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Locality and the functional sequence in the left periphery

1 "Further explanation" of the properties of the sequence: The role of interface and locality principles

Cartographic studies have focused on the sequences of functional elements which characterize the fine structure of the different zones of clauses and phrases. Such functional sequences have well-defined properties, which have been the target of extensive study in recent year: properties of ordering, of dependencies and mutual incompatibilities between positions, of freezing induced by certain functional elements and the like. These discoveries have substantially enriched the empirical coverage of theoretical and comparative syntax.

Why is it that we typically find certain properties of ordering and co-occurrence restrictions, rather than others? As pointed out in Cinque and Rizzi (2010) it is unlikely that the functional hierarchy may be an absolute syntactic primitive, unrelated to other requirements or constraints: why should natural language syntax have evolved to express such a complex and apparently unmotivated primitive? It is more plausible that the functional hierarchy and its properties (to the extent to which they are universal) may be rooted elsewhere.

So, properties of the functional sequence should be amenable to "further explanations" in terms of deductive interactions involving basic ingredients and fundamental principles of linguistic computations. The search for such further explanations should be considered an integral part of the cartographic endeavor (Rizzi 2013). What could be possible sources of "further explanation" for the properties of functional sequences? Two broadly defined candidates come to mind:

1. Certain properties could derive from requirements of the interface systems. For instance, it could be that functional head B may necessarily occur under functional head A (thus giving the linear order AB in head initial languages and BA in head-final languages) because the opposite hierarchical order would yield a structure not properly interpretable. Ordering of aspect below tense may be a case in point, as well as other cases of the strict orders between functional elements in the IP spine systematically mapped in Cinque (1999)

and much subsequent work inspired by this seminal reference. A special case of the impact of interface requirements may be the ordering properties that follow from selectional requirements, e.g., the fact that the Force head in embedded clauses must be high enough to be accessible to higher selectors, which want to know if their complement is a declarative or a question, for instance (Rizzi 1997).

2. When the functional heads occurring in specific orders trigger movement, the ordering may be a consequence of locality requirements. For instance, Abels (2012) has argued that almost all the ordering effects observed in the Italian left periphery may follow from the theory of locality based on a version of featural Relativized Minimality, along the lines developed in Starke (2001), Rizzi (2004): if A is a stronger island-creating element than B, then B will not be extractable from the domain of A, neither long-distance, nor locally. So, if A and B can co-occur in the same left periphery, the only possible local order will be A B, as B A would violate locality. In the same vein, Haegeman (2012) has argued that the theory of locality may capture certain cross-linguistically variable restrictions on the occurrence of left peripheral constructions in some kinds of adverbial clauses. I will come back later on to her analysis of the contrast between English and Italian (and French) concerning the possible occurrence of topics in adverbial clauses. Other properties of the layers appearing in the sequence, e.g., the "halting problems" for wh-movement and related phenomena, may be derivable from other computational ingredients, such as the labeling algorithm (Chomsky 2013, 2015, Rizzi 2015a, 2015b, 2016 and the papers published in Boskovic 2016).

In this paper I will focus on the role of interface and locality principles in constraining the functional sequences in many ways.

2 On the possible relevance of locality: Constraints in the English left periphery

English and Italian express topic – comment configurations with two constructions which differ in important ways. Italian uses the Clitic Left Dislocation construction, in which a direct object topic is obligatorily resumed by a clitic. Omission of the clitic renders the structure ungrammatical:

(1)   *Il tuo libro, *(lo) voglio leggere.*
       'Your book, I (it) want to read.'

Cinque (1990) argued that the impossibility of simply preposing a topic, without clitic resumption, follows from the fact that the clause-internal gap in (2) should be interpreted as a variable, and the topic is not an operator, so that a variable would remain unbound in (1), plausibly a violation of Full Interpretation (Chomsky 1986) and/or of Koopman and Sportiche's (1982) Bijection Principle:

(2)   * *Il tuo libro, voglio leggere __.*
       'Your book, I want to read __.'

In this respect, Italian/Romance CILD has opposite syntactic requirements with respect to corrective focus movement to the left periphery, a construction which sharply differs from topic – comment in prosodic contour and pragmatic conditions for felicitous use (on the typology of focus in Romance see Belletti 2009, Cruschina 2012, Bianchi, Bocci, Cruschina 2016, Rizzi and Bocci 2016 for recent discussion). Focus movement allows and requires a clause internal gap:

(3)   *IL TUO LIBRO voglio leggere __, non il suo.*
       'YOUR BOOK I want to read, not his.'

In terms of Cinque's approach, this is expected if a correctively focused element is characterized by an operator feature, an assumption which is supported by the observation that focus gives rise to Weak Cross-over effects, the hallmark of certain prototypical operators (e.g., question and negative operators: Rizzi 1997). It should be noticed that the operator status seems to be a necessary, not a sufficient property for giving rise to Weak-Crossover effects, as certain operators, e.g, relative operators in appositive relative clauses, do not give rise to the effect, so, only a proper subset of the operators give rise to Weak-Crossover; for our purposes the implication "if Weak Cross-over then operator" is sufficient to establish the operator nature of focus, in line with much work on the logical form of focal structures.

English topicalization differs from Romance topicalization in permitting a gap, as the grammaticality of the gloss of (2) shows. Cinque (1990), updating the classical approach to topicalization in Chomsky (1977), proposes that English resorts to a null operator mediating between the gap and the topic. The representation then is something like the following:

(4)   *Your book Op I want to read __.*

That null operators are an option made available by UG is suggested by many constructions which use this device: relatives (under the matching analysis), *easy to please* constructions, parasitic gaps, etc. The rationale here is that, as English lacks clitics, it resorts to the null operator as a functional equivalent of the clitic, to solve the problem of connecting the topic to a gap. The plausibility of the

null operator analysis is enhanced by the observation that some closely related languages, like Dutch, can use an overt (relative-like) operator in topicalization, alternating with the null variant:

(5)   *Die man (die) ken ik.*   (Dutch: Koster 1978)
      'That man, I know.'

Italian and other Romance languages also resort to null operators in certain constructions, including appositive relatives, *easy to please* and parasitic gaps. Presumably, the use of the null operator in the topic construction is blocked by the availability of the clitic in the language (English also permits pronominal resumption in Ross' (1967) Left Dislocation, *Your book, I will read it*; this option may not block the null operator if Left Dislocation and Topicalization differ to some extent at the interpretive level, as suggested in Rodman 1974).

Assuming Cinque's analysis, Haegeman (2012) traces to the same explanatory scheme other distributional differences between English and Italian topicalization. In Italian a topic structure is possible in various kinds of adverbial environments which disallow the construction in English, e.g., in temporal adverbial clauses:

(6)   *Quando gli esami di primo anno li hai superati __, ti puoi iscrivere al secondo anno.*
      'When the first year exams you them have passed, you can register for the second year.'

(7)   **When the first year exams you have passed __, you can register for the second year.*

Under Cinque's analysis, the presence of a topic requires a null operator in (7). Then, Haegeman argues, if the subordinator *when* is moved from an IP internal position, it necessarily crosses the null operator; as *when* itself plausibly belongs to the class of operators, the derived configuration violates featural Relativized Minimality:

(8)   **When_{Op} the first year exams Op you __ have passed __ you can register for*

      the second year.

As the Italian topicalization construction involves no null operator, but only a topic (crucially, not a member of the operator class), no violation of locality arises in (6). So, under Haegeman's (2012) analysis, an apparently unrelated distributional difference between the two languages can be deductively connected

to the fundamental difference between English and Italian topicalization, the involvement of a null operator in the former by not in the latter.

3 The incompatibility of two topics in English vs. the proliferation of topics in Romance

There are other systematic differences between the topic constructions in the two languages. An important one is that Italian allows as many topics as there are topicalizable elements, whereas English fundamentally requires a unique topic. This is particularly clear when we restrict our attention to DP topics, whereas certain PP's with topic-like interpretation may enjoy more freedom (see below). Take the case in which both the main and the embedded (infinitival) clause have a direct object: both can be Cl left-dislocated, in any order:

(9)   a. *Ho convinto Gianni a comprare il tuo libro.*
         'I convinced Gianni to buy your book.'
      b. *Gianni, lo ho convinto a comprare il tuo libro.*
         'Gianni, I convinced him to buy your book.'
      c. *Il tuo libro, ho convinto Gianni a comprarlo.*
         'Your book, I convinced Gianni to buy it.'
      d. *Gianni, il tuo libro, lo ho convinto a comprarlo.*
         'Gianni, your book, I convinced him to buy it.'
      e. *Il tuo libro, Gianni, lo ho convinto a comprarlo.*
         'Your book, Gianni, I convinced him to buy it.'

On the contrary, in English the two objects can be topicalized independently, but cannot co-occur in the left periphery:

(10) a. *I convinced John to buy your book.*
      b. *John, I convinced __ to buy your book.*
      c. *Your book, I convinced John to buy __.*
      d. **John, your book, I convinced __ to buy __.*
      e. **Your book, John, I convinced __ to buy __ .*

Again, the hypothesis that a topic DP always involves a null operator in English immediately captures the ill-formedness of (10d-e). The relevant representation would be something like the following:

(11) **John Op, your book Op, I convinced ___ to buy ___.*

In this representation, one null operator would inevitably cross over the other, giving rise to a violation of featural Relativized Minimality. In Italian, on the other hand, the representations of (9d-e) do not involve null operators, so that no violation of fRM is produced.[1]

Another significant difference between the two languages is that in English a topic and a focus cannot naturally co-occur, whereas in Italian the configuration is fine:

(12) *??John, YOUR BOOK I convinced __ to buy __ (not Bill's book).*

(13) *Gianni, IL TUO LIBRO lo ho convinto a comprare __ (non quello di Piero).*
    'Gianni, YOUR BOOK I convinced him to buy __ (not Piero's)'

In English a corrective focus may also involve a null operator; or perhaps, as in Italian, the focalized constituent inherently counts as an operator, hence it can directly bind its gap. Whatever analysis turns out to be correct, we still have a member of the operator class, Op, crossing over another member of the operator class, the focalized element, which gives rise to a violation. As Italian does not use Op, topic and focus belong to distinct featural classes, and therefore no violation arises in (13).

Going back to the incompatibility of two topics in English, it should be noticed that clear cases illustrating it involve two DP's: on the contrary, a DP can co-occur with a PP with topic-like interpretation in certain cases, as in the following example provided by Ian Roberts (p.c.):

(14) *Words like that, in front of my mother, I would never say __ __.*

Apparently, a topic-like PP (at least in certain cases) has an additional structural option w.r.t. a DP topic, one which does not involve Op: one plausible possibility is that this kind of PP can also target the Mod(ification) position postulated in Rizzi (2004), a position which is involved in the attraction of highlighted adverbials of various kinds. So, if the representation of (14) is (15),

(15) *Words like that Op, in front of my mother Mod, I would never say __ __.*

we expect the structure to be possible, as it does not violate fRM: Mod belongs to a featural class distinct from the operator class (Rizzi 2004).

That such PP's can target Mod is also shown by the contrast between such preposed elements and topic DP's in anti-adjacency environments. *That*-trace effects, as in (16a), can be alleviated by a preposed adverbial, as in (16b), but not by a genuine topic (16)c. This is the antiadjacency effect, or adverb effect (Bresnan 1977, Culicover 1993, Browning 1996, Rizzi 1997):

(16) a. **This is the man who Peter said that __ will sell his house next year.*
    b. *This is the man who Peter said that next year, __ will sell his house __.*
    c. **This is the man who Peter said that his house, __ will sell __ next year.*

In a nutshell, the interpolation of a Mod layer has a beneficial effect on the *that*-trace environment, whereas the interpolation of a topic does not change things (see Rizzi 2014 for a possible analysis of the alleviating effect crucially relying on the Mod layer). Now, PP's like the one in (15) have a similar ameliorating effect:

(17) *This is a man who I think that, in front of my mother, __ would never say words like that.*

This supports the view that the PP in (15), (17) indeed targets the Mod layer, whence the lack of intervention effect in (15) (under fRM), and the alleviating effect in (17), on a par with (16b).[2]

4 The incompatibility of two left-peripheral foci in Italian

Whereas two (or more) topics and a topic and a focus can co-occur in the Italian left periphery, co-occurrence of two foci is sharply excluded:

(18) a. *GIANNI ho convinto __ a comprare il libro, non Piero.*
    'GIANNI I convinced to buy the book, not Piero.'

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1 If the topic is moved to the left periphery in the Romance CILD construction (as proposed in Cinque 1977 on the basis of island sensitivity; a movement analysis is also supported by the existence of reconstruction effects: Cecchetto 2000), the question arises of why movement of a +Top element across another +Top element does not give rise to a violation of fRM. In Rizzi (2004) I suggested that the topic feature may be excluded from the computation of fRM; or that multiple topics may give rise to an "equidistance" situation (Chomsky 1995) voiding the locality effect. Other options come to mind, which I will not discuss here.

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2 Aboh (2004) observes that topics are unique in Gungbe. This state of affairs interestingly contrasts with the one found in Abiji (Hager-Mboua 2014), which permits a multiplicity of topics, each one followed by an overt topic marker. The contrast could not be attributed to locality (in the terms developed in this section), as both languages involve pronominal resumption of topics. So, a primitive parametric difference may be involved here, or interface factors may be at play: it could be that Gungbe may only allow topics with interpretive properties requiring uniqueness (some kinds of topics are unique in the typology of Frascarelli and Hinterhoelzl 2007, Bianchi and Frascarelli 2010, whereas others permit recursion). I will leave this issue open here.

b. *IL LIBRO ho convinto Gianni a comprare __, non il disco.*[3]
   'THE BOOK I convinced Gianni to buy__, not the record'
c. **GIANNI IL LIBRO ho convinto __ a comprare __, non Piero, il disco.*
   'GIANNI THE BOOK I convinced __ to buy __, not Piero, the record'

The uniqueness of focus seems to hold generally for left-peripheral focus, also in languages permitting multiple topics, such as Italian or Abidji (Hager-Mboua 2014); and a similar incompatibility has been observed in Finno-ugric (Puskas 2000), other African languages (Aboh 2004), Creole languages (Durrleman 2008). A principled explanation thus seems to be in order.

An early attempt to provide a further explanation of this uniqueness requirement was made in Rizzi (1997). Uniqueness of focus, it was proposed, may follow from the interface properties of the Focus – Presupposition configuration. Assume (19) to be the interpretive routine triggered by the focal head in the left periphery:

(19) $[$ _____ $]$ Foc $[$ _____ $]$
        "Focus"   "Presupposition"

I.e., something like "interpret my Spec as the Focus (of the appropriate kind, here corrective focus), and my complement as the presupposed part". Now, if a Foc2 head was recursively embedded as the complement of a higher Foc1 head, we would have that a focal element, the Spec of Foc2, would be contained in the complement of the higher Foc1 (underscored in (20)), a presupposed part according to (19). But something cannot be at the same time presupposed and focalized, two conflicting requirements. Therefore Foc recursion in a given left peripheral system is barred by the functioning of the interpretive system at the interface:

(20) *\[GIANNI] **Foc1** [[IL LIBRO] **Foc2** [ho convinto __ a comprare __
     'GIANNI   THE BOOK   I convinced __ to buy __'

Liliane Haegeman (p.c.) points out that, under the analysis proposed for (11) on the ban of double topicalization in English, (18c) is also ruled out by locality: the higher focus necessarily moves across the lower focus in (18c), thus triggering a violation of fRM, with the focalized element, an operator, crossing the other focalized element, also an operator. So, do we still need an interface account to (redundantly) exclude such examples?

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3 (18b) sounds slightly unnatural, presumably because the direct object of *convincere* is in the presupposed part, and the natural way to express a presupposed object is through an object clitic. Anyway, (18c) is severely ill-formed, in sharp contrasts with both (18a-b).

I think we need the interface account for independent reasons. Certain cases of double focalization are not captured by locality, and still they are ill-formed. In order to see that, we need cases in which a left peripheral element is externally merged directly in the left periphery, and not moved from a clause internal position. A case in point may be provided by "scene-setting" adverbial expressions (Reinhart 1981, Benincà and Poletto 2004). The fact that scene setting elements may be externally merged in the left periphery is shown by the fact that they do not give rise to reconstruction effects. Consider the famous contrast discussed by Reinhart (1981) between (21a) and (21b):

(21) a. *In this picture of John$_i$, he$_i$ looks sick.*
     b. **In this picture of John$_i$, he$_i$ found a scratch.*
     b'. **In this picture of John$_i$, he$_i$ found a scratch <in this picture of John$_i$>*

Example (21b), involving the preposing of a locative expression from the IP, gives rise to condition C effects under reconstruction. In terms of the copy-theory of traces, the representation is (21b'), where principle C is violated. The well-formedness of (21a) thus suggests that here the adverbial simply "sets the scene" for the event reported in the following clause, and it is not derived from a clause-internal position. If there is no movement, and no trace, the lack of reconstruction is correctly expected.

Let us now see what happens in constructions with scene-setting adverbials in case of corrective focalization. Double corrective focalization of the scene setting adverbial and of a clause-internal element is still excluded:

(22) a. *NELLA FOTO, Gianni sembra il più alto, non nel ritratto.*
     'IN THE PICTURE Gianni looks the tallest one, not in the portrait.'
     b. *Nella foto, GIANNI sembra il più alto, non Piero.*
     'In the picture, GIANNI looks the tallest one, not Piero.'
     c. **NELLA FOTO GIANNI sembra il più alto, non nel ritratto, Piero.*
     'IN THE PICTURE GIANNI looks the tallest one, not in the portrait, Piero.'

So, given a statement like (23a), if the interlocutor disagrees both on who looks the tallest and in what image this is visible, s/he will have to express his/her disagreement through two clauses, as in (23)B, while a single clause with two corrective foci, as in (22)c, is impossible:

(23) A: *Nel ritratto, Piero sembra il più alto...*
     'In the portrait, Piero seems the tallest one...'
     B: *No, GIANNI sembra il più alto, non Piero; e NELLA FOTO si ha questa impressione, non nel ritratto.*
     'No, GIANNI seems the tallest one, not Piero; and IN THE PICTURE one has this impression, not in the portrait'

b. *IL LIBRO ho convinto Gianni a comprare __, non il disco.*[3]
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So, given a statement like (23a), if the interlocutor disagrees both on who looks the tallest and in what image this is visible, s/he will have to express his/her disagreement through two clauses, as in (23)B, while a single clause with two corrective foci, as in (22)c, is impossible:

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B: *No, GIANNI sembra il più alto, non Piero; e NELLA FOTO si ha questa impressione, non nel ritratto.*
    'No, GIANNI seems the tallest one, not Piero; and IN THE PICTURE one has this impression, not in the portrait'

The ill-formedness of (22c) is not captured by locality, if no movement of the scene-setting adverbial from a clause internal position is involved here. If more than one Foc head could occur in a left periphery, the scene setting adverbial could be moved to the Spec of a higher focus (say Foc1 in (22)c') from the left-peripheral position dedicated to such adverbials (Beninca' and Poletto 2004), and another element could be moved to the Spec of a lower focus (Foc2), in which case the two paths would not cross, and there would be no violation of fRM:

(22) c'. *NELLA FOTO   Foc1 __ ...   GIANNI   Foc2 ...   __   sembra il più alto, non nel ritratto, Piero.

     'IN THE PICTURE   GIANNI   looks the tallest, not in the portrait, Piero.'

On the contrary, the ill-formedness of (22c) immediately follows from the interface analysis, as GIANNI would be in the presupposed part of the higher focus Foc1, which would give rise to the interpretive clash. It thus appears that, even if fRM excludes most cases of double left peripheral corrective focalization, we also need the interface account to cover all the cases.

Italian provides an even more straightforward piece of evidence supporting the view that the interface account must be maintained. In Italian a constituent can be correctively focused by movement to the main left periphery, or to an embedded left periphery, but not simultaneously in main and embedded domains:

(24) a. *A GIANNI ho detto __ che dovrebbe leggere il tuo libro, non a Piero.*
     'TO GIANNI I said   that he should read your book, not to Piero.'
     b. *Ho detto a Gianni che IL TUO LIBRO dovrebbe leggere __, non quello di Antonio*
        'I said to Gianni that YOUR BOOK he should read, not Antonio's.'
     c. **A GIANNI ho detto __ che IL TUO LIBRO dovrebbe leggere __, non a Piero, quello di Antonio.*
        'TO GIANNI I said __ that YOUR BOOK he should read __, not to Piero, Antonio's.'

Again, locality cannot rule out (24c) because the two foci never cross each other in their movements to the respective left peripheries. On the other hand, the interface account captures the ill-formedness of (24c), under the assumption that the presupposed part includes not just the simple clause complement of Foc, but the whole complex clause: so, the presupposition of the main

clause Foc1 in (24c) is the whole complex clausal constituent underscored in the following:

(24) c'. *A GIANNI Foc1 <u>ho detto __ che IL TUO LIBRO Foc2 dovrebbe leggere __</u>, non a Piero, quello di Antonio.*
     'TO GIANNI Foc1 <u>I said __ that YOUR BOOK Foc 2 he should read __</u>, not to Piero, Antonio's.'

In (24c') the presupposed part of Foc1 includes a corrective focus, the Spec of Foc2, hence the interpretive clash arises here. In conclusion, the impossibility of co-occurrence of two left-peripheral focus positions appears to be more general than what would be expected simply on the basis of a locality account.

We may now ask the reciprocal to Haegeman's question: could an interface analysis be proposed as an alternative to the locality analysis to bar double topic constructions in English such as (11), repeated here for convenience:

(11) **John Op, your book Op, I convinced ___ to buy ___*

The answer seems to be negative: the only interpretive requirement that a comment must have seems to be that it should contain some new information (and perhaps even that is not strictly needed if a topic – comment structure is used to confirm the information expressed by the interlocutor, so that the whole utterance is given information). In any event, nothing in the interpretation of a comment precludes the possibility that it may have in turn a topic-comment structure, as is shown by the possibility of Top recursion in Italian. Therefore, (11) is uniquely excluded by locality.

In conclusion, both the locality analysis and the interface analysis appear to be needed to ban multiple occurrences of operator-like elements in the left periphery.[4]

Aboh (2004) observes that, while Gungbe disallows Foc recursion in the same left periphery, cases of activation of the left-peripheral focus in distinct clauses akin to (24) are possible. Under the interface analysis proposed here, this state of affairs suggests that the calculation of what counts as presupposition is submitted to parametric variation: apparently, in Gungbe only the simple clause complement of Foc is interpreted as presupposed, whereas this property extends in Italian to the whole complex structure which is complement of Foc, including embedded clausal domains. I will leave open here the question whether this

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4 I will not address here the phenomenon of multiple wh-movement, permitted in certain languages; see Krapova and Cinque (2008) for an analysis of how a violation of fRM is alleviated in such cases.

is a primitive parametric choice, or a consequence of independent differences between the two languages.[5]

5 Constraints on lower Top in Italian

In addition to the higher Top position, robustly attested across languages, Italian permits a Top position lower than Foc:

(25) a. *Alla riunione, QUESTO, a Gianni, gli avresti dovuto dire, non quello che hai detto.*
'At the meeting, THIS, to Gianni, you should have said to him, not what you said.'
b. *A Gianni, QUESTO, alla riunione, gli avresti dovuto dire, non quello che hai detto.*
'To Gianni, THIS, at the meeting, you should have said to him, not what you said'

In Rizzi (1997) this position is treated as identical to the higher Top position, and in fact in many cases the two topics surrounding Foc seem interchangeable, as in (25).

Nevertheless, Frascarelli and Hinterhoelzl (2006), Bianchi and Frascarelli (2010) have observed that distinct topic positions may differ in interpretive properties, while sharing a common core of topical interpretation.

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5 An anonymous reviewer raises the issue of the proper analysis of contrastive topics, which, according to Wagner (2008) would be cases of nested focus (focus within focus). As a contrastive topic typically cooccurs with an independent focus, this analysis does not seem to be immediately compatible with the account of the ban against multiple foci proposed here (see, in particular the next section, in which several well-formed examples of a left-peripheral contrastive topic immediately followed by a corrective focus are discussed).
In fact, the Romance languages provide clear syntactic evidence to distinguish contrastive topic and focus: the former requires clitic resumption (like other kinds of topics):
(i)   Q: *Hai deciso che cosa fare del libro? E del disco?*
'Did you decide what to do of the book? And of the record?'
A: *Il libro *(lo) darò a Maria, e il disco, a Francesca*
'The book, I will give *(it) to Maria, and the book, to Francesca'
whereas a left-peripheral focus is not clitic-resumed (Rizzi 1997). So, I will continue to assume that a contrastive topic is a particular kind of topic, structurally and interpretively distinct from focus, as in Frascarelli and Hinterhoelzl (2006), Bianchi and Frascarelli (2010). See also section 5.

One salient difference between topic positions preceding and following focus is that the higher Top field can host a contrastive topic (a topic explicitly contrasted with another topic salient in discourse), whereas the lower topic disallows the contrastive interpretation. This can be made clear if appropriate contexts are built. In a dialogue introduced by (26A), in replies like (26B) and (26B'), the topic is not contrasted with any other salient referent, and both Top Foc and Foc Top orders are possible:

(26) A: *So che vorrebbero regalare un disco a Mario per il suo compleanno...*
'I know that they would want to give a record to Mario on his birthday...'
B: *No, a Mario, UN LIBRO gli vorrebbero regalare, non un disco.*
'No, to Mario, A BOOK they would want to give, not a record.'
B': *No, UN LIBRO, a Mario, gli vorrebbero regalare, non un disco.*
'No, A BOOK, to Mario, they would want to give, not a record'

On the other hand, in (27) the topic is contrastive, as Mario is contrasted with another salient referent, Gianni, mentioned in the immediate discourse context. Here the order Top Foc is possible, but the order Foc Top is not:

(27) A: *So che vorrebbero regalare un disco a Mario e un libro a Gianni...*
'I know that they would want to give a record to Mario and a book to Gianni...'
B: *No, a Mario UN LIBRO gli vorrebbero regalare, e a Gianni UN DISCO.*
'No, to Mario, A BOOK they would want to give, and to Gianni A RECORD'
B': **No, UN LIBRO a Mario gli vorrebbero regalare, e UN DISCO a Gianni.*
'No, A BOOK to Mario they would want to give, and A RECORD to Gianni'

The following is another case illustrating the same point, with a dative focus and an accusative topic:

(28) A: *Darò il libro di linguistica al professore, e quello di fantascienza allo studente...*
'I will give the book about linguistics to the professor, and the one about science fiction to the student...'
B: *No, il libro di fantascienza, AL PROFESSORE lo dovresti dare, e quello di linguistica ALLO STUDENTE.*
'No, the book about science fiction, TO THE PROFESSOR you should give, and the one about linguistics, TO THE STUDENT.'
B': **No, AL PROFESSORE, il libro di fantascienza, lo dovresti dare, e ALLO STUDENTE quello di linguistica.*
'No, TO THE PROFESSOR, the book about science fiction, you should give, and TO THE STUDENT the one about linguistics.'

So, the pattern we obtain is the following:

(29) a. *OK   Top ...   Foc ...   (as in 27B, 28B)*
            [+contr]

   b. *   *Foc ...   Top   ...   (as in 27B', 28B')*
            [+contr]

   c. *OK   Foc ...   Top   ...   (as in (26B')*
            [--contr]

The preceding discussion of the role of locality in constraining left peripheral orders immediately suggests a possible analysis. Suppose that contrastive topics are marked by the feature [+contrast], whose relevance for intervention has been highlighted by Neeleman and van de Koot (2010). In our terms, the natural assumption is that +contrast is a feature belonging to the operator class. If it is so, (29b) is excluded by fRM: an element marked by an Op feature, the focal element, is moved across an element which is also marked by an Op feature, the contrastive topic, and this yields a violation of fRM. (27B'), (28B') are thus excluded. On the other hand, (29c) is fine because a focus is extracted from the domain of a "pure" (non-contrastive) topic, hence across an element which is disjoint in relevant features for the computation of locality. Therefore, the order Foc – Top (non contrastive) is possible, as in (26B').

What about the well-formedness of (29a)? Here the contrastive topic is extracted from the domain of a focus, hence an element carrying an operator feature is moved across another such element. Why doesn't this induce a minimality violation? This is in fact an instance of a large class of cases in which weak island effects are alleviated. By and large, the logic of the approach to fRM in Starke (2001), Rizzi (2004) and developed in Friedmann, Belletti and Rizzi (2009) in the context of acquisition studies, is that when a featurally richer element is extracted from the domain of a featurally more impoverished element, the locality violation is alleviated. A straightforward sense in which in (27)B the extracted topic is more complex than the focus defining the extraction domain is that the topic is specified both by a topic feature and by an operator feature (+contrast), whereas the focus is solely characterized by an operator feature (+focus):

(27) B: *No,   a Mario   UN LIBRO   gli vorrebbero regalare, e a Gianni*
        UN DISCO.
        'No,   to Mario,   A BOOK   they would want to give, and to Gianni
        A RECORD'
           [+Top, +contr]   [+Foc]

We are, therefore, in an inclusion configuration, one which in the system proposed by Friedmann, Belletti and Rizzi (2009) is tolerated by the adult system (whereas it appears to raise insurmountable problems for children: see the reference quoted and much related work).

6 Degrees of acceptability

The full acceptability of the inclusion configuration in (29)a raises an issue in relation to the gradation of judgments in the domain which originally motivated the fRM approach: extractions from Weak Islands. Both bare and lexically restricted wh-elements are freely extractable with declaratives, giving rise to fully acceptable structures:

(30) a. *Which book   do you think that John read __ ?*
            [+Q, +NP]
   b. *What   do you think that John read __ ?*
            [+Q]

In extraction from indirect questions, though, we get a contrast. Lexically restricted wh-elements are marginal, whereas bare wh-elements are more severely degraded:

(31) a. *??Which book   do you wonder   if   John read __ ?*
            [+Q, +NP]   [+Q]
   b. **What   do you wonder   if   John read __?*
            [+Q]   [+Q]

The amelioration of (31a) over (31b) has been taken as the paradigmatic case supporting the view that an element with a more complex featural specification is more easily extractable from a WI environment than a simpler element. Here I am assuming that the relevant features are +Q and +NP, the latter characterizing lexically restricted wh-elements, as in Friedmann et al. (op cit.).[6]

If this approach is combined with the analysis of the distribution of contrastive topics just presented, the question which arises is the following. (31a) shows that when the featural specification of the target properly includes the specification of the intervener, the intervention configuration gives rise to marginality. This case contrasts with both the identity relation, giving rise to stronger deviance (as in (31b), and with disjunction, which, all other things being equal, gives rise to full acceptability, as in (30a-b). Along the lines of the proposed analysis, (27B) would also be a case of proper inclusion, with the contrastive topic, specified as +Top and +contrast (the latter an operator feature) extracted across a focalized element, which also is characterized by an Op feature (+Foc). But (27B)

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6 Other proposals have assumed that the additional specification of *which book* is D-linking, or topicality: see Rizzi (2011) for discussion; I will not addressed these alternatives here, which leave the core of the issue unchanged.

is perceived as fully acceptable. So, why is it not degraded, in contrast with (31a) (or the Italian equivalent, also degraded to some extent)?

In order to capture this discrepancy between two cases of proper inclusion, I would like to adopt the approach proposed in Villata, Franck, Rizzi (2015), according to which not all features entering into the computation of locality have the same weight. In particular, the Top, Foc and Q features are criterial features, in the sense of Rizzi (1997) and much subsequent work, i.e., features which (among other properties) are able to trigger movement on their own. On the other hand, such features as +NP, +Contrast are non-criterial: they have the role of finely modulating the landing site and interpretation of the moved element, so they somehow operate in tandem with the criterial features, but do not have the capacity of triggering A'-movement on their own. So, it appears that while criterial inclusion (i.e., inclusion in which the feature in common between X and Z is the criterial feature) determines a degradation in acceptability, non-criterial inclusion (a case of inclusion in which the feature in common between Y and Z is non-criterial) does not affect acceptability. Then, (27B), a case of non-criterial inclusion (because +Contrast is a non-criterial operator feature), is fully acceptable, much as a lexically restricted object question or relative crossing a lexically restricted subject:

(32) a. *Which politician   did   the journalist   attack __?*
          [+Q, +NP]   [+NP]
     b. *Here is*   *the politician   that   the journalist   attacked __.*
          [+R. +NP]   [+NP]

(where +R is the criterial feature characterizing the relative head). (32a-b), both cases of non-criterial inclusion (with non-criterial feature +NP in common between X and Z), are fully acceptable, on a par with (27B). Non-criterial inclusion has an impact on locality which is visible elsewhere (i.e., in the acquisition of these complex constructions, according to the analysis in Friedmann, Belletti and Rizzi 2009, and, possibly, on adult processing: Belletti and Rizzi 2013), but it does not affect acceptability.

7 Selection and the delimiting positions of Force and Fin

An independent element which may contribute to determine the order of elements in functional sequences is selection. Selectional requirements may demand that certain specifications be structurally adjacent to selectors, thus enforcing certain orders. An early reference to selection as a property determining order is in Rizzi (1997)'s discussion of Force and Fin as the delimiting heads of the complementizer space. Force, it is argued, expresses a property that external selectors want to know about, the clausal type (if a clause is a declarative, or a question, or an exclamative, etc., Cheng 1991), therefore it must be the most prominent head of the left periphery. Fin selects an IP agreeing in finiteness with it (for instance, complementizer *di* in Italian selects an infinitival IP), hence it must be structurally adjacent to the IP. This follows from a strict theory of selection:

(33) *Local selection: Selection is strictly local, in that a head can only select a structurally adjacent head.*

I.e., in the following configuration, H1 can select H2 and H2 can select H3, but H1 cannot directly select H3:

(34) $H1$ $[_\alpha H2$ $[_\beta H3 ...$

Problems for this simple and restrictive approach to selection are raised by certain cartographic discoveries. Consider, for instance, the observation that an indirect yes-no question in Italian can be introduced by a topic preceding the interrogative marker *se* (if):

(35) *Non so   a Gianni   se   gli potremo parlare*
     'I don't know   to Gianni   if   we could speak to him.'

Clearly, the embedded clause cannot be a TopP: the higher verb selects for an indirect question, not a clause introduced by a topic. The nature of the clause as an indirect question is expressed by the question particle *se* (if) which is in a lower position (the position Int of Rizzi 2001 and subsequent work) so that, under (33), the main verb cannot directly select for Int. Assuming (33) it must be the case that the embedded clause is introduced by a Force marker expressing interrogative force, as is suggested by the representation in (36).

(36) *Non so   [Force   [a Gianni Top   [Op   se$_{+Int}$ gli potremo parlare   ]]]*
     'I don't   to Gianni   if   we could speak to him.'
     know

Similar problems arise for indirect wh-questions, in which the wh-element fills the lower Foc position, (and possibly an even lower wh-position: see Rizzi and Bocci 2016 for discussion):

(36') *Non so   [Force   [a Gianni Top   [che cosa Foc   gli potremo*
                                                                         dire __]]]
      'I don't know   to Gianni   what   we could
                                                                         tell him.'

If we stick to the restrictive theory of selection based on (33), in (36), (36') Force must carry the specification +Int, accessible to the higher selector. Clearly, $Force_{+Int}$ must be connected to Int, headed by the interrogative marker *se*, and possibly hosting a yes-no null operator akin to English *whether* in (36); and, analogously, $Force_{+Int}$ must be connected to the lower position hosting the wh-phrase in (36') and other wh-questions. A natural way to ensure this connection is to assume a (Probe-Goal) Agree relation, which is local but not as strictly local as (33). As all probe-goal relations, it is constrained by Relativized Minimality, which blocks the relation only if the intervener has certain featural characteristics in common with the elements involved in the relation; an intervening Top layer does not interfere in the relation between $Force_{+Int}$ and Int, so a representation like (37) is well-formed:

(37) *Non so*   *[Force$_{+Int}$ [a Gianni Top   [Op   se$_{+Int}$ ... gli potremo parlare ...]]]*

'I don't know   to Gianni   if we could speak to him.'

(Whether the Agree relation targets the yes-no (or wh-) operator, as the arrow in (37) suggests, or the Int head, is not crucial for our discussion here).

The necessity of separating a higher Force marker and the position(s) of the interrogative operator is straightforwardly supported by the Spanish reported question construction (Plann 1982, Suner 1994, McCloskey 1992, Saito 2012, Rizzi 2013). If I hear María ask the question "Are there newspapers on Monday?", I can report this speech event by uttering the following (examples due to Maria Lluisa Hernanz, discussed in Rizzi 2013):

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

Que overtly realizes the Force head abstractly postulated in (37), which here expresses both the reported character of the clause (as complementizer *to* in Saito's 2012 analysis of the Japanese equivalent), and its interrogative force; the latter specification agrees with *si* in the Int position across the topicalized adverbial:

(39) *María preguntó*   **que**$_{+Rep+Int}$ *el lunes*   Op   **si**$_{+Int}$ *había periódicos*
      Maria asked   that   the Monday   if there were newspapers

The construction is dependent on the nature of the main verb: it can be selected by main verbs like *ask*, compatible with both reports and questions, but not by main verbs which are not verbs of saying, like *remember/forget*, which are only compatible with ordinary (non-reported) questions.

In wh-questions which are also interpreted as reported questions, the wh-element presumably is in the lower Foc position (or in an even lower position adjacent to Fin: see Rizzi and Bocci 2016 on Italian), and *que* enters into an Agree relation with this position (across an intervening topic, in cases like (40)):

(40) *Le pregunté*   *[que$_{+Rep+Int}$ [Juan Top   [cómo   Foc$_{+Int}$ ... cocinaba]]]*
      Maria asked   that   Juan   how   he cooked

This kind of overtly complex structure of the CP system, specialized for reported questions in Spanish, is generalized to all indirect questions in Hungarian (whether yes-no or wh, reported or not). In this language, all embedded questions are introduced by complementizer *hogy* (that); yes-no questions are marked by the enclitic particle *–e*, attached to the verb, as in (41), while wh-questions have the wh-element in focus position, as in (42), (43). In the spirit of what we just proposed, in all these cases we assume an Agree relation between *hogy* and the position marking the clause as a yes-no or wh-question:

(41) *Kiváncsi*   *vagyok,*   *hogy$_{+Int}$*   *elmentek-e$_{+Int}$*   *a vendégek.*
      curious   be-PRES-1SG   that   PART-left-3PL-E   the guests-NOM
      'I wonder if the guests have left.'

(42) *Kiváncsi*   *vagyok,*   *hogy$_{+Int}$*   *kit*   *Foc$_{+Int}$*   *keresett*   *Zeta.*
      curious   be-PRES-1SG   that   who-ACC   looked-for   Zeta-NOM
      'I wonder whom Zeta looked for.'

(43) *Kiváncsi vagyok,*   *hogy$_{+Int}$ Zeta*   *Top kit*   *Foc$_{+Int}$ keresett*
      curious be-PRES-1SG that   Zeta-NOM   who-ACC   looked-for
      'I wonder whom Zeta looked for.'   Puskas (2000:226)

Example (43) shows that the Agree relation can hold across a Topic, as is expected under fRM. The relevant representation is:

(43') *Kiváncsi vagyok,*   *hogy$_{+Int}$ Zeta*   *Top kit*   *Foc$_{+Int}$ keresett*
       curious   be-PRES-1SG that   Zeta-NOM   who-ACC   looked-for

Hungarian straightforwardly shows that Int (for yes-no questions) or the wh-element (for wh-questions) are not hosted in the highest C position in all kinds of embedded questions; under the restrictive theory of selection we are assuming this requires an Agree approach connecting Force and the criterial position.

8 Some theoretical speculations

Apparently, the following property holds in Italian, Spanish, and, very straight-forwardly, in Hungarian:

(44) **Force** *(the typing position selected for) and the* **criterial position**
(the position which hosts the interrogative operator) are distinct
positions in the C-sequence.

Why should this separation hold? Wouldn't it be simpler for natural languages to always unify the typing position and the criterial position, which share the same featural content, rather than duplicating the relevant feature on two positions?

I would like to speculate that the separation may be connected to the way in which Phase Theory works. In standard Phase Theory, the C head defines the full clausal phase. If one combines cartographic representations and Phase Theory, C is split into finer components, hence the important question arises of what left peripheral head, or heads, define(s) the clausal phase. A plausible candidate is, of course, the Force head, which manifests the properties of autonomy at the interfaces that are expected from phase heads (Chomsky 2001). Things could of course be more complex and there could be more than one left peripheral head defining a phase, but certainly Force is the first and most immediately plausible candidate that comes to mind.

If this is correct, why couldn't the Force layer also play the role of the criterial layer, hosting the criterial operator in its Spec, and avoiding the necessity of having an independent criterial layer in a lower position, as in statement (44)? Remember that according to Phase Theory the escape hatch for extracting something from a phase is the specifier of the phase edge, the phrasal position which is not sent to Spell-out at the end of the phase. Then, if the Force layer and the criterial layer coincided, the Spec of the Force head would systematically be filled by the criterial operator, hence the structure would not have an escape hatch available for extraction, and would always be a strong island. So, the separation of the Force layer and of the criterial layer may be seen as a device to provide a possible escape hatch, and make extraction from an embedded clause possible.
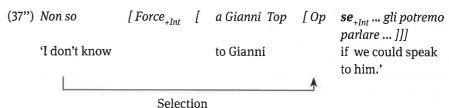
An additional question that arises has to do with the generality of (44): languages like Italian, Spanish, Hungarian, etc., which freely permit elements like topics to occur in a LP position higher than the criterial position, clearly require the dissociation of Force and the criterial position; does this requirement hold in general? A language with Force = Criterial position would have the relevant constructions (indirect questions, in particular) always functioning as strong islands, because the Spec providing an escape hatch from the clause would be systematically unavailable for extraction in such languages. This could offer a device to address a rather elusive element of variation, the fact that extractions from indirect questions appear to be more acceptable in some languages than in other languages, an issue on the research agenda ever since the late 1970's (see Rizzi 1978, 1982, Chomsky 1981). I will not try to develop this possible path in this paper.

A separate question is raised by the assumed system to satisfy selection in clausal complements. The strictly local approach to selection that we have adopted enforces a two-steps selection procedure, a strictly local selection of a clause headed by Force with the appropriate specifications, and a somewhat less local Agree relation connecting Force to the criterial position. I.e., going back to (37), we would have:

(37') *Non so* [*Force$_{+Int}$* [*a Gianni Top* [*Op* *se$_{+Int}$ ... gli potremo parlare ...]]]*

'I don't know   to Gianni   if we could speak to him.'

      Selection   Agree

But couldn't one assume that the system is simpler, and selection from the higher verb in (35), (36), (37), (38), (39), (41)-(43) is directly satisfied through an Agree relation from the higher verb, connecting it directly to the criterial layer and bypassing the Force layer? I.e., couldn't selection work as in (37")?

(37") *Non so* [*Force$_{+Int}$* [*a Gianni Top* [*Op* *se$_{+Int}$ ... gli potremo parlare ...]]]*

'I don't know   to Gianni   if we could speak to him.'

      Selection

The assumption that selection may be satisfied by Agree certainly creates problems elsewhere. For instance, it would permit selection of a complement to be possible "at a distance", across intervening material provided that the interveners do not affect the Agree relation. This does not seem to be correct. E.g., if a verb could directly select a direct object across adverbial material via Agree, all languages would be expected to have this option, and the important results connecting V Adv O orders to verb movement (in French and other languages: Emonds 1978, Pollock 1989, Belletti 1990) would be lost.

The facts that we have reviewed in this section are very naturally captured by the two steps analysis of selection expressed in (37'). The point is that the Force head is spelled out in language particular ways, depending both on the selectional properties of the main verb and the presence or absence of a lower criterial layer. In Italian and English, Force is realized as zero both in

reported questions and simple embedded questions, and as *che/that* in embedded declaratives. In Spanish and Japanese the cake is cut differently, and Force is realized as *que/to* in declaratives and reported questions, whereas simple embedded questions have zero realization in Force (Int is realized in a lower head, giving rise to the *que si, ka to* sequences, respectively; again, see Saito 2012, Rizzi 2013 for discussion). Hungarian shows no variation at all, the Force head being invariably realized as *hogy* in declaratives, reported questions, and simple indirect questions:

(45)	Force$_{Decl}$	Force$_{Int+Rep}$	Force$_{Int}$
Italian	che	Ø	Ø
English	that	Ø	Ø
Spanish	que	que	Ø
Japanese	to	to	Ø
Hungarian	hogy	hogy	hogy

This double dependency determining the spell-out of Force is naturally expressed by the two steps analysis, which connects the main verb to Force via selection, and the latter to the criterial position via Agree, as in (37').

If selection cannot be satisfied by Agree, and is strictly local, so that a two-step analysis of (37) is enforced, the question arises of why it is so.

Suppose that selection is a precondition for external merge; i.e., A and B can be externally merged only if a selectional relation holds, i.e., A selects B or B selects A. Then, a very straightforward way of capturing the strictly local nature of selection would be to assume that external merge can only see the label of the elements which are merged, and cannot look inside such elements and their internal structure at all. Let us reconsider (34):

(34) $H1$ $[_\alpha H2$ $[_\beta H3 \ldots$

When H1 is merged with α, the operation can only see the label of α, which is determined by H2 (in fact the label of α is H2, under bare phrase structure and restrictive labeling algorithms, as in Chomsky 2013, 2015, Rizzi 2014, 2015); so the operation cannot be sensitive to properties of H3, an element internal to α.

Another way of stating this conclusion may be the following: selection is not to be assimilated to feature checking, which is formally implemented by the Agree operation. Selection and Agree differ in the locality conditions they must obey: Agree respects featural Relativized Minimality, whereas selection respects a stricter condition like (33), structural adjacency. In fact, this follows from the way in which computation proceeds: if selection is a prerequisite for external merge, the system only sees the labels of the elements A and B to be merged. An Agree relation between A and an element internal to B cannot be defined because Agree

requires c-command, and c-command cannot be defined here because A and B are not (yet) connected in a tree structure; so the only properties visible to the external merge operation are the labels of A and B, whence the strict locality of selection.
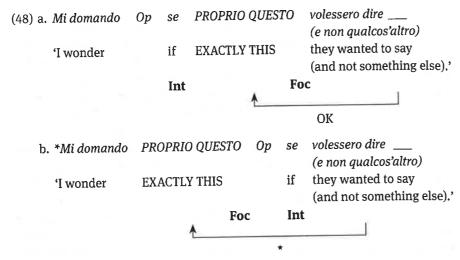
The analysis of the preceding paragraph presupposes the idea that selection is a prerequisite of external merge. This is plausible, but not obvious. E.g., Chomsky (2004) has argued that selection is checked post-syntactically, at the end of a phase, in which case selection could not be a prerequisite for merge. If this is correct, the strict locality of selection could not be derived by the way of functioning of external merge, as suggested in the previous paragraph. An alternative to consider could be that Agree is a formal operation available in the syntactic box, but not in the systems at the interface with syntax (much as merge itself, in fact). So presumably interface systems can interpret positions which are syntactically marked as agreeing in syntax, but do not have the power to establish such relations on their own. If selection is an interface property, then it cannot establish Agree relations, and can only see strict adjacency. The different ideas mentioned in this speculative section have significant ramifications and consequences elsewhere, which I will not try to address in this paper.

9 The interplay of selection and locality

The theory of locality may have an important role in the "further explanation" of properties of functional sequences, as was underscored by Abels (2012), Haegeman (2012), Rizzi (2013), and in previous sections of the present article. Consider, for instance, the following asymmetry between topic and focus: a topic can both precede and follow Int, as is shown in Italian (46), but a focus can only follow Int, as shown in (47):

(46) a. *Mi domando se il tuo libro, lo abbiano già letto.*
   'I wonder if your book, they have already read it.'
   b. *Mi domando, il tuo libro, se lo abbiano già letto.*
   'I wonder, your book, if they have already read it'

(47) a. *Mi domando se PROPRIO QUESTO volessero dire (e non qualcos'altro).*
   'I wonder if PRECISELY THIS they wanted to say (and not something else).'
   b. **Mi domando PROPRIO QUESTO se volessero dire (e non qualcos'altro).*
   'I wonder EXACTLY THIS if they wanted to say (and not something else).'

Here, as Abels (2012) points out for similar cases, a plausible candidate is locality, and more specifically Relativized Minimality (Rizzi 1990) in its featural version (Starke 2001, Rizzi 2004). The representations of (47) are given in (48):

(48) a. *Mi domando* Op se *PROPRIO QUESTO* *volessero dire* ___
　　　　　　　　　　　　　　　　　　　　　　　(e non qualcos'altro)
　　　　'I wonder　　　if　EXACTLY THIS　they wanted to say
　　　　　　　　　　　　　　　　　　　　　　　(and not something else).'

　　　　　　　　Int　　　　　　　Foc
　　　　　　　　　　　　　　　　　OK

　　b. **Mi domando* *PROPRIO QUESTO* Op se *volessero dire* ___
　　　　　　　　　　　　　　　　　　　　　　(e non qualcos'altro)
　　　　'I wonder　EXACTLY THIS　if　they wanted to say
　　　　　　　　　　　　　　　　　　　(and not something else).'

　　　　　　　　　　Foc　　　Int
　　　　　　　　　　　　　　　*

If the Int position hosts a yes-no operator Op in its Spec, an element bearing the +Foc feature, which also is a member of the operator class, cannot jump across it in (48b). When the focal element remains lower than Int, there is no crossing of another operator, and the structure is fine, as in (48a). A Topic, not bearing an operator feature (nor involving a null Op in Romance), can move across Int without any problem, as in (46b).

All this is pretty straightforward, but Cinque and Krapova (2013), Callegari (2014) have noticed problems for a locality approach to similar cases of ordering in the sequence. One general problem is this. All other things being equal, if a given ordering *A-B is excluded in the sequence as a locality effect (A cannot be moved across B), one would predict equal status for any movement of A across B, including long-distance extraction. But this prediction is not met in some cases.

For instance, in the case of (48b), long-distance focus extraction from an *if* clause and local ordering Foc – Int should be on a par under a locality approach, but long distance extraction from an *if* clause is distinctly more acceptable than local movement of Focus across *if*. Compare (48b) with the corresponding case of long distance extraction:

(49) ?*PROPRIO QUESTO* Foc *mi domando* Op se_{+Int} *volessero dire* ___
　　　　　　　　　　　　　　　　　　　　　　　(e non qualcos'altro)
　　'EXACTLY THIS　　　I wonder　　if　they wanted to say
　　　　　　　　　　　　　　　　　　　　　(and not something else).'

Clearly, a more severe violation is involved in local ordering ... Foc – Int ... then in long distance extraction Foc ..... Int ... . Why is it so?

We can now capitalize on the two-step approach to selection introduced in the previous section to tackle this problem. Remember that the critical ingredient was the Agree relation which must be established between Force and the criterial position. A more complete representation of (48b), also expressing this Agree relation, would be the following:

(48) b'. **Mi domando* Force_{+Int} *PROPRIO* Foc Op se_{+Int} *volessero*
　　　　　　　　　　　　　　QUESTO　　　　　　　*dire* ___ ...
　　　　'I wonder　　　　EXACTLY　　　　　if　they wanted
　　　　　　　　　　　　THIS　　　　　　　　　to say ...'
　　　　　　　　　　　　　　　　　　Foc　　　Int

Here we have a double violation of RM, indicated by the two arrows in (48b'): the yes-no Op intervenes between the focal operator *PROPRIO QUESTO* and its trace, thus disrupting the antecedent-trace relation, and the focal operator intervenes between Force_{+Int} and Int, thus disrupting the required Agree relation. We thus have two violations of Relativized Minimality here. On the other hand, there is only a single violation of RM in (49), with the yes-no operator intervening between the focal operator, extracted from the embedded clause, and its trace (moreover here the effect may also be weakened by whatever property makes violations with argumental operators weaker than with non-argumental operators). Moreover there is no violation of RM at all when we have the order Int Foc in embedded questions, as in (48a), with the following more complete representation:

(48) a'. *Mi domando* Force_{+Int} Op se_{+Int} *PROPRIO* Foc *volessero*
　　　　　　　　　　　　　　　　　　　QUESTO　*dire* ___ ...
　　　　'I wonder　　　　　　　　　EXACTLY　they wanted
　　　　　　　　　　　　　　　　　　THIS　　　to say ....'
　　　　　　　　　Force　　　Int　　　　　Foc

Here focus movement stops at a position lower than Int: therefore it does not cross another operator position; moreover, the focus position does not interfere with the Agree relation connecting Force and the yes-no operator.

So, we have

(50) – 　0 violations of RM in (48a).
　　 – 　1 violation of RM in (49).
　　 – 　2 violations of RM in (48b).

This captures the gradation of acceptability pretty accurately. Notice that this presupposes that violations of RM are cumulative, but this is entirely in the spirit of the featural approach, which is precisely intended to capture graded judgments. In the classical cases the severity of the violation depends on the featural overlap between target and intervener, whereas in (50) the gradation depends on the number of violations. We may look at these ideas as addressing distinct dimensions of the same general issue of graded judgments, providing independent but consistent tools for a quantitative approach to degrees of acceptability.[7]

10 Conclusion

The empirical discoveries of cartographic research raise issues of further explanation: why do structural maps have the properties of ordering and distribution nation: why do structural maps have the properties of ordering and distribution that we observe? How do such properties relate to fundamental ingredients of linguistic computations? These issues directly connect cartographic work to fundamental theoretical research, and nourish the theoretical reflection with novel empirical materials. Two broad factors may be involved in forms of further explanation. Interface systems may demand that syntactic elements be organized in certain ways; and formal principles constraining syntactic computations, such as locality, may determine certain properties of functional sequences.

That intervention effects, captured in terms of featural Relativized Minimality, may determine certain orderings and other distributional constraints in functional sequences has been shown in Abels (2012), Haegeman (2012) and much related work. In this paper I have used this mode of explanation to capture the uniqueness of topics in English, as opposed to the possible proliferation of topics in Romance. This cross-linguistic difference has been made to follow from the theory of locality, in interaction with an independent difference between the topic constructions in the two types of languages: clitic resumption in Romance, as opposed to the use of a null operator in English.

The relevance of interface factors has been illustrated by the uniqueness of left-peripheral (corrective) focus, which has been traced back to the properties of the interface routine for the interpretation of configurations involving clause-initial focus. The interface explanation and the locality effect overlap in part in this case, but one cannot be reduced to the other, as the uniqueness of focus also holds in structures which would not involve intervention configurations.

Another plausible interface factor is selection, which straightforwardly determines the delimiting positions of Force and Fin in the left periphery (Rizzi 1997). Combined with a strictly local theory of selection, this factor implies a two-step analysis of the selectional properties of indirect questions in which the Force position and the criterial position are clearly distinct: the Force position is selected by the external selector, and agrees in interrogative features with the criterial position. I used the two-step approach to also capture certain fine grained judgments concerning focus movement across Int locally and long distance: local focus movement across Int violates fRM twice, which accounts for the particularly severe nature of the violation.

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7 In Rizzi (1997: 330, fn. 18, ex. (ii)a) I had observed that a focalized indirect object can be marginally moved locally across a wh-element in an indirect question. The example is reproduce here:

(i) ?Mi domando *A GIANNI che cosa abbiano detto* (, non a Piero)

'I wonder TO GIANNI what they said (, not to Piero)'

This marginal possibility is not expected given the analysis in the text, as a double violation of fRM should be produced here. It should be noticed that if a direct object is locally focus moved across a wh-element, a more severe violation is produced, more in line with (47)b:

(ii) *Mi domando *QUESTO a chi abbiano detto* (, non qualcos'altro)

'I wonder THIS to whom they said (, not something else)'

I will leave open here what determines the amelioration of (i). Puskas (2000: 272, fn. 33) has observed that a similar option holds in Hungarian.

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Ur Shlonsky

Wh in situ and criterial freezing

1 Introduction: Subject extraction in the criterial approach

The more stringent constraints delimiting subject movement as compared with object movement are attributed by Rizzi and Shlonsky (2007) and related work to criterial freezing, (1).

(1) Criterial Freezing: A phrase moved to a position dedicated to some scope-discourse interpretive property, a criterial position, is frozen in place.

Following Rizzi (2006), it is assumed that the classical EPP, the requirement that clauses have subjects, can be restated as a criterial requirement, namely the Subject Criterion, which is formally akin to the Topic Criterion, the Focus Criterion, the Q or Wh Criterion, etc.

Thematic subjects are attracted to Spec/Subj, see Cardinaletti (2004), where they satisfy the Subject Criterion. In accordance with (1), they become frozen and cannot move further. Movement of objects and other complements is not similarly constrained since there is no Object Criterion, parallel to the Subject Criterion.

The familiar subject-object asymmetry in long movement from an embedded clause – the *that-trace* effect – is effectively reduced, in this approach, to a violation of criterial freezing. The subject in (2a) is frozen in Spec/Subj but object wh movement in (2b) is unperturbed.

(2) a. *[Which boy] do you think that <which boy> saw this movie?*
     b. [Which movie] do you think that this boy saw <which movie>?*

The goal of this contribution – based on an oral presentation at the 2012 Complementizer Agreement workshop organized by Liliane Haegeman in Ghent – is to explore the relevance of the subject criterion for covert movement, in particular that of subject wh in situ.

Studies in Generative Grammar

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Volume 127

Elements of Comparative Syntax

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Theory and Description

Edited by
Enoch O. Aboh
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Genoveva Puskás
Manuela Schönenberger

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This book is dedicated to Liliane Haegeman, a colleague, friend, and mentor, in appreciation of her extensive contribution to the field of comparative syntax.

Contents

Enoch O. Aboh, Eric Haeberli, Genoveva Puskás,
Manuela Schönenberger

Introduction

The starting point of this volume was the intention of the editors to publish a collection of articles in honour of Liliane Haegeman for her contribution to the field of comparative syntax. A small number of friends and colleagues were invited to contribute to this volume, and the outcome of this selection process, which, from a scientific point of view, was fairly random, provides an excellent testimony of the way in which the field of comparative generative syntax has developed from the beginning of Liliane Haegeman's academic career in the late 1970s to today. These developments are reflected in the empirical basis of generative theorizing as well as the theoretical issues that are addressed in current work, and they illustrate how "[i]n this new comparative syntax, careful study of empirical data takes a central position with a stimulating two-way interaction between theoretical developments and empirical study" (Haegeman 1997a: 1).

Since the emergence of generative grammar in the middle of the 20th century, its aim has been to provide an explanatory model of grammatical competence and thereby to gain a deeper understanding of the nature of the human language faculty. Initially, this aim was pursued by examining evidence from a very limited number of languages, with standard English playing the most prominent role. This empirical bias is shown for example in the contributions to the first two volumes of *Linguistic Inquiry* (1970, 1971). Leaving aside work focussing on phonology and morphology, we observe that nearly three fourths of all research papers dealing with transformational grammar contain data that are exclusively drawn from English. Similarly, among over 70 squibs published, only 9 contain data from a language other than English. This empirical focus on a single language can be justified by the complexity of the task of providing a complete account of a speaker's knowledge of that language, but also in view of identifying the properties of Universal Grammar (UG), the genetic endowment for language hypothesized within the generative framework. According to the 'poverty of the stimulus' argument, aspects of linguistic competence that cannot be derived from the language learner's input must be attributed to properties of UG. To identify such properties, evidence from a single language is arguably sufficient.

However, since the mid-70s, generative work has considerably expanded its empirical scope. Increasing attention has been paid to other languages not only to test earlier theoretical proposals made on the basis of English but also to gain a better understanding of what is common to all languages and what the