to the position(s) higher than Foc. The occurrence of Top position(s) lower than Foc thus appears to be a parametric property independent from the possible proliferation of topics. We thus identify the following parametric properties:
(51)a Overt or null marker for Top?

b Single Top or Top recursion?

c Top position(s) lower than Foc?

As for focus positions, no variation is observed as to the number of positions, as all languages so far analysed in this perspective allow a single left-peripheral focus to occur. This is illustrated by Italian and Abidji data, the latter (taken again from Hager-Mboua 2014) involving the overt Foc marker bé (on different kinds of focus marking in African languages see also Hartmann & Zimmermann 2012):

(52)a IL LIBRO ho dato a Gianni, non il disco
‘THE BOOK I gave to Gianni, not the record’

b * A GIANNI, IL LIBRO ho dato, non a Piero, il disco
‘TO GIANNI, THE BOOK I gave, not to Piero, the record’

(53)a. kòfì è pipjé ókókò è
Kofi MA peel.RES banana Def.
‘Kofi peeled the banana.’

b. ókókò è, bé kòfì pipjé ______
banana Def. Foc Kofi peel.RES
‘THE BANANA, Kofi peeled ___’

c. *ókókò, é bé kòfìj bé _____ pipjé _____
banana, Def. Foc Kofij Foc ____ peel.RES ____
‘THE BANANA, KOFI ____ peeled ____’

See also Brody (1990), Puskás (2000) on the uniqueness of left peripheral focus in Finno-Ugrian, Durrlemann (2008) on Creole, etc. If no parametrisation appears to be at work here, languages and varieties do differ as to the fine interpretive properties of the left peripheral focus position. Belletti (2001, 2004) observed that the left peripheral focus position cannot be used in Italian to express simple new information focus (e.g., in a clausal answer to a wh-question), an interpretation which is associated to the sentence final position, in her analysis to a low focus position associated to the vP periphery:

(54)Q: Che cosa hai scritto? (Italian)
‘What did you write?’

A: Ho scritto un articolo
‘I wrote an article’

A’: # UN ARTICOLO ho scritto
‘AN ARTICLE I wrote’
On the other hand, other languages, even close varieties such as the Sicilian dialect described in Cruschina (2012), can use the left peripheral position as new information focus:

(55) Q: Chi scrivisti?  
     ‘What did you write?’

     A: N’articulu scrissi  
     ‘An article I wrote’

So, some form of parametrisation must be postulated here, involving the interface between focus structures and their interpretive properties (in addition, again, to the trivial parametrisation concerning the use or not of an overt Foc marker in the language). See also Hernanz (2011) and Servidio (2014) on the parametrisation at play with responding particles.

Going back to the uniqueness of the left-peripheral focus position, if indeed this is an invariant property, it should be amenable to some principled reason. This is a particular case of a general issue: the prospects of a “further” explanation for aspects of cartographic maps. Cartographic studies bring to light invariant and variable properties in the fine structural organization of clauses and phrases, in particular on the ordering of the functional sequences and on patterns of mutual exclusions between positions. If variable properties raise the question of how to properly express an empirically adequate parametrisation, invariant properties raise the issue of “further explanation”: it is not very plausible that UG may include primitive statements on ordering and mutual exclusion in the functional sequence (Cinque & Rizzi 2010), so the natural path to explore is that such aspects of cross-linguistic invariance may be traced back to fundamental principles ruling grammatical computations.

An early discussion of such a case concerns the uniqueness of the left peripheral focus. If focal structures are interpreted according to the schema in (37), along the following lines:

(56) IL LIBRO  Foc  ho dato a Gianni  
     “Focus”  “presupposition”

a recursion of Foc would inevitably give rise to a configuration in which the Spec of the lower focus is part of the presupposed information of the higher focus:

(57) * A GIANNI  Foc1  IL LIBRO  Foc2  ho dato  
     “Focus1”  Foc1  “presupposition1”
     “focus2”  Foc2  “presupposition2”

The same expression (IL LIBRO in (57) should thus be interpreted as part of the presupposition of Foc1, and as focus of Foc2, two inconsistent interpretive properties. Therefore, Foc recursion cannot occur. No such problem arises for Top recursion: a lower topic would be part of the comment of the higher topic, but nothing in the notion of “comment” precludes the possibility that a comment may in turn have topic – comment structure.

In this case, a plausible further explanation of the uniqueness of Foc vs the possible multiplicity of Top comes from principles operating at the interface with interpretation. A different form of “further explanation” for cartographic properties may come from formal
principles constraining syntactic computations. For instance, Abels (2012) explores the hypothesis that the theory of locality, in the form of featural Relativized Minimality (fRM: Starke 2001, Rizzi 2001b, 2004a) may be able, under appropriate auxiliary assumptions, to capture the ordering constraints discussed in Rizzi 1997 and successive work on Italian left peripheral positions involving movement (see also Callegari 2014, Krapova & Cinque 2014 for critical appraisals). Along similar lines Haegeman (2012) shows that the bulk of root / non-root asymmetries, in particular the impossibility of topicalisation in adjunct clauses and other forms of embedding, may be amenable to fRM. And Chomsky (2013, 2014), Rizzi (2014a) address freezing effects in criterial positions in terms of fundamental properties of the labeling algorithm.

The success of attempts to a “further explanation” has sometimes been considered an argument against cartographic studies, but such a conclusion would have no basis, no matter how successful this research path may be. The possibility of tracing back properties of the functional sequence, when invariant, to fundamental computational principles does not make the observed sequence an epiphenomenon, or an artifact resulting from a particular way of looking at things: the sequence remains a real “object of the world”, much as the structure of DNA is an “object of the world”, no matter whether particular aspects of the sequence of nucleotides may be derived from fundamental principles of physic/chemistry (see Rizzi 2013b for discussion). In fact, the very discovery of properties of ordering and mutual exclusions in the functional sequence, as it emerges from cartographic studies, is an inevitable research step in view of asking questions of deeper explanation in terms of the interplay of fundamental computational principles.

Acknowledgment.

Footnotes

1. A case in point is the activation of the left periphery in V-2 languages, in which the parametric properties characterizing V-2 severely constrain the occurrence of elements in left peripheral positions. For approaches consistent with the view of a uniform left periphery in V-2 and non V-2 languages see Haegeman (1996), Roberts (2004), and the recent discussion in Samo 2014.

2. The terms Criterion, Criterial head, etc. were originally based on an analogy with the Theta Criterion: much as thematic assignment is done on a local configuration involving the assigning head and the recipient, scope-discourse properties are similarly assigned by dedicated (functional) heads to elements in local configurations with them. See May (1985), Pesetsky (1982) for the original formulations of the Wh Criterion (later also referred to as the Q Criterion, and extended to the other scope-discourse configurations created by To, Foc, etc.).

3. We follow Cinque (1977) in assuming that the clitic left dislocation involves movement of the dislocated phrase, as is shown by the connectivity effects, and by the fact that the
construction obeys island constraints. See also Rubio 2014. Under a movement analysis, the doubling clitic plausibly comes from a “big DP” including both the clitic and the phrase to be dislocated (Belletti 2005, Cecchetto 2000). We will not analyze here the Hanging Topic construction (Benincà and Poletto 2004), involving a very high, presumably externally merged, topic-like position.

4. Here we continue to characterize this articulation through the classical terminology in Chomsky 1968, Jackendoff 1972; other approaches refer to the non-focal part as “background”.

5. Wie of may also co-occurring with dat (wie of dat), presumably marking the Fin head, and the sequence wie dat (who that) is also found, a rather common sequence in Romance and Germanic dialectal varieties. In this connection, Van Craenenbroek (2006) observes that in certain Northern Italian dialects one finds the orders Wh > che, Top > wh, che > Top, which would seem to give rise to an ordering paradox: che should both precede and follow wh. Van Craenenbroeck argues on this basis that transitivity considerations on ordering are potentially problematic and may be the sources of paradox (see also van Craenenbroeck 2009). In fact, the paradox dissolves as one recognizes that elements like che are typically versatile, and can occur in different positions in the clausal spine: in the dialects under consideration they occur in the highest position as declarative force markers, and also in a lower position, lower than the wh element in indirect questions. In some varieties, a higher and a lower che can co-occur, for instance surrounding a topic, as in the Piedmontese variety discussed in Paoli (2007):

(i) A chërdo che, col liber, ch’ a l’ abia già lesulo (Turinese, Paoli 2007)
   ‘They believe that, that book, that s/he has already read’

See also Ledgeway (2003), Radford (2013), Mioto (1999), Villa-Garcia (2012) on other cases in which two simultaneous occurrences of che-like elements are possible.

6. If a probe-goal search is activated from the criterial head, this mechanism may be the central computational device in in situ (focus or wh) constructions, possibly followed by covert movement at LF.

7. Notice incidentally that the contrast (46)A-A’ also shows that preverbal subjects cannot be assimilated to topics, not even in a null subject language like Italian, as is sometimes suggested.

8. The comparison between the contours of corrective and mirative focus also bears on another important question. In connection with figure 1, one may wonder whether the pitch compression observed on the postfocal material with corrective focus is induced by the occurrence of a fronted focus or rather by the fact that the postfocal constituents in (48)B are discourse-given information (in the sense of Schwarzschild 1999). In the Germanic languages, in fact, deaccenting is massively used to mark given information (see Selkirk 2008, among others). Could this proposal be extended to capture the intonational pattern of the presupposition in Italian?
The prosodic properties of sentences with left peripheral mirative focus strongly suggest that what triggers prosodic subordination and pitch compression of the presupposition is actually the occurrence of focus: in both focal structures the fronted focus element bears main stress and the background is realized with a low and flat pitch contour, even if in (44b) the presupposition is not discourse-given. This strongly suggests that the givenness of the background in Italian is not a necessary condition to trigger intonational compression. Quite generally, it has been repeatedly observed that Italian and Romance languages in general fail to deaccent given information (see Avesani et al., among others).

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