

Joanna Blochowiak · Cristina Grisot
Stephanie Durrleman
Christopher Laenzlinger *Editors*

Formal Models in the Study of Language

Applications in Interdisciplinary
Contexts

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This collection of articles is dedicated to Jacques Moeschler, Full Professor at the University of Geneva. His work in formal semantics and pragmatics, as well as in the framework of Relevance Theory, has impacted the research of many scientists in the field of formal linguistics as shown by the heterogeneity of the contributions to this book.

It pays homage to the rich and diverse nature of Jacques Moeschler's work and to his scientific expertise in the domain of Language Sciences, and more broadly, in that of cognitive sciences.

It has been intended as a 'Festschrift' for his 60th birthday to which many of his colleagues and friends have more than happily contributed. Among the authors, there are both budding researchers who initiated their careers under Jacques Moeschler's supervision, experienced researchers who have collaborated with him over the years, as well as other colleagues who wanted to join us for this celebration.

The 'Festschrift' partly developed into the volume 'Formal Models in the Study of Language', which proposes innovative, empirically motivated theoretical models and their application to various linguistic phenomena.

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On the Syntax and Pragmatics of Some Clause-Peripheral Positions

Adriana Belletti and Luigi Rizzi

Abstract The criterial approach to scope-discourse semantics puts forth the hypothesis that the clausal peripheries are populated by functional heads attracting phrases to their specifiers and determining interpretive properties at the interfaces with sound and meaning. In this paper we address some interpretive properties of positions dedicated to topic and focus. Through the use of short discourse fragments such as question—answer pairs it is possible to highlight some conditions which render topic use felicitous, and which distinguish between different types of focus such as new information focus, corrective focus and mirative focus. A systematic use of such testing environments is an essential component of the cartography of syntactic structures and of the study of the interface properties of cartographic representations.

Keywords Cartography · Topic · New Information Focus · Corrective Focus · Mirative Focus · Italian · Romance languages · Left-periphery

1 Introduction

The cartographic projects have led syntacticians to focus on new domains, previously neglected in formal linguistic studies (Cinque et al. 2010; Shlonsky 2010; Rizzi et al. (2015)). One is adverb syntax. What syntactic positions are dedicated to adverbial elements? How do positional properties interact with interpretive properties? Ever since Pollock (1989), Belletti (1990) and much work since the early

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1990s, the positional properties of adverbs have started to play a fundamental role in syntactic argumentation, a trend which was fully systematized in a broad cross-linguistic perspective in Cinque (1999). Special attention was paid to adverbs and particles expressing negation, which can occupy different positions in the clausal structure (Zanuttini 1997; Moscati 2011), providing critical evidence for the positions of main constitutive elements of the clause (verbs, arguments, etc.); they also give rise to subtle interpretive properties (of scope, presupposition, etc.), in which position and interpretation interact in complex ways, opening the potential of very fruitful interactions with the study of negation “from the other side” of the LF interface (semantic-pragmatic computations: Moeschler 2013).

Another domain which has recently come to the fore of syntactic studies under the impulse of cartographic research is the expression of discourse-related properties through morphosyntactic means. An obvious fact about language is that a syntactic property like word order (and displacement determining certain special orders) can be used to express properties relevant for discourse interpretation. For instance, many languages express the Topic—Comment articulation by moving the topic to clause initial position, e.g., in English

(1) Your new book, I will read ___ next week

Another well-known fact is that certain languages use special words or morphemes to express such interpretively relevant properties. E.g., the Kwa language, Gungbe, uses special particles *yà*, *wè* to designate, respectively, topic and focus (Aboh 2004).

A third familiar fact is that prosody may play a major role in the identification of such discourse-related properties through the assignment of different intonational contours. For instance, topic-comment and focus-presupposition configurations in Italian (and undoubtedly in many other languages) have sharply distinct contours amenable to precise rules assigning prosodic prominence (Bocci 2013).

These three properties typically combine: for instance, a topic in Gungbe is moved to the front and carries the special topic particle *yà*; topic and contrastive focalization may both involve movement of an element to clause initial position, but are differentiated by clearly distinct intonational contours, etc.

The criterial approach to scope-discourse semantics, a basic component of the cartographic study of the left periphery of the clause (Rizzi 1997, 2013a, b), tries to coordinate the study of these properties by tracing them back to specific syntactic configurations which are “read” by the interpretive components at the interfaces with sound and meaning.

More specifically, the initial periphery of the clause is assumed to be populated by a sequence of functional heads, designating Topic, Focus, the positions for highlighting adverbials, and the scope domains of such operators as *wh*-expressions for questions, relatives, exclamatives, comparatives and other A’ constructions. These syntactic specifications, expressed by appropriate syntactic heads, are contained within a space delimited by the two heads of Force (declarative, interrogative, exclamative, etc.) and Finiteness.

Each criterial head has a syntactic function (basically, triggering movement) and an interface function, guiding the interpretive properties at the interfaces with sound and meaning. For instance, a focal head *Foc* in the left periphery of the Italian clause drives movement of the element to be focalized to the front, guides the proper assignment of the special prosodic prominence to this position at the interface with the sound system, and the special interpretation as contrastive focus at the interface with meaning and discourse functions:

- (2) IL TUO LIBRO *Foc* [voglio leggere ____] (non quello di Gianni)
 ‘YOUR BOOK I want to read, not Gianni’s’

The *Foc* head is not pronounced in Italian (but it displays syntactic actions, such as the attraction of the focalized element and, in certain varieties, the attraction of the inflected verb determining inversion), whereas it is pronounced as a special morpheme in Gungbe type languages.

In this paper we will focus on the interface properties of certain criterial heads, which determine word order and interpretive properties in Italian and other Romance languages. Section 2 will address certain syntactic properties of left-peripheral positions expressing the major discourse-related articulations of topic-comment and focus-presupposition. Sections 3 and 4 will be devoted, respectively, to the interface properties of topic and focus.

2 Some Formal and Interpretive Properties of Topic and Focus Constructions

The space delimited by *Force* and *Fin* contains positions dedicated to Scope-discourse semantic properties: different kinds of operators taking scope over the clause (interrogative, relative, exclamative, comparative, etc.); and positions which express informational properties and are relevant for the organisation of discourse. The two fundamental articulations of the latter kind are Topic-Comment and Focus-Presupposition. Topic-Comment is typically expressed in Romance through the Clitic Left Dislocation (CLLD) construction (Cinque 1990), as in (3)a, while the left peripheral focus construction is characterized by a marked prosodic prominence on the focus (conventionally indicated through capitalisation) and typically (but not necessarily) occurs with a negative tag, as in (3)b:

- (3) a. Il suo libro, lo dovresti leggere (Topic – Comment)
 ‘His book, you should read’
 b. IL SUO LIBRO dovresti leggere, non il mio (Focus – Presupposition)
 ‘HIS BOOK you should read, not mine’

The two constructions differ sharply in prosodic and discourse properties, and also clearly differ in syntax: the CLLD of a direct object requires an object clitic doubling the topic (a dislocated PP may or may not involve the clitic), while the

focus construction does not involve clitic resumption (Cinque 1990, Rizzi 1997 and much related work).

English, like other languages with no clitics, differentiates the structures less, in that both Topic-Comment and Focus-Presupposition involve a gap, the salient difference being a very different intonational contour:

- (4) a. His book, you should read ____
 b. HIS BOOK you should read ____ not mine

Both constructions have sometimes been referred to as topicalisation in the literature, but this is a terminologically questionable choice: prosody and discourse functions of (4)a–b are sharply different. We will continue to restrict the term Topicalisation, or rather Topic-Comment structure, to the construction illustrated by (4)a, and we will call left peripheral Focalisation, or Focus-Presupposition structure, the one in (4)b.

French (like other Romance languages) has clitic Left Dislocation, but doesn't naturally allow contrastive focalisation through simple preposing. The cleft construction is used in this case (Belletti 2013 for a comparison with Japanese):

- (5) a. Son livre, tu devrais le lire
 'His book, you should read'
 b. C'est son livre que tu devrais lire ____ (pas celui de Jean)
 'It is his book that you should read, not Jean's'

English also has a Left Dislocation construction, with an overt resumptive pronoun (which is not a syntactic clitic) instead of the gap of (4)a, and pragmatics and intonation similar to topicalisation:

- (6) His book, you should read it

But this construction has clearly different properties. E.g., while topicalization is sensitive to island contexts, English Left Dislocation is not (Ross 1967, the reference which also introduced the relevant terminology). Italian and Romance Clitic Left Dislocation thus differs from English Left Dislocation in that the Romance construction obeys fundamental islands, as originally observed in Cinque (1977).

3 Topics and Information Structure

The use of a topic or focus construction can be characterized as a conversational move which is grounded by the previous context, and which affects the following discourse structure. So, we may want to distinguish the conditions which licence the use of the construction from the consequences that it has on the continuation of discourse. Here we will focus on the licensing conditions: they may be highlighted by creating mini-discourse contexts and checking the appropriateness of the use of the different constructions.

At a very rough first approximation, the discourse properties which license topic and focus can be characterized in terms of requirements and incompatibilities in the association with given or new information.

While the association of topics with given information is controversial (Reinhart 1981), and different subtypes of topics may have different requirements (Frascarelli et al. 2007; Bianchi and Frascarelli 2010), a clear constraint is that a topic is incompatible with the new information consisting in the assignment of the value to a wh-variable. For instance, a wh-question on the object like (7)Q can be answered by leaving the object in final position as in (7)A (in new information focus position, see below), but not by topicalizing the object: (7)A' is not a felicitous answer to (7)Q:

- (7) Q: Che cosa hai dato a Gianni ?
 'What did you give to Gianni?'
 A: Gli ho dato il tuo libro
 'I gave to him your book'
 A': # Il tuo libro, glielo ho dato
 'Your book, I gave it to him'

In other types of question-answer pairs in which a referent is mentioned in the question, hence it is given information and not the questioned constituent, the use of a topic construction to refer to it is fully felicitous:

- (8) Q: Che cosa hai fatto con il mio libro ? (e con quello di Piero?)
 'What did you do with my book?' (and with Piero's?)
 A: Il tuo libro, lo ho dato a Gianni (quello di Piero, non lo ho visto)
 'Your book, I gave it to Gianni' (Piero's, I haven't seen it)

In the absence of the parenthesized part of (8)Q, the reiteration of the topic sounds possible in the answer, but somewhat redundant, the most natural answer simply involving the clitic pronoun ("Lo ho dato a Gianni", 'I gave it to Gianni'). The parenthesized part, introducing a possible alternative, makes the use of the overt topic fully felicitous. So, we may think of a topic as an element selected from the background and about which a comment is made (Rizzi 2005 for a comparison with the interpretation of subjects):

- (9) "Among the elements of the background, I select X (Topic) and tell you about it that Y (Comment)"

As (8) shows, a topic can pick up a referent introduced in the immediate context. But such a strict contextual licensing is not required. Even if the question in (8) had simply been "Che cosa hai fatto?" 'What did you do?', (8)A would still be a felicitous answer, provided that a certain set of books had been salient and familiar from the previous context. Moreover, it is not required that a particular referent be previously mentioned, as is shown by the fact that also an indefinite topic is possible in CILD, i.e., the following is fully felicitous:

- (10) In questa indagine, una prova convincente, non l'hanno ancora trovata
 'In this investigation, a convincing piece of evidence they haven't found yet

An indefinite DP may even be formally marked as non-specific by being modified by a relative clause in the subjunctive mood, and still function as a legitimate topic:

- (11) Una segretaria che sappia tenere la contabilità del dipartimento, Gianni non l'ha ancora trovata
 'A secretary who may keep the budget of the department, Gianni has not found yet'

These properties clearly show that a topic does not necessarily involve a referent already mentioned in discourse, in which case a definite determiner would be required (as in (8)A). Nevertheless, at least an indirect connection with a contextually given and salient information may be involved in topic interpretation.

Consider the following dialogue between father and son; the son is preparing an exam, and the father is checking on his activity:

- (12) A Father: Ieri non hai fatto niente per preparare l'esame...
 'Yesterday you didn't do anything to prepare the exam...'
 B Son: Beh, un libro, lo ho letto...
 'Well, a book, I read...' meaning: a book relevant for the preparation of the exam.'

(12)B is felicitous, but the natural interpretation of the son's reply is that the book he read was relevant for the preparation of the exam, part of the exam's program. If the son's reply had not involved a topic, as in (13B), there would be no indication that the book should be connected to the exam.

- (13) B Son: Beh, ho letto un libro
 'Well, I read a book...' Here the book does not have to be connected to the preparation of the exam.

In (13) the son may simply be saying: "I didn't do anything to prepare the exam, but I spent time in another constructive activity, like reading a book".

The subtle but clear difference between (12)B and (13)B suggests that at least an indirect connection to a contextually given set of referents is needed to license a topic. The connection may be understood as a kind of implicit partitive relation. (12)B would thus be interpreted as something like:

- (14) Given the set of publications necessary for the preparation of the exam, a book belonging to this set, I read.

Analogously, (10) may be interpreted as "given the pieces of evidence which may be relevant for this investigation, a convincing one, they didn't find".

Given the vagueness of this licensing partitive relation, topics are legitimate in a great deal of situations. Nevertheless there are limits to their possible use: we have seen that a topic cannot be used to express the value of a variable, as in (7), and this constraint holds even when the relevant referent is immediately mentioned in the linguistic context, as in alternative questions:

- (15) Q: Che cosa hai comprato, il libro di Gianni o quello di Mario?
 ‘What did you buy, Gianni’s book or Mario’s?’
 A: # Il libro di Gianni, lo ho comprato
 ‘Gianni’s book, I bought

Here the range of the *wh*-variable is explicitly given in the question, and still the topic construction cannot be used to give its value.¹

4 Types of Foci: New Information Focus Versus Corrective Focus Versus Mirative Focus

That focus expresses what is informationally new in a sentence is at the core of the very notion of focus. Novelty means that some entity is singled out thereby excluding other relevant alternatives in the particular discourse situation (Rooth 1992). In the question-answer pair “Who did you see? I saw John” the new information in the answer is the value assigned to the *wh*-variable, hence the fact that that particular individual *John* carries the theme role of *see*. A sentence can also be all-new, i.e. a whole sentence counts as informationally new in the given context; this is the case for sentences answering a (possibly implicit) question like “what happens/what is going on?” We limit our attention here to cases in which it is one constituent of the clause that is focalized (sometimes referred to as narrow focus). In cases of this type it is immediately clear that notions such as novelty, informationally new, and the like are not sufficient to fully characterize focus interpretation, and finer distinctions are needed.

Focus comes in different types. In fact, it seems more appropriate to refer to it with the plural term *foci* (Kiss 1998). Cartographic studies have contributed to clarify different types of foci that languages express through different means, essentially two: position, possibly combined with specific markers depending on

¹1. There are cases which come close to this option. E.g., (i)Q sounds natural in context (i)A:

(i)Q Che cosa vorresti bere, un caffè o un tè?

‘What would you like to drink, coffee or tea?’

A Beh, un caffè lo berrei volentieri.

‘Well, a (cup of) coffee, I would drink with pleasure’

Still, (i)A may be a kind of indirect, politeness reply rather than a straight answer to (i)Q. In fact, if exactly the same lexical choices are maintained (which would virtually force the interpretation as a straight answer), the only natural reply seems to involve the non-topical structure:

(ii)Q Che cosa vorresti bere, un caffè o un tè?

‘What would you like to drink, coffee or tea?’

A Vorrei bere un caffè

I would like to drink (a cup of) coffee

A’ # Un caffè, lo vorrei bere

‘(A cup of) coffee, I would like to drink’ .

the language, and prosody (see Sect. 1). These are the ultimate cartographic tools: positions, resulting in a particular word order in the clause structure, are the reflex of a relation that the relevant constituent holds with a head expressing a certain discourse value, e.g. focus in the case at issue; this information is sent to the interface with semantics and pragmatics, and the interface systems compute the interpretation of an element on the basis of its structural position and the local relation to the relevant criterial head. At the interface with the sound system, the prosodic component assigns a particular prosody to the resulting word order. Teasing apart the interplay between position and prosody and the related interpretations at the interfaces is thus the crucial contribution of a cartographic approach to focalization and, more generally, to discourse related phenomena.

We now review here some properties motivating an articulated typology of foci, both building on contributions from the existing literature and also enriching the database in some respects. In so doing, we will try to make explicit some relevant contexts, linguistic and also extra-linguistic, which seem to play crucial roles in distinguishing the different types. We will illustrate the typology with Italian data, with some cross-linguistic comparison (mainly with French and English), when needed.

4.1 *New Information Focus*

Consider the following exchange, within the described context.

(16) Linguistic context: Question-Answer

Extra-linguistic context: Somebody enters the room. At the time of the event, the speaker is unable to identify the person, whereas his interlocutor has the relevant information.

(17) Q: Chi è entrato?

‘Who came in?’

A: È entrato Gianni / uno studente

‘Came in Gianni / a student’

The overwhelmingly preferred word order in the answer in standard Italian is the order Verb-Subject, as in (17)A; this holds with all verb classes and irrespective of the definite or indefinite nature of the post-verbal subject.² In (17)A the post-verbal subject expresses the value of the wh-variable, hence it is the carrier of the information asked for in the question, the new information focus.

In (17)A, the verb is unaccusative, which might suggest the hypothesis that the subject simply remains in situ in object position (at least when it is indefinite:

²Belletti (2004, 2009) and references cited there for detailed discussion; Belletti and Guasti (2015) for an overview from the point of view of acquisition.

Belletti 1988); but the same VS order with narrow focalization of the subject is also found with unergative and transitive verbs (in the latter case, with obligatory cliticisation of the object):

- (18) Q: Chi ha starnutito?
 ‘Who sneezed?’
 A: Ha starnutito Gianni / uno studente
 ‘Sneezed Gianni / a student’
- (19) Q: Chi ha risolto il problema?
 ‘Who solved the problem?’
 A: Lo ha risolto Gianni / uno studente
 ‘It-solved Gianni / a student’

This uniform VS order for subject focalization led Belletti (2001, 2004) to postulate a low focus position in the vP periphery, expressing new information focus, which the subject of all verb classes is moved to in narrow focus environments, i.e., when the subject provides the value of the wh-variable.

Consider now the following exchange, where the wh-question bears on the object:

- (20) Q: Che cosa hai letto?
 ‘What did you read?’
 A: Ho letto un articolo
 ‘I read an article’

The second speaker’s answer necessarily displays the order VO. Notice that the normal, unmarked word order in an “all new” Italian transitive clause also is SVO:

- (21) Q: Che cosa è successo?
 ‘What happened?’
 A: Maria ha letto un articolo
 ‘Maria read an article’

In (20)A the object seems to be in the same syntactic position as in the case of an “all new” sentence like (21)A. However, in (20)A the object is narrow focus, it is the sole constituent carrying the new information the question is asking for. Hence, it seems natural to assume that the position of the object in (20)A is not the same as in (21)A. Rather, the narrow focus object plausibly is in the same low focus position occupied by the narrow focus subject in (17)A, (18)A, (19)A.

In conclusion, there are good reasons to postulate a position dedicated to new information focus in the low part of the clause structure, lower than the functional position hosting the lexical verb in the surface order (the past participle in all of the examples above); this position is in the immediate periphery of the verb phrase (see footnote 2, and references cited there). Its presence is obscured in the case of a new information object, since the VO order is non-distinct from the unmarked word order expressed in “all new” sentences, but it is made clearly visible in the case of a new information subject with all verb classes.

4.2 *Corrective Focus*

Consider now the exchange in (22) in which Q and the extra-linguistic context are the same as in (17):

- (22) Q: Chi è entrato?
 “Who came in?”
 A: # Gianni / uno studente è entrato
 ‘Gianni / a student came in’
 A’: # GIANNI / UNO STUDENTE è entrato
 ‘GIANNI / A STUDENT came in’

The capital letters in (22)A’ indicate, as before, a marked, prominent prosodic contour. In the exchange in (22) neither A (with normal SV prosody on the subject) nor A’ are felicitous.

The impossibility of (22)A as an answer to (22)Q is directly explained by the reasoning developed above: since the answer should contain the narrow focus information on the subject as requested in the question, the appropriate word order requires the subject to fill the low focus position, yielding VS order with a post-verbal subject. The impossibility of (22)A’ indicates that not only does the new information focus have the option of being low, but it must be low. (22)A’ is not per se an ungrammatical sentence in Italian. It is perfectly grammatical and appropriate in a different context, both linguistic and extra-linguistic. For instance, it is appropriate as a corrective focus as illustrated in the exchange in (23) (we follow here the terminology used in Bianchi et al. (2014); this kind of focus has been called “contrastive focus” in previous work)³:

- (23) Speaker 1: Alla fine, Mario è entrato / E’ entrato Mario
 ‘In the end, Mario came in / came in Mario’
 Speaker 2: No, ti sbagli: GIANNI è entrato (non Mario)
 ‘No, you are wrong: GIANNI came in, not Mario’

The corrective interpretation of the subject in (23) is the same found in the exchange in (24), where Speaker’s 2 correction bears on the object.

- (24) Speaker 1: Alla fine hai letto un libro //Un libro, l’hai letto
 ‘In the end, you read a book / a book, you read’
 Speaker 2: No, ti sbagli: UN ARTICOLO ho letto (non un libro)
 ‘No, you are wrong: AN ARTICLE I read, not a book’

³Pre-verbal or post-verbal position of the subject depends here on whether Speaker A is pronouncing an all-new sentence or a sentence with a narrow focus subject, as previously discussed in the text.

The corrective focalization involves overt preposing of the object to the left periphery of the clause. Hence, corrective focalization in Italian is realized in a left peripheral position, as mentioned in the introduction.⁴ In a symmetric way, as in the previous discussion of (22), the corrective focalization of the object in (24) makes visible the active presence of a corrective focus position in the left periphery of the clause with, once again, an effect on word order. Hence, as far as (23) is concerned, the focalization produced by Speaker 2 concerning the subject can be safely assumed to make use of the same dedicated left peripheral position as the corrective focalization of the object in the exchange in (24). Going back to the answer in (22) A', it is not felicitous in that question-answer exchange because a question simply requiring new information cannot be answered with a sentence in which the relevant constituent, i.e. the subject, is in fact correctively focused. This is further shown by the parallel deviance of the answer in exchange (25):

- (25) Q: Che cosa hai letto?
 'What did you read?'
 A: # UN ARTICOLO ho letto
 'AN ARTICLE I read'

We already know that the appropriate answer to question (25)Q (= (20)Q) is (20)A, with the object in the low new information focus position.

To dig more into this issue, we note that (22)A' may become an appropriate answer to question (22)Q under very special circumstances: i.e., if the interlocutor providing the answer has reasons to assume that the speaker uttering the question does not expect Gianni/a student to be the person entering the room. Hence, in his/her answer the interlocutor may want to correct this presupposition, which is left implicit. In this special case, the use of corrective focus would be legitimate. Similar considerations would hold for the object answer in (25)A. If the interlocutor has reasons to assume that the speaker asking the question would a priori exclude "an article" as a possible answer (for instance because the speaker just said that the preparation of an exam would only involve studying course handouts, and no published work), the interlocutor may want to correct this belief imputed to the speaker by uttering (25)A, with corrective left peripheral focus. Apart from such very special circumstances, answer (25)A would not be felicitous.

The very special circumstances in which a left-peripheral focus may be legitimately used to answer a *wh*-question can be illustrated by exchanges like (26)–(27), instantiating a fairly typical misunderstanding, for both subject and object questions:

⁴In the statement by Speaker 1, the object can either be part of an all-new sentence, or it can be the narrow focus of new information, or it can be a topic, realized in a CLLD structure, on which see above. The status of the object in this statement does not seem to be particularly relevant in connection to the following statement by Speaker 2.

- (26) Speaker 1: Q. Chi ha vinto?
 ‘Who won?’
 Speaker 2: A. GIANNI ha vinto!
 ‘GIANNI won!’
 Speaker 1: Ah, per carità, non intendevo certo escludere che Gianni potesse vincere!
 ‘Oh well, I certainly didn’t want to exclude the possibility that Gianni could win!’
- (27) Speaker 1: Q. Che cosa hai letto per preparare l’esame?
 ‘What did you read to prepare the exam?’
 Speaker 2: A. TRE LIBRI ho letto!
 ‘THREE BOOKS I read’
 Speaker 1: Ah, beh, scusa, non non volevo certo dire che non avresti fatto letture impegnative!
 ‘Well, sorry, I didn’t want to imply that you would not have done demanding readings’

In other words, the answers of Speaker 2 cannot be interpreted here as pure new information answers, so they are inappropriate answers if there is no negative presupposition from Speaker 1 concerning the element on which the question bears, be it the subject or the object. Here Speaker 1, confronted with a corrective focal answer by Speaker 2, interprets it as correcting a negative presupposition attributed to him, and reacts apologetically/defensively.

4.3 “Mirative” Focus

Another kind of left-peripheral focus, is the one which Cruschina (2012) defines “mirative focus”, illustrated by examples like the following one:

- (28) E io che pensavo che la preparazione dell’esame sarebbe stata facile...
 TUTTA LA DIVINA COMMEDIA mi son dovuto leggere!
 ‘And I had thought that the preparation of the exam would be easy...
 THE WHOLE DIVINE COMEDY I had to read!

Here the speaker does not correct a thought imputed to any interlocutor, but corrects a belief that he/she him/herself previously held, so that the observed state of affairs determines his/her surprise. So, a mirative focus can typically be introduced by a short preamble like “Ma pensa un po’...” (just think of it) and/or be followed by a continuation like “Incredibile!” (unbelievable), “Chi l’avrebbe mai detto!” “(Who would have said that?!). Bianchi et al. (2014) give experimental evidence that the intonational contour of mirative focus detectably differs from the contour of corrective focus.

Considering again the question-answer exchanges in (26) and (27) we notice that the frontier between corrective and mirative focus may be very subtle in that the special replies exemplified there may correct not just (or not at all) a belief imputed

to the first speaker, as in the corrective focus instances discussed, but also a previous belief of the second speaker, yielding a mirative focus structure. This is made clear by the following exchange:

- (29) Speaker 1: Q. Chi è entrato?
 ‘Who came in’
 Speaker 2: Ma pensa un po’... GEORGE CLOONEY è entrato! Chi l’avrebbe mai detto!?
 ‘Just think of it... GEORGE CLOONEY came in! Who would have thought it!?’

Corrective focus and mirative focus have in common, as opposed to new information focus, the fact that the value of the variable falls outside “natural expectations” linked to the discourse situation (Rizzi 2013b): expectations of the interlocutor in the case of corrective focus (where the expectations may or may not be made explicit in the immediately previous discourse), and previous expectations of the speaker uttering the sentence, e.g. Speaker 2 in a question-answer setting such as in (29), in the case of mirative focus. In the latter case the previous expectations may be shared by the interlocutor (e.g. Speaker 1 in (29)), as they may correspond to what anyone would naturally expect in the given situation.

4.4 On Some Cross-Linguistic Differences

The different *foci* detected with their different discourse value may be differently realized in different languages. In other words, the structural way languages realize the different *foci* may be parametrized. For instance, cross-linguistic work on answering strategies has shown, also through experimental evidence, that a new information subject may be realized in the preverbal position with a peculiar intonational contour (in italics) in a language like English (30)A, or it may involve use of a (often reduced) cleft sentence in a language like French (31)A (Belletti 2009 and references cited there):

- (30) Q: Who spoke?
 A: *John* spoke
- (31) Q: Qui a parlé?
 Who has spoken
 A: C’est Jean (qui a parlé)
 It is Jean (who has spoken)

Compared to the Italian exchanges discussed in 4.1, no difference is detected in the new information object answers in the three languages:

- (32) Q: Che cosa hai letto/ What did you read/ Qu’as-tu lu ?
 A: Ho letto un libro/I read a book/J’ai lu un livre

This suggests that languages vary in the way they can exploit the low new information focus position. So, a non-null subject language, such as English or

French, does not allow direct use of this position for narrow focus on the subject, which would yield the ungrammatical—VS output. However, the position may be exploited in a more indirect way by use of a Subject-cleft sentence, as shown by French in the analysis proposed in Belletti (2009).

The parametrization may also concern the possible location of the new information feature in a position in the left periphery, rather than in the clause internal low position discussed in 4.1. This possibility seems to be realized in Sicilian, where question-answer pairs bearing on the object may have the object preposed, with no special interpretive property on top of simple new information focus (Cruschina 2012):

- (33) Q: Chi scrivisti airi?
 ‘What did you write yesterday?’
 A: N’articulu scrissi
 ‘An article I wrote’

Thus, a prototypical new information subject as the one found in answering the identification question on the phone has the subject in the preverbal position in Sicilian, as shown in exchanges as the one in (34), made popular by Andrea Camilleri’s novels on the famous *commissario*:

- (34) Q: Pronto chi parla?
 Hello, who is speaking?
 A: Montalbano sono
 ‘Montalbano I am = It is Montalbano’

while standard Italian would necessarily use a postverbal subject here (*Sono Montalbano* ‘It is Montalbano’).

These types of data suggest that *foci* may distribute in partly different ways in different languages, keeping the linguistic and extra-linguistic contexts unchanged. Therefore, the assignment of scope-discourse features to syntactic positions must be parametrized in part.

5 Conclusion

Cartographic studies have focused on the structural realization of informationally relevant articulations such as topic-comment and focus-presupposition. One central idea is that such articulations are syntactically expressed through the same structural mechanisms (merger of functional heads, movement) which form the core of natural language syntax. Functional heads endowed with the relevant featural specifications, criterial heads, attract phrases with matching features to their specifiers, and determine interpretive routines at the interfaces with sound and meaning. In this paper we have studied some interface properties of cartographic representations with discourse articulation and pragmatics. By using appropriate discourse

fragments, it is possible to precisely investigate the discourse conditions which license the use of topics and foci. This method is also instrumental to address the typology of such positions, the form-function correlations, and the cross-linguistic variation that the system allows. Through this method, we have illustrated certain felicity conditions on topics in the Romance Clitic Left Dislocation construction, and a structural typology of foci distinguishing new information, corrective and mirative focus.

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