

Left Periphery of the Clause

Primarily Illustrated for Italian

Luigi Rizzi

University of Geneva, Switzerland; University of Siena, Italy

Giuliano Bocci

University of Geneva, Switzerland

- 1 Introduction
- 2 The study of the left periphery in the context of cartographic research
 - 2.1 The cartography of syntactic structures
 - 2.2 The initial map for Italian
- 3 Extensions
 - 3.1 Int
 - 3.2 Mod
 - 3.3 Q_{emb}
- 4 Cross-linguistic evidence
- 5 Computational mechanisms: the criterial approach
- 6 Some interface properties of topic and focus
- 7 Principles, parameters, and further explanation

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 syntax.

The Wiley Blackwell Companion to Syntax, Second Edition.

Edited by Martin Everaert and Henk C. van Riemsdijk.

© 2017 John Wiley & Sons, Inc. Published 2017 by John Wiley & Sons, Inc.

DOI: 10.1002/9781118358733.wbsyncom104

The analysis of the left periphery was one of the first topics of cartographic research in the mid 1990s, 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 this 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 parametrizations which must be assumed, and of the prospects of tracing back the observed properties 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 1980s it became clear that certain grammatical specifications, previously treated as simple morphosyntactic features associated with 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 (1989) 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 1989; Belletti 1990), to the capacity to offer insightful analyses of adverb syntax (Cinque 1999). 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 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 Universal Grammar (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 aimed at finding deeper explanations for the observed properties (see Cinque and Rizzi 2010; Shlonsky 2010; Rizzi 2013c; Rizzi and Cinque 2016 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 (Rizzi 1982; Kayne 1983), necessarily follows the topic:

- (1) Italian
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 differ 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*, and so on (Chomsky and Lasnik 1993), hence they must remain structurally local to the subject position (Rizzi 1997, sects 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, as in Belletti 2009), or through a Search relation between Force and Fin (Rizzi 2013a).

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, ex. 7):

- (5) Is dóiche [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, ex. 16):

- (6) Dywedais i **mai** fel arfer y dynion **a** fuasai'n gwerthu'r ci.
 Said I PTCL as usual the men PTCL would-ASP sell-the dog.
 '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 dovrete 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):

- (8) [Force [Top* [Foc [Top* [Fin [IP ...]]]]]]

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) 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) Mi domando se LA MACCHINA/*LA MACCHINA se gli potremmo regalare
(non la moto)
'I wonder if THE CAR/*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 and Soare 2011), both in main and embedded questions:

- (11) Italian
A Gianni, perché, la macchina, gliela volete regalare?
'To Gianni, why, the car, you want to give it to him?'
- (12) Perché LA MACCHINA/*LA MACCHINA perché gli volete regalare, e non la moto?
'Why THE CAR/*THE CAR why 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:

- (14) [Force [Top* [Int [Top* [Foc [Top* [Fin [_{IP} ...]]]]]]]]]

3.2 Mod

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

- (15) Italian
 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 that of topicalization, both the syntax and interpretation of adverb preposing are different from topicalization (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 (15b) 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 (15b), 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) Italian
 Rapidamente, Mario ha detto (____) che Gianni ha trovato (*____) la soluzione.
 'Rapidly, Mario said that Gianni found the solution.'

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

- (17) Italian
 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 topicalization or focalization (this is illustrated through contrastive focalization in (19): Rizzi 2004a building on Rizzi 1990 and Koster 1978):

(18) Italian

*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 topicalization 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; 2014):

- (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):

(21) Italian

Rapidamente, i libri, li hanno rimessi a posto.
'Rapidly, the books, they put them back in place.'

(22) Mi domando se, rapidamente, /*rapidamente, se Gianni potrà trovare la soluzione.

'I wonder if, rapidly, /*rapidly, if Gianni will manage to find a solution.'

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

(23) Rapidamente, I LIBRI hanno rimesso a posto, non gli articoli.

'Rapidly, THE BOOKS they put back in place, not the articles.'

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

- (24) a. So che hanno rapidamente rimesso a posto gli articoli ...
 'I know that they have rapidly put back the articles in place ...'
 b. No! rapidamente, I LIBRI hanno rimesso a posto, non gli articoli.
 'No! rapidly, THE BOOKS they put back in 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, as in (21):

- (25) [Force [Top* [Int [Top* [Foc [Top* [Mod [Top* [Fin [_{IP} ...]]]]]]]]]]]

3.3 Q_{emb}

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

- (26) *A GIANNI che cosa/*Che cosa A GIANNI hai detto, non a Piero?
 'TO GIANNI what/What TO GIANNI did you say, 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): 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):

- (27) Italian
 a. ?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 TO 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 (27a) 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), for the lack of a better term (the position was called Wh in Rizzi 2004a). 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) Italian

[?]*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) and (27) seem 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).

4 Cross-linguistic evidence

The initial empirical core for the analysis of the left periphery came from the study of Italian, with extensions to other Romance and Germanic languages, but this line of research quickly proved of general relevance and was extended to other language families. On Romance see Rizzi (1997; 2000; 2004a; 2004b), Laenzlinger (1999), Poletto (2000), Cinque (2002), Belletti, (2004a, 2004b; 2009), Benincà and Munaro (2010); and on Germanic Grewendorf (2002), Haegeman (2004), among many other references. See Roberts (2004) on Celtic; Garzonio (2005), Krapova and Cinque (2008) on Slavic; Puskás (2000) on Finno-Ugric;¹ Shlonsky (1997; 2014) on Semitic; Frascarelli and Puglielli (2008) on Cushitic; Aboh (2004), Bassong (2010), Biloa (2013), Torrence (2013), Hager M'boua (2014) on African languages; Durrelman (2008) on Creole; Jayaseelan (2008) on Dravidian; Paul (2005; 2014), Badan (2007), Tsai (2008; 2015), Badan and Del Gobbo (2011) on Chinese; Endo (2007; 2014) Saito (2010) on Japanese; Pearce (1999) on Austronesian; Speas and Tenny (2003) on American Indian; Legate 2002 on Australian aboriginal. In addition, much research was produced in Romance and Germanic dialectology (e.g., Ledgeway 2003; Paoli 2007; Grewendorf and Poletto 2009; Cruschina 2012), and on Classical languages and diachrony (Salvi 2005; Benincà 2006; Franco 2009; Danckaert 2012). Volumes 1, 2, 3, 5, 7, 8, 9, 10, and 11 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 and Rizzi (2010), Shlonsky (2010), Rizzi (2013c), Rizzi and Cinque (2016) 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 parameters² and in part require an appropriate parametrization.

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 2013c; thanks are due to M. Lluïsa Hernanz for useful discussion of this construction).

- (31) Spanish
 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, etc.) 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; for example, the Force head enters into an agree-like Search relation with Int which endows it with the relevant interrogative feature, so that

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 (in the sense of Chomsky 2004): the scope position and scope domain of different kinds of operators (interrogative, relative, exclamative, etc.³), 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) 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, and so on, 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;⁴ 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 and Van de Koot 2008; Szendrői 2002).

For instance, a topic head, as in the clitic left dislocation constructions (Cinque 1990), attracts a phrase to its Spec,⁵ and determines the interpretation of its Spec 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":⁶

- (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 "syntacticization of scope discourse-semantics" (Cinque and 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 semantics 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:

(38) Dutch varieties

- a. Ik weet niet [wie of [Jan ____ gezien heeft]]
 I know not who Q Jan seen has

(Haegeman 1994)

Gungbe

- b. Un sè [do [dan lo yà [Kofi hu i]]]
 I heard that snake the TOP Kofi killed it

(Aboh 2004)

Gungbe

- c. Un sè [do [dan lo wè [Kofi hu ____]]]
 I heard that snake the FOC Kofi killed

(Aboh 2004)

Bavarian

- d. Der Mantl [den wo [dea Hons ____ gfundn hot]]
 The coat which REL the Hans found has

(Bayer 1984)

Italian

- e. Che bel libro [che [ho letto ____]]!
 What nice book that I.SG.AUX read

Certain Dutch varieties overtly mark the Q feature as *of* (if) in (38a);⁷ Gungbe overtly marks topic and focus through particles *yà* and *wè*, respectively, as in (38b)–(38c); Bavarian marks the relative complementizer as *wo*, as many Germanic varieties (38d); 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 and 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, for example 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.⁸ 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 (40a) and (40b); Lasnik and Saito 1992), not even if the second movement could be attracted by a different feature, for example a contrastive focus feature on the lexical restriction in (41a) and (41b) (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 and Shlonsky 2007; Rizzi 2010):

- (42) Criterial freezing: A phrase meeting a criterion is frozen in place.

See Lohndal (2010), Gallego and Uriagereka (2007) for discussion of these effects, and Bošković (2008), Rizzi (2015a) 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 with such positions, and *that*-trace effects, analyzed 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 and Shlonsky 2007; Rizzi 2014, 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 with 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 (Rizzi 1997; Kiss 1998; among others), as opposed to simple new information focus, that is, focus in answers to *wh*-questions (see section 7; for a different view, see Brunetti 2004).

But this should be qualified. In the alternative semantics framework (Rooth 1992 and much related literature), the notion of contrastive focus is quite broad and is basically related to the idea that 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 and Bocci (2012) and Bianchi (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 (43a) can felicitously continue with a clause-final focus as in (43b), while a continuation with a left-peripheral focus would not be appropriate:

- (43) 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 worth four cents.'

So, a mere contrast is not enough to license 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 (44b) can be totally felicitous in a context where it follows a statement like (44a):

- (44) a. *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 worth four cents ...'
 b. *Speaker B: No, UN ARMANI si era messa.*
 'An ARMANI DRESS she wore.'

Other cases show that an explicit correction is not necessary to license a left-peripheral focus. As discussed in Cruschina (2012) and Bianchi, Bocci, and Cruschina (2014), left-peripheral focus in Italian is also licit when it expresses what is sometimes called a "mirative" import (Cruschina 2012). Consider the discourse context provided by sentence (45a) followed by sentence (45b):

- (45) 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 they went on honeymoon.'

Notice that the presupposition of this "mirative" focus is not necessarily discourse-given (in the sense of Schwarzschild 1999): left-peripheral focus can felicitously occur in contexts like (45), where the alternative propositions are based on expectations.

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 2013b), and/or previously assumed by the speaker. Both interpretations could be associated with a unique left-peripheral position. Alternatively, the mirative and the corrective import could be grammaticalized as defining two distinct types of foci (see Bianchi, Bocci, and Cruschina 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 postulation of additional sound–meaning relations, independent from syntax.

A different type of focalization, 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:

- (46) 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 preceding 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, ch. 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 Belletti (2014), Haegeman, Meinunger, and Vercauteren (2014), Karssenbergh and Lahousse (2014), among many other references.

Consider now topic interpretation. According to a prominent view (Reinhart 1981; Vallduví 1992; but see also Roberts 1996; Büring 1997, among others), 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 (47b')), cannot be felicitously used in an out-of-the-blue “all new” context, contrary to preverbal subjects (as in (47b): Rizzi 2005; 2015b).⁹

- (47) a. Che cosa è successo?
'What happened?'
b. Un camion ha tamponato un autobus.
'A truck bumped into a bus.'
b'. #Un autobus, un camion lo ha tamponato.
'A bus, a truck bumped into it.'

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 favor of a refined typology of topics: see Benincà and Poletto (2004), and Frascarelli and Hinterhölzl (2007), Bianchi and Frascarelli

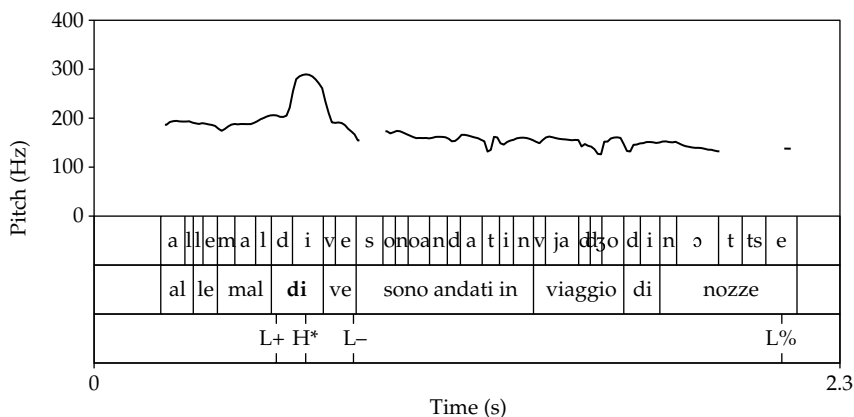


Figure 1 Pitch contour of a realization of (48b) with corrective focus (from Bianchi, Bocci, and Cruschina 2015)

(2010) for different proposals. Interestingly, different interpretative categories are argued to pattern with hierarchical and positional differences (as well as with distinct kinds of prosodic contours, e.g., for contrastive and non-contrastive topics) 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 accents. Consider (48b), 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) a. Speaker A: Se ho capito bene, sono andati alle isole Vergini.
'If I understood correctly, they went to the Virgin Islands.'
- b. 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 (45b), 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 edge 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.

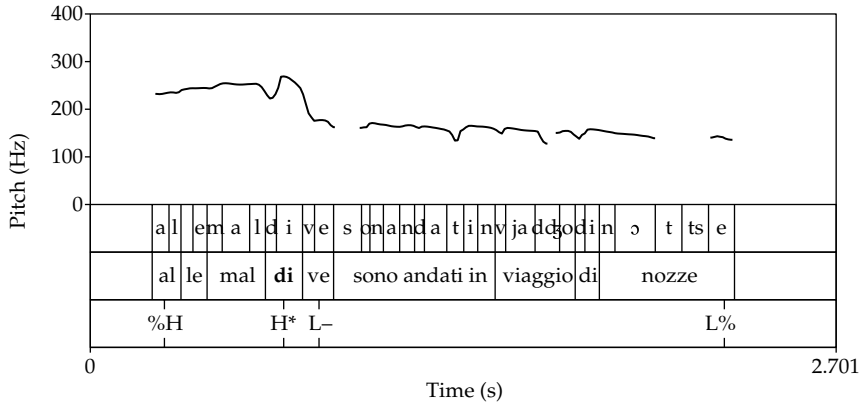


Figure 2 Pitch contour of a sentence with mirative focus (from Bianchi, Bocci, and Cruschina 2015)

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, Delais-Roussarie, and Sleeman (2002) for French; Feldhausen (2010) for Catalan; Frascarelli (2000) and 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. Speaker 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. Speaker B: Beh, alle Maldive, ci sono andati in viaggio di nozze.
 ‘Well, to the Maldives, they went (there) on honeymoon.’

Figure 3 shows the pitch contour of the clitic-left dislocated structure (49b). 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 like the presupposition in Figure 1 and Figure 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

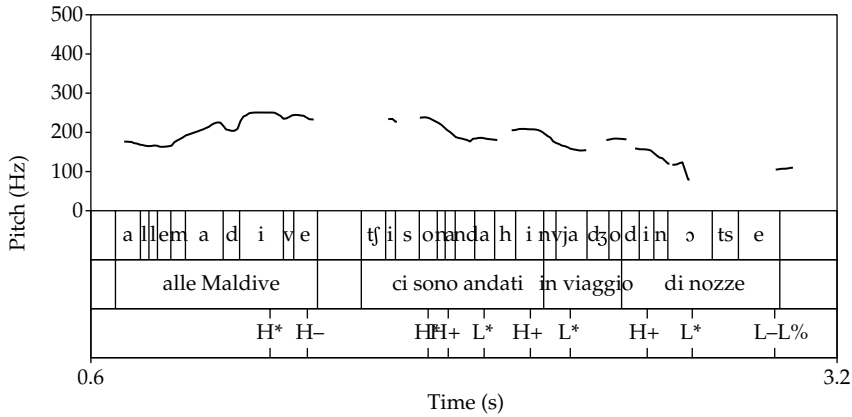


Figure 3 Pitch contour of a realization of (49b) with clitic cleft dislocation

allows us to capture in a principled way the prosodic differences opposing left-peripheral focus and topics (see Poletto and Bocci in press 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 and Hinterhölzl 2007; Bianchi and Frascarelli 2010). Concerning the languages in which a proliferation of topics is possible (notated as Top* in maps like (29)), the question arises 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 *éké*, and which permits a proliferation of topics, each one followed by the Top marker (Hager M’boua 2014, which is the source of the following data):

- (50) kòfí_i éké òkòkò_j é éké t_i è pìpǰé nǰ.
 Kofí_i TOP banana_j DEF TOP t_i ASP.MARKER peel.RES PRON_j
 ‘Kofi, the banana, he peeled it.’

These data, of course, do not exclude the possibility that other languages may use a different device, but provide evidence that Top recursion is a UG option (see also Rizzi 2013c on evidence that overt Top or Foc markers are optimally analyzed 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 parametrization 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 analyzed 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 M'boua 2014) involving the overt Foc marker *bé* (on different kinds of focus marking in African languages see also Hartmann and 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. òkókò é_i bé kòfí pìpǐé ____
 Banana DEF FOC Kofi peel.RES ____
 'THE BANANA, Kofi peeled ____'
 b. *òkókò_i é bé kòfí_j bé ____ pìpǐé ____
 banana_i DEF FOC Kofi_j FOC ____ peel.RES ____
 'THE BANANA, KOFI ____ peeled ____'

See also Brody (1990) and Puskás (2000) on the uniqueness of left-peripheral focus in Finno-Ugric, Durrelman (2008) on Creole, and so on. If no parametrization 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; 2004a) 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 with the sentence final position, in her analysis to a low focus position associated with the vP periphery:

- (54) Italian
 Q: Che cosa hai scritto?
 '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) Sicilian
 Q: Chi scrivisti?
 'What did you write?'
 A: N'articulu scrissi.
 'An article I wrote.'

(Cruschina 2012)

So, some form of parametrization must be postulated here, involving the interface between focus structures and their interpretive properties (in addition, again, to the trivial parametrization concerning the use or not of an overt Foc marker in the language). See also Hernanz (2011) and Servidio (2014) on the parametrization 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 parametrization, 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 and 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: Rizzi 2001b; 2004a; Starke 2001) 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 Cinque and Krapova 2013; Callegari 2014 for critical appraisals). Along similar lines Haegeman (2012) shows that the bulk of root/non-root asymmetries, in particular the impossibility of topicalization in adjunct clauses and other forms of embedding, may be amenable to fRM. And Chomsky (2013; 2015) and Rizzi (2015a; 2015b) address freezing effects in criterial positions in terms of fundamental properties of the labeling algorithm.

The success of attempts at 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 physics/chemistry (see Rizzi 2013c 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

This research was supported by the ERC Advanced Grant n. 340297 "SynCart."

For helpful comments on an earlier draft, we would like to thank Adriana Belletti, Giuseppe Samo, Ur Shlonsky, the editors of *The Companion to Syntax*, and an anonymous reviewer.

SEE ALSO: Complementizer-Trace Effects; Embedded Root Phenomena; Focus Movement; Freezing Effects; Left Dislocation; Phrasal Stress and Syntax; Topic Prominence

Notes

1. There is a longstanding tradition of work on Hungarian sentence structure with particular reference to word order and the interface with information structure which had a significant impact on the development of the cartographic approach to the study of the left periphery (see in particular Horvath 1986; Brody 1990; Kiss 1995; 1998; 2002; and Lipták 2011).
2. A case in point is the activation of the left periphery in V2 languages, in which the parametric properties characterizing V2 severely constrain the occurrence of elements in left-peripheral positions. For approaches consistent with the view of a uniform left periphery in V2 and non-V2 languages, see Haegeman (1996), Roberts (2004), and the recent discussion in Samo (2014).
3. Also other kinds of operators, traditionally assumed to undergo Quantifier Raising in the sense of May (1985), have been argued to reach dedicated positions fixing their scope in the left periphery, a view particularly congenial to a cartographic perspective. See Beghelli and Stowell (1997) and Szabolcsi (1997).
4. 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) and 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 Top, Foc, etc.).
5. We follow Cinque (1977) in assuming that clitic left dislocation involves movement of the dislocated phrase, as is shown by 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 (Cecchetto 2000; Belletti 2005). We will not analyze here the Hanging Topic construction (Benincà and Poletto 2004), involving a very high, presumably externally merged, topic-like position.
6. Here we continue to characterize this articulation through the classical terminology in Chomsky (1972), and Jackendoff (1972); other approaches refer to the non-focal part as “background.”
7. *Wie of* may also co-occur 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 Craenenbroeck (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 paradoxes (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) Turinese

A chërdo *che*, col liber, *ch'* a l' abia già lesulo

'They believe that, that book, that s/he has already read'

(Paoli 2007)

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

8. 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.
9. Notice incidentally that the contrast (47b)–(47b') also shows that preverbal subjects cannot be assimilated to topics, not even in a null subject language like Italian, as is sometimes suggested. An extensive literature has been devoted to the distinction between subject and topic ever since Li and Thompson (1976), which we cannot properly review here for space constraints.

References

- Abels, Klaus. 2012. "The Italian Left Periphery: A View from Locality." *Linguistic Inquiry*, 43: 229–254.
- Aboh, Enoch Oladé. 2004. *The Morphosyntax of Complement–Head Sequences: Clause Structure and Word Order Patterns in Kwa*. New York, NY: Oxford University Press.
- Aboh, Enoch Oladé. 2010. "Information Structuring Begins with the Numeration." *Iberia*, 2 (1): 12–42.
- Badan, Linda. 2007. "High and Low Periphery: A Comparison between Italian and Chinese." PhD diss., University of Padua.
- Badan, Linda, and Francesca Del Gobbo. 2011. "On the Syntax of Topic and Focus in Chinese." In *Mapping the Left Periphery: The Cartography of Syntactic Structures*, edited by Paola Benincà and Nicola Munaro, vol. 5: 63–90. New York, NY: Oxford University Press.
- Bassong, Paul Roger. 2010. "The Structure of the Left Periphery in Basaa." MS, University of Yaounde I, Cameroon.
- Bayer, Josef. 1984. "COMP in Bavarian Syntax." *Linguistic Review*, 3: 209–274.
- Bayer, Josef, and Alexander Grosu. 2000. "Feature-Checking Meets the Criterion Approach." In *Comparative Studies in Romanian Syntax*, edited by Virginia Motapanyane, 49–81. Amsterdam: North-Holland.
- Beghelli, Filippo, and Tim Stowell. 1997. "Distributivity and Negation: The Syntax of Each and Every." In *Ways of Scope Taking*, edited by Anna Szabolcsi, 71–107. Dordrecht: Kluwer.
- Belletti, Adriana. 1990. *Generalized Verb Movement: Aspects of Verb Syntax*. Turin: Rosenberg et Sellier.
- Belletti, Adriana. 2001. "Inversion as Focalization." In *Subject Inversion in Romance and the Theory of Universal Grammar*, edited by Aafke Hulk and Jean-Yves Pollock, 60–90. New York, NY: Oxford University Press.
- Belletti, Adriana. 2004a. "Aspects of the Low IP Area." In *The Structure of CP and IP*, edited by Luigi Rizzi, 16–51. New York, NY: Oxford University Press.
- Belletti, Adriana, ed. 2004b. *Structures and Beyond. The Cartography of Syntactic Structures*, vol. 3. New York, NY: Oxford University Press.

- Belletti, Adriana. 2005. "Extended Doubling and the VP Periphery." *Probus*, 17: 1–35.
- Belletti, Adriana. 2009. *Structures and Strategies*. London: Routledge.
- Belletti, Adriana. 2014. "The Focus Map of Clefts: Extraposition and Predication." In *Beyond Functional Sequence*, edited by Ur Shlonsky. New York, NY: Oxford University Press.
- Benincà, Paola. 1996. "La struttura della frase esclamativa alla luce del dialetto padovano." In *Italiano e dialetti nel tempo: Saggi di grammatica per Giulio Lepschy*, edited by Paola Benincà, Guglielmo Cinque, Tullio De Mauro, and Nigel Vincent, 23–43. Rome: Bulzoni.
- Benincà, Paola. 2006. "A Detailed Map of the Left Periphery of Medieval Romance." In *Cross-linguistic Research in Syntax and Semantics: Negation, Tense, and Clausal Architecture*, edited by Raffaella Zanuttini, Hector Campos, Elena Herburger, and Paul H. Portner, 53–86. Washington, DC: Georgetown University Press.
- Benincà, Paola, and Nicola Munaro, eds. 2010. *Mapping the Left Periphery: The Cartography of Syntactic Structures*, vol. 5. New York, NY: Oxford University Press.
- Benincà, Paola, and Cecilia Poletto. 2004. "Topic, Focus and V2: Defining the CP Sublayers." In *The Structure of CP and IP*, edited by Luigi Rizzi, 52–75. New York, NY: Oxford University Press.
- Berwick, Robert C., and Noam Chomsky. 2011. "The Bilingual Program: The Current State of its Evolution and Development." In *The Bilingual Enterprise*, edited by Cedric Boeckx and Anna-Maria di Sciullo, 19–41. Oxford: Oxford University Press.
- Bianchi, Valentina. 2013. "On 'Focus Movement' in Italian." In *Information Structure and Agreement*, edited by Victoria Camacho-Taboada, Angel Jiménez-Fernández, Javier Martín-González, and Mariano Reyes-Tejedor, 193–216. Amsterdam: John Benjamins.
- Bianchi, Valentina, and Giuliano Bocci. 2012. "Should I Stay or Should I Go? Optional Focus Movement in Italian." In *Empirical Issues in Syntax and Semantics 9*, edited by Christopher Piñón, 1–18.
- Bianchi, Valentina, Giuliano Bocci, and Silvio Cruschina. 2015. "Focus and its Implicatures." In *Romance Languages and Linguistic Theory: Selected Papers from Going Romance 2013*, edited by Enoch Aboh, Jeannette Schaeffer, and Petra Sleeman, 1–20. Amsterdam: John Benjamins.
- Bianchi, Valentina, and Mara Frascarelli. 2010. "Is Topic a Root Phenomenon?" *Iberia*, 2: 43–48.
- Bilola, Edmond. 2013. *The Syntax of Tuki: A Cartographic Approach*. Amsterdam: John Benjamins.
- Bocci, Giuliano. 2013. *The Syntax–Prosody Interface: A Cartographic Perspective with Evidence from Italian*. Amsterdam: John Benjamins.
- Bošković, Željko. 2008. "On the Operator Freezing Effect." *Natural Language & Linguistic Theory*, 26: 249–287.
- Bresnan, Joan W. 1970. "On Complementizers: Toward a Syntactic Theory of Complement Types." *Foundations of Language*, 6 (3): 297–321.
- Bresnan, Joan W. 1977. "Variables in the Theory of Transformations." In *Formal Syntax*, edited by Peter Culicover, Thomas Wasow, and Adrian Akmajian, 157–196. New York, NY: Academic Press.
- Brody, Michael. 1990. "Some Remarks on the Focus Field in Hungarian." *UCL Working Papers in Linguistics*, 2: 201–225.
- Browning, M. A. 1996. "CP Recursion and That-t Effects." *Linguistic Inquiry*, 27: 237–255.
- Brunetti, Lisa. 2004. *A Unification of Focus*. Padua: Unipress.
- Büring, Daniel. 1997. *The Meaning of Topic and Focus: The 59th Street Bridge Accent*. London: Routledge.
- Callegari, Elena. 2014. "Why Locality-Based Accounts of the Left Periphery are Unfit to Account for Its Variation." Paper presented at Variation in C Macro- and

- Micro-Comparative Approaches to Complementizers and the CP Phase (Workshop), Ca' Foscari University of Venice.
- Cardinaletti, Anna. 2004. "Towards a Cartography of Subject Positions." In *The Structure of CP and IP*, edited by Luigi Rizzi, 115–165. New York, NY: Oxford University Press.
- Cardinaletti, Anna, Guglielmo Cinque, and Yoshio Endo, eds. 2014. *On Peripheries: Exploring the Clause Initial and Clause Final Positions*. Tokyo: Hituzi Syobo.
- Cecchetto, Carlo. 2000. "Doubling Structures and Reconstruction." *Probus*, 12: 93–126.
- Cheng, Lisa Lai-Shen. 1991. "On the Typology of Wh Questions." PhD diss., MIT.
- Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton.
- Chomsky, Noam. 1972. *Studies on Semantics in Generative Grammar*. The Hague: Mouton.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. "Derivation by Phase." In *Ken Hale: A Life in Language*, edited by Michael Kenstowicz, 1–50. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2004. "Beyond Explanatory Adequacy". In *Structures and Beyond*, edited by Adriana Belletti, 104–131. Oxford: Oxford University Press.
- Chomsky, Noam. 2013. "Problems of Projection." *Lingua*, 130: 33–49.
- Chomsky, Noam. 2015. "Problems of Projection: Extensions." In *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, edited by Elisa Di Domenico, Cornelia Hamann, and Simona Matterini, 3–16. Amsterdam: John Benjamins.
- Chomsky, Noam, and Howard Lasnik. 1993. "Principles and Parameters Theory." In *Syntax: An International Handbook of Contemporary Research*, edited by Joachim Jacobs, Arnim von Stechow, and Wolfgang Sternefeld, 506–569. Berlin: De Gruyter.
- Cinque, Guglielmo. 1977. "The Movement Nature of Left Dislocation." *Linguistic Inquiry*, 8 (2): 397–412.
- Cinque, Guglielmo. 1990. *Types of A' Dependencies*. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. New York, NY: Oxford University Press.
- Cinque, Guglielmo, ed. 2002. *Functional Structure in DP and IP: The Cartography of Syntactic Structures*, vol. 1. New York, NY: Oxford University Press.
- Cinque, Guglielmo, and Iliyana Krapova. 2013. "DP and CP: A Relativized Minimality Approach to One of Their Non Parallelisms." Paper presented at Congrès International des Linguistes, Geneva.
- Cinque, Guglielmo, and Luigi Rizzi. 2010. "The Cartography of Syntactic Structures." In *The Oxford Handbook of Linguistic Analysis*, edited by Bernd Heine and Heiko Narrog, 51–65. New York, NY: Oxford University Press.
- Craenenbroeck, Jeroen van. 2006. "Transitivity Failures in the Left Periphery and Foot-Driven Movement Operations." *Linguistics in the Netherlands*, 23: 52–64.
- Craenenbroeck, Jeroen van, ed. 2009. *Alternatives to Cartography*. Berlin: De Gruyter.
- Cruschina, Silvio. 2012. *Discourse-Related Features and Functional Projections*. New York, NY: Oxford University Press.
- Culicover, Peter. 1993. "The Adverb Effect: Evidence against ECP Accounts of the *that-t* Effect." *Proceedings of NELS*, 23: 97–110.
- Danckaert, Lieven Jozef Maria. 2012. *Latin Embedded Clauses: The Left Periphery*. Amsterdam: John Benjamins.
- Doetjes, Jenny, Elisabeth Delais-Roussarie, and Petra Sleeman. 2002. "The Prosody of Left Detached Constituents in French." In *Proceedings of Speech Prosody 2002*, edited by Bernard Bel and Isabelle Marlien, 247–250.
- Durreleman, Stephanie. 2008. *The Syntax of Jamaican Creole*. Amsterdam: John Benjamins.
- Endo, Yoshio. 2007. *Locality and Information Structure*. Amsterdam: John Benjamins.

- Endo, Yoshio. 2014. "An Overview of the Cartography of Syntactic Structures in Japanese." In *On Peripheries: Exploring the Clause Initial and Clause Final Positions*, edited by Anna Cardinaletti, Guglielmo Cinque, and Yoshio Endo, 9–28. Tokyo: Hituzi Syobo.
- Feldhausen, Ingo. 2010. *Sentential Form and Prosodic Structure of Catalan*. Amsterdam: John Benjamins.
- Franco, Irene. 2009. "Verbs, Subjects and Stylistic Fronting: A Comparative Analysis of the Interaction of CP Properties with Verb Movement and Subject Positions in Icelandic and Old Italian." PhD diss., University of Siena.
- Frascarelli, Mara. 2000. *The Syntax–Phonology Interface in Focus and Topic Constructions in Italian*. Dordrecht: Kluwer.
- Frascarelli, Mara, and Annarita Puglielli. 2008. "Focus in the Force–Fin System: Information Structure in Cushitic Languages." In *Focus Strategies in African Languages*, edited by Enoch Aboh, Katharina Hartmann, and Malte Zimmermann, 161–184. Berlin: De Gruyter.
- Frascarelli, Mara, and Roland Hinterhölzl. 2007. "Types of Topics in German and Italian." In *On Information Structure, Meaning and Form*, edited by Susanne Winkler and Kerstin Schwabe, 87–116. Amsterdam: John Benjamins.
- Frota, Sónia. 2000. *Prosody and Focus in European Portuguese: Phonological Phrasing and Intonation*. New York, NY: Garland.
- Gallego, Ángel J., and Juan Uriagereka. 2007. "Sub-Extraction from Subjects: A Phase Theory Account." In *Romance Linguistics 2006: Selected Papers from the 36th Linguistic Symposium on Romance Languages*, edited by José Camacho, Nydia Flores-Ferrán, Liliana Sánchez, et al., 149–162.
- Garzonio, Jacopo. 2005. "Struttura informazionale e soggetti nulli in Russo: Un approccio cartografico." PhD diss., University of Padua.
- Grewendorf, Günther. 2002. "Left Dislocation as Movement." *Georgetown University Working Papers in Theoretical Linguistics*, 2: 31–81.
- Grewendorf, Günther, and Cecilia Poletto. 2009. "The Hybrid Complementizer System of Cimbrian." *Studies in Linguistics*, 3: 181–194.
- Haegeman, Liliane. 1994. *Introduction to Government and Binding Theory*. Oxford: Blackwell.
- Haegeman, Liliane. 1996. "Verb Second, the Split CP and Null Subjects in Early Dutch Finite Clauses." *GenGenP*, 4 (2): 133–175.
- Haegeman, Liliane. 2004. "Topicalization, CLLD and the Left Periphery." In *Proceedings of the Dislocated Elements Workshop*, edited by Benjamin Shaer, Werner Frey, and Claudia Maienborn, 157–192.
- Haegeman, Liliane. 2012. *Adverbial Clauses, Main Clause Phenomena, and Composition of the Left Periphery*. New York, NY: Oxford University Press.
- Haegeman, Liliane, André Meinunger, and Aleksandra Vercauteren. 2014. "The Architecture of It-Clefts." *Journal of Linguistics*, 50: 269–296.
- Hager M'Boua, Clarisse. 2014. "Structure de la phrase en Abidji." PhD diss., University of Geneva.
- Hartmann, Katharina, and Malte Zimmermann. 2012. "Focus Marking in Bura: Semantic Uniformity Matches Syntactic Heterogeneity." *Natural Language & Linguistic Theory*, 30: 1061–1108.
- Hernanz, Maria Lluïsa. 2011. "Assertive *Bien* in Spanish and the Left Periphery." In *Mapping the Left Periphery*, edited by Paola Benincà and Nicola Munaro, 19–62. New York, NY: Oxford University Press.
- Horvath, Julia. 1986. *FOCUS in the Theory of Grammar and the Syntax of Hungarian*. Dordrecht: Foris.
- Jackendoff, Ray S. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge, MA: MIT Press.

- Jayaseelan, Karattuparambil A. 2008. "Topic, Focus and Adverb Positions in Clause Structure." *Nanzan Linguistics*, 4: 43–68.
- Karsenberg, Lena, and Karen Lahousse. 2014. "C'est Clefts vs. Il y a Clefts in French." Paper presented at Going Romance 2014, Lisbon.
- Kayne, Richard. 1983. *Connectedness and Binary Branching*. Dordrecht: Foris.
- Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.
- Kiss, Katalin É., ed. 1995. *Discourse Configurational Languages*. New York, NY: Oxford University Press Oxford.
- Kiss, Katalin É. 1998. "Identificational Focus versus Information Focus." *Language*, 74: 245–273.
- Kiss, Katalin É. 2002. *The Syntactic Structure of Hungarian*. Cambridge: Cambridge University Press.
- Koster, Jan. 1978. *Locality Principles in Syntax*. Dordrecht: Foris.
- Krapova, Ilyana, and Guglielmo Cinque. 2008. "On the Order of *wh*-Phrases in Bulgarian Multiple *wh*-Fronting." In *Formal Description of Slavic Languages*, edited by Gerhild Zybatow, Luka Szucsich, Uwe Junghanns, and Roland Meyer, 318–336. Frankfurt am Main: Peter Lang.
- Krifka, Manfred. 2008. "Basic Notions of Information Structure." *Acta Linguistica Hungarica*, 55: 243–276.
- Laenzlinger, Christopher. 1999. *Comparative Studies in Word Order Variations: Pronouns, Adverbs and German Clause Structure*. Amsterdam: John Benjamins.
- Lasnik, Howard, and Mamoru Saito. 1992. *Move Alpha: Conditions on Its Application and Output*. Cambridge, MA: MIT Press.
- Ledgeway, Adam. 2003. "Il sistema completivo dei dialetti meridionali: la doppia serie di complementatori." *Rivista Italiana di Dialettologia*, 27: 1–59.
- Legate, Julie Anne. 2002. "Warlpiri: Theoretical implications." PhD Diss., MIT.
- Li, Charles N., and Sandra A. Thompson. 1976. "Subject and Topic: A New Typology of Language." In *Subject and Topic*, edited by Charles N. Li, 457–461. New York, NY: Academic Press.
- Lipták, Anikó. 2011. "The Structure of the Topic Field in Hungarian." In *Mapping the Left Periphery*, edited by Paola Benincà and Nicola Munaro, 163–198. New York, NY: Oxford University Press.
- Lohndal, Terje. 2010. "Freezing Effects and Objects." *Journal of Linguistics*, 47 (1): 163–199.
- May, Robert. 1985. *Logical Form: Its Structure and Derivation*. Cambridge, MA: MIT Press.
- Mioto, Carlos. 1999. "A periferia esquerda no Português Brasileiro." MS, Federal University Santa Catarina; University of Siena.
- Neeleman, Ad, and Hans van de Koot. 2008. "Dutch Scrambling and the Nature of Discourse Templates." *The Journal of Comparative Germanic Linguistics*, 11: 137–189.
- Paoli, Sandra. 2007. "The Fine Structure of the Left Periphery: COMPs and Subjects: Evidence from Romance." *Lingua*, 117: 1057–1079.
- Paul, Waltraud. 2005. "Low IP Area and Left Periphery in Mandarin Chinese." *Recherches Linguistiques de Vincennes*, 33: 111–134.
- Paul, Waltraud. 2014. *New Perspectives on Chinese Syntax*. Berlin: De Gruyter.
- Pearce, Elizabeth. 1999. "Topic and Focus in a Head-Initial Language: Maori." *Toronto Working Papers in Linguistics*, 16: 249–263.
- Pesetsky, David. 1982. "Paths and Categories." PhD diss., MIT.
- Plann, Susan. 1982. "Indirect Questions in Spanish." *Linguistic Inquiry*, 13: 297–312.
- Poletto, Cecilia. 2000. *The Higher Functional Field: Evidence from Northern Italian Dialects*. New York, NY: Oxford University Press.
- Poletto, Cecilia, and Giuliano Bocci. In press. "Syntactic and Prosodic Effects of Information Structure in Romance." In *Handbook of Information Structure*, edited by Caroline Féry and Shin Ishihara. New York, NY: Oxford University Press.
- Pollock, Jean-Yves. 1989. "Verb Movement, Universal Grammar, and the Structure of IP." *Linguistic Inquiry*, 20: 365–424.

- Puskás, Genoveva. 2000. *Word Order in Hungarian: The Syntax of \bar{A} -Positions*. Amsterdam: John Benjamins.
- Radford, Andrew. 2013. "The Complementiser System in Spoken English." In *Information Structure and Agreement*, edited by Victoria Camacho-Taboada, Ángel L. Jiménez-Fernández, et al., 11–54. Amsterdam: John Benjamins.
- Reinhart, Tanya. 1981. "Pragmatics and Linguistics: An Analysis of Sentence Topics in Pragmatics and Philosophy I." *Philosophica anc Studia Philosophica Gandensia Gent*, 27: 53–94.
- Rizzi, Luigi. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 1997. "The Fine Structure of the Left Periphery." In *Elements of Grammar: A Handbook of Generative Syntax*, edited by Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2000. *Comparative Syntax and Language Acquisition*. London: Routledge.
- Rizzi, Luigi. 2001a. "On the Position 'Int(errogative)' in the Left Periphery of the Clause." In *Current Studies in Italian Syntax: Essays Offered to Lorenzo Renzi*, edited by Guglielmo Cinque and Giampaolo Salvi, 267–296. Amsterdam: Elsevier.
- Rizzi, Luigi. 2001b. "Relativized Minimality Effects." In *The Handbook of Contemporary Syntactic Theory*, edited by Mark Baltin and Chris Collins, 89–110. Oxford: Blackwell.
- Rizzi, Luigi. 2004a. "Locality and Left Periphery." In *Structures and Beyond*, edited by Adriana Belletti, 223–251. New York, NY: Oxford University Press.
- Rizzi, Luigi, ed. 2004b. *The Structure of IP and CP: The Cartography of Syntactic Structures*, vol. 2. New York, NY: Oxford University Press.
- Rizzi, Luigi. 2005. "On Some Properties of Subjects and Topics." In *Proceedings of the XXX Incontro di Grammatica Generativa*, edited by Laura Brugé, Giuliana Giusti, Nicola Munaro, et al., 203–224.
- Rizzi, Luigi. 2006. "On the Form of Chains: Criterial Positions and ECP Effects." In *Wh-Movement: Moving On*, edited by Lisa Lai-Shen Cheng and Norbert Corver, 97–134. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 2010. "On Some Properties of Criterial Freezing." In *The Complementizer Phase: Subjects and Operators*, edited by E. Phoevos Panagiotidis, vol. 1: 17–32. Oxford: Oxford University Press.
- Rizzi, Luigi. 2013a. "A Note on Locality and Selection." In *Deep Insights, Broad Perspectives: Essays in Honor of Mamoru Saito*, edited by Yoichi Miyamoto, Daiko Takahashi, and Hideki Maki, 325–341. Tokyo: Kaitakusha.
- Rizzi, Luigi. 2013b. "Focus, Topic and the Cartography of the Left Periphery." In *The Bloomsbury Companion to Syntax*, edited by Silvia Luraghi and Claudia Parodi, 436–451. London: Bloomsbury Publishing.
- Rizzi, Luigi. 2013c. "Notes on Cartography and Further Explanation." *Probus*, 25 (1): 197–226.
- Rizzi, Luigi. 2014. "Some Consequences of Criterial Freezing." In *Functional Structure from Top to Toe*, edited by Peter Svenonius, 19–45. New York, NY: Oxford University Press.
- Rizzi, Luigi. 2015a. "Cartography, Criteria, and Labeling." In *Beyond Functional Sequence*, edited by Ur Shlonsky. New York, NY: Oxford University Press.
- Rizzi, Luigi. 2015b. "Notes on Labeling and Subject Positions." In *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, edited by Elisa Di Domenico, Cornelia Hamann, and Simona Matteredini, 17–46. Amsterdam: John Benjamins.
- Rizzi, Luigi and Guglielmo Cinque. 2016. "Functional Categories and Syntactic Theory." *Annual Review of Linguistics*, 2: 139–163.
- Rizzi, Luigi, and Ur Shlonsky. 2007. "Strategies of Subject Extraction." In *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax–Semantics*, edited by Hans-Martin Gärtner and Uli Sauerland, 115–160. Berlin: De Gruyter.
- Roberts, Craige. 1996. "Information Structure in Discourse: Towards an Integrated Formal Theory of Pragmatics." *Ohio State University Working Papers in Linguistics*, 49: 91–136.

- Roberts, Ian. 2004. "The C-System in Brythonic Celtic Languages, V2, and the EPP." In *The Structure of CP and IP*, edited by Luigi Rizzi, 297–328. New York, NY: Oxford University Press.
- Rooth, Mats. 1992. "A Theory of Focus Interpretation." *Natural Language Semantics*, 1: 75–116.
- Roussou, Anna. 2000. "On the Left Periphery: From Modal Particles to Complementisers." *Journal of Greek Linguistics*, 1: 65–94.
- Rubio, Alcalà Carlos. 2014. "Syntactic Constraints on Topicalization Phenomena." PhD diss., Universitat Autònoma de Barcelona.
- Saito, Mamoru. 2010. "Sentence Types and the Japanese Right Periphery." MS, Nanzan University, Nagoya.
- Salvi, Giampaolo. 2005. "Some Firm Points on Latin Word Order: The Left Periphery." In *Universal Grammar in the Reconstruction of Ancient Languages*, edited by Katalin É. Kiss, 429–456. Berlin: De Gruyter.
- Samek-Lodovici, Vieri. 2006. "When Right Dislocation Meets the Left-Periphery: A Unified Analysis of Italian Non-Final Focus." *Lingua*, 116: 836–873.
- Samo, Giuseppe. 2014. "There Can Be Only One: Cartography of V2 in Root Contexts." MA thesis, University of Siena.
- Schwarzschild, Roger. 1999. "GIVENNESS, AVOIDF and Other Constraints on the Placement of Accent." *Natural Language Semantics*, 7: 141–177.
- Servidio, Emilio. 2014. "Polarity Particles in Italian Focus, Fragments, Tags." PhD diss., University of Siena.
- Shlonsky, Ur. 1997. *Clause Structure and Word Order in Hebrew and Arabic: An Essay in Comparative Semitic Syntax*. New York, NY: Oxford University Press.
- Shlonsky, Ur. 2010. "The Cartographic Enterprise in Syntax." *Language and Linguistics Compass*, 4: 417–429.
- Shlonsky, Ur. 2014. "Topicalization and Focalization: A Preliminary Exploration of the Hebrew Left Periphery." In *Peripheries: Clause-Initial and Clause-Final Positions*, edited by Anna Cardinaletti, Guglielmo Cinque, and Yoshio Endo, 327–341. Tokyo: Hituzi Syobo.
- Shlonsky, Ur, and Gabriela Soare. 2011. "Where's Why?" *Linguistic Inquiry*, 42: 651–669.
- Speas, Peggy, and Carol Tenny. 2003. "Configurational Properties of Point of View Roles." In *Asymmetry in Grammar*, edited by Anna Maria di Sciullo, 315–345. Amsterdam: John Benjamins.
- Starke, Michal. 2001. "Move Dissolves into Merge: A Theory of Locality." PhD diss., University of Geneva.
- Suñer, Margarita. 1994. "V-Movement and the Licensing of Argumental Wh-Phrases in Spanish." *Natural Language & Linguistic Theory*, 12: 335–372.
- Szabolcsi, Anna. 1997. "Strategies for Scope Taking." In *Ways of Scope Taking*, edited by Anna Szabolcsi, 109–154. Kluwer: Dordrecht.
- Szendrői, Kriszta. 2002. "Focus and the Syntax–Phonology Interface." PhD diss., University College London.
- Torrence, Harold. 2013. *The Clause Structure of Wolof: Insights into the Left Periphery*. Amsterdam: John Benjamins.
- Truckenbrodt, Hubert. 1995. "Phonological Phrases: Their Relation to Syntax, Focus, and Prominence." PhD diss., MIT.
- Tsai, Wei-Tien Dylan. 2008. "Left Periphery and How-Why Alternations." *Journal of East Asian Linguistics*, 17: 83–115.
- Vallduví, Enric. 1992. *The Informational Component*. New York, NY: Garland.
- Villa-García, Julio. 2012. "Recomplementation and Locality of Movement in Spanish." *Probus*, 24: 257–314.
- Zanuttini, Raffaella, and Paul Portner. 2003. "Exclamative Clauses: At the Syntax–Semantics Interface." *Language*, 79: 39–81.