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# **Towards a Fine-Grained Theory of Focus**

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**Abstract** This paper investigates the roles of focus, arguing that such a notion is too wide and can be applied to several phenomena. I show that focus needs to be further specified for (at least) another feature and is therefore made of smaller primitive traits. These can combine to create bundles of features, which give rise to the several types of foci we know. Moreover, these features are subject to parametrization and can thus account for cross-linguistic differences.

**Summary** 1 Introduction. – 2 Focus Typology Reconsidered. – 2.1 New Information Focus. – 2.2 Contrastive Focus. – 2.3 Corrective Focus. – 2.4 Mirative Focus. – 2.5 Exhaustive Focus. – 2.6 Some Unsolved Issues. – 3 A Critical Analysis of Previous Accounts. – 3.1 Criterial Approach. – 3.2 Prosody-Driven Approaches. – 3.3 The Double Nature of (some) Foci. – 4 Syntactic Properties of Focalisation. – 4.1 On Movement Operations. – 4.2 How Many Projections are There?. – 5 Explaining Focus. – 5.1 On the Compositionality of Features. – 5.2 The Position of Focus and Its Movement (or Lack Of). – 6 Conclusion.

**Keywords** Syntax. Left periphery. Focus. Focalisation. Focus movement.

#### 1 Introduction

As is well-known from the literature on the topic, the term focus refers to different phenomena regarding the information structure of a discourse.¹ Its role has been investigated on the basis of the novelty it introduces (Jackendoff 1972), or the presence of relevant alternatives for the interpretation of linguistic expressions (Rooth 1992; Krifka 2008). However, these definitions are very wide: they can be applied to different types of focalisation, as they are able to capture many interpretive properties, but they do not allow us to truly grasp such a phenomenon.

It is still unclear how many kinds of foci exist, and to what extent we can talk about a grammaticalized difference between them. Nonetheless, this is a fundamental aspect to be considered when dealing with focalisation. In this paper I address this issue from a syntactic perspective, keeping into

1 I wish to thank the two anonymous reviewers for helpful comments and insights, as well as the audience of the workshop *Word Order in the Left Periphery*, held at the University of Oslo on October 17-18, 2018.

account also pragmatic and prosodic properties. My proposal is that (i) focus has to be considered as a general feature that needs to be decomposed into smaller primitive features, (ii) such features are universal, and (iii) they can combine to create bundles of features; (iv) the compositionality of these features gives rise to the types of foci attested cross-linguistically and (v) they are subject to parametrization depending on the language.

In this paper I will mainly discuss Italian focalisation, offering also insights about other languages. In Italian some foci can be realised in different positions in the sentence. Such apparent freedom has led to many problems: (i) does the focused constituent move? And if it does, (ii) what is the trigger of displacement? (iii) Are there projections dedicated to focus? And (iv) how many are there, and where are they located in the derivation? Finally, (v) if the focalised element has to move, why is it also possible to realise it in a lower position? The latter point introduces the problem of optionality of movement that, according to a minimalist approach, should be avoided whenever possible. In fact, we cannot explain why we have displacement in a sentence whose derivation would converge anyway: if the lack of movement does not generate a crash, then displacement should never occur. I will analyse these issues taking into account existing approaches to focalisation.

The paper is organised as follows: § 2 discusses the focus typology, presenting focus types and the various differences among them. In § 3 previous approaches to focus are briefly discussed, taking into account criterial models and prosodic approaches. § 4 presents some syntactic properties of focalisation, with a particular reference to its movement (or lack of), based on (i) weak cross-over effects, (ii) n-words licensing and (iii) parasitic gaps licensing. § 5 presents and discusses the hypothesis of feature compositionality that is connected to the structural positions of focus, its movement and cross-linguistic differences. In § 6 conclusions can be found.

# 2 Focus Typology Reconsidered

In order to explain the different properties of focalisation, I will distinguish some focus types on different levels: pragmatically, prosodically and syntactically. Data are mainly from Italian, but other languages will also be briefly considered. The basic distinction between focus types has often been the one among information – *presentational* in Kiss' (1998) terms – and contrastive focalisation.<sup>2</sup> However, I will argue that we refer to different phenomena by means of the same term, and I will therefore

<sup>2</sup> Although such a distinction is not always recognised by scholars: see Brunetti (2004) for an analysis where new information focus and contrastive focus are taken to be the same construction.

propose a more fine-grained typology. What is common to all types of foci is that they corresponds to the most informative part of a sentence, and for this reason they have prosodic prominence.

The sentences presented here are always preceded by a context, in order to ensure the right interpretation and a correct intonation. This is crucial in sentences containing a focused element, given that the marked order is licensed thanks to context and prosody.

### 2.1 New Information Focus

New information focus is often used in answering wh- questions: the focused element corresponds to the wh- constituent. Its role is introducing new information in the discourse. The wh- question presents a set of alternatives, and the answer usually chooses one of these as the correct one. Notice that they refer to an open set of alternatives (Kiss 1998), namely there is no need of a semantic antecedent. See examples in (1):

- a. Chi ha incontrato Gianni ieri? who has met Gianni yesterday 'Who did John meet yesterday?'
  - b. Gianni ha incontrato Maria. Gianni has met Maria
  - c. \*Maria Gianni ha incontrato.
     Maria Gianni has met
     'John met Mary.'

In (1b) *Maria* is an example of *Information Focus*, and is thus the constituent interpreted as new information. Information foci are marked by main sentential stress. In Italian they can appear only in a low position in the sentence, and if we move such constituent, as in (1c), the sentence is out.<sup>3</sup>

- 3 Samek-Lodovici (2016, 6) argues that in Italian focus fronting of the information kind can be an appropriate answer, as the exchange in (i).
- (i) A: Chi ha vinto la gara?'Who won the race?'B: Maria ha vinto!C: Ha vinto Maria!'Maria won.'

However, it seems to me that a sentence like (iB) is an appropriate answer only if uttered under some specific circumstances, as in the case the speaker does not expect/believe that information (or thinks that the hearer does not believe that information), or she/he is disappointed. Basically, a new information focus is allowed to be fronted only if an implicit presupposition is present, but not in a neutral information-seeking context (see also Belletti, Rizzi 2015 on this point). We could thus analyse the focused constituent *Maria* in (iB) as a mixture of information and mirative focus, which will be discussed in section 2.4. Notice

Although there is a general tendency for several languages to realise new information in a sentence final, or later than usual, position (Drubig 2001), there are some cases where movement to the left is not only licensed, but the only available option. This is the case of Sicilian (Cruschina 2012) and Sardinian (Jones 1993; Mensching, Remberger 2010):

- (2) a. Chi scrivisti? what you.wrote 'What did you write?'
  - b. N'articulu scrissi. an article I.wrote 'I wrote an article.' (Cruschina 2012, 58, examples 33a,b)
- (3) a. Comporatu l'as?
  you.bought it have
  'Did you buy it?'
  b. Emmo, comporatu l'appo.
  yes,.bought it have
  'Yes, I bought it.'
  (Jones 1993, 355, examples 131a,b)

(2b) shows that the appropriate position for information focus in Sicilian is fronted in the left periphery, and the same goes for (3b) in Sardinian.<sup>4</sup>

#### 2.2 Contrastive Focus

Contrastive focus has to be differentiated from corrective focus, as noted by Bianchi, Bocci and Cruschina (2015, 2016). The two are distinct in many respects, as I will briefly explain in the next section. Purely contrastive focalisation expresses a contrast between a focused element and a parallel one, involving reference to at least two alternatives. Contrary to

that the same interpretation can be obtained in (iC), where the focused constituent is in a lower position, which is also the preferred alternative for Italian. However, this interpretation is possible only if the same prosodic contour is used. The prosodic contour of such constituent should be studied, in order to detect similarities with mirative focalisation, but I leave this issue open for future research.

4 Crucially, the fact that in Sicilian and Sardinian both information and corrective focus occur in a fronted position allow us to compare their syntactic behaviour in such a position. See Cruschina (2012) for a detailed analysis explaining their differences with respect to several phenomena: (i) information focus requires to be adjacent to the verb, even when fronted in the left periphery, whereas this is not true for corrective focus; (ii) partial movement is not accepted with information focus; (iii) corrective focus is not sensitive to weak islands, contrary to information focus. Given these differences, we can state that the two are to be considered as different types.

information focus, it refers to a *closed* set of alternatives. The non-focal part does not have to be given.

- a. Il mio amico Gianni ha fame, ma so che è a dieta.'My friend John is hungry, but I know that he is on a diet.'
  - b. Ti conviene mangiare un'INSALATA (, non la pasta). To vou be better eat a salad not the pasta
  - c. \*Un'INSALATA ti conviene mangiare (, non la pasta). a salad to.you be.better eat not the pasta 'You'd better eat a salad (, not pasta).'

Example in (4b) represents a case of *contrastive focus*: the focused constituent *un'insalata* has a salient alternative in the context, i.e. *la pasta* (or any other food not appropriate for a diet), and there is a contrastive import connected to them, but no presupposition associated. Crucially, these are realised *inside* the same speech act (Bianchi 2013, 2015), which means that the semantic antecedent is realised at the same time of its contrast. Notice that a contrastive focus is pragmatically felicitous only when in situ, as in (4b), but it cannot be moved to a fronted position (4c).<sup>5</sup>

#### 2.3 Corrective Focus

Corrective focus was previously called contrastive focus in the literature, but it can actually be considered a subtype of merely contrastive focalisation (Bianchi, Bocci 2012; Bianchi, Bocci, Cruschina 2015). This is used for denying or correcting a previous assertion or presupposition that the speaker does not share. As in the case of contrastive focus, it refers to a *closed* set of alternatives, but here a semantic antecedent is needed: the non-focal part must be given.

- (5) a. Ieri Gianni ha letto un libro. yesterday Gianni has read a book. 'Yesterday John read a book.'
  - b. Gianni ha letto UN ARTICOLO (, non un libro). Gianni has read an article not a book
  - c. UN ARTICOLO ha letto Gianni (, non un libro). an article has read Gianni not a book 'John read an ARTICLE (,not a book).'
- 5 As proved by an experiment run by Bianchi and Bocci (2012): sentences with contrastive focus in situ were preferred over their alternatives with fronted focus in the 98.1% of the utterances. Notice that sentence (4c) can be appropriate if I see John eating pasta in front of me. This is someway expected, since it would be considered as a case of corrective focalisation, where it is not a sentence previously uttered that needs to be corrected, but rather the alternative present in the context itself. If this is the case, the intonation connected to focus changes according to its interpretation.

In both examples (5b) and (5c) we have a *Corrective Focus*: the alternative that needs to be corrected by the speaker, namely *il libro*, is realised in the previous utterance, whereas the correction *un articolo* is uttered by another speaker. The focused constituent is connected to a special stress and it can appear in several positions in the clause: it is licensed in its base position, as in (5b), but also in a fronted one (5c).<sup>6</sup>

To better understand the differences among contrastive and corrective focus consider sentences in (6):

- (6) a. Maria era molto elegante l'altra sera a teatro Maria was really elegant the other night at (the) theater
  - b. L'altra sera a teatro, Maria si era messa uno straccetto di H&M. the other night at (the) theater Maria wore a cheap-dress from H&M
  - Si era messa un ARMANI, non uno straccetto di H&M she.wore an Armani (dress), not a cheap dress from H&M (Bianchi, Bocci 2012, 2, examples 2, 3,4)

If (6c) follows (6b), the speaker is correcting a piece of information contained in the previous assertion, hence it is a corrective focus and it can be fronted to an initial position. However, if (6c) follows a more 'neutral' sentence such as (6a), it has a contrastive import: no correction is needed, but the focused object contrasts with the alternative of the negative tag, realised in the same utterance. Focus fronting is not acceptable in this case.

The differences among the two types can be summarised in: (i) distinct pragmatic contexts, (ii) both types are connected to contrast, but in corrective focus this is enriched with a corrective import, (iii) contrast is inside the same utterance in the case of contrastive focus, but across utterances in corrective focus, (iv) movement can be applied only to focus of the corrective kind, (v) in contrastive focus the non-focal material does not have to be given, while in corrective focus there has to be a background, and (vi) the two are realised with different intonational contours. Finally, we can state that (vii) the factor distinguishing contrastive focus from corrective focus is that in the former the salient contextual alternative is implicit, while in the latter it is explicitly mentioned in the discourse.

<sup>6</sup> Crucially, the special intonation is always the same, both when the constituent is realised in situ and when moved to the left periphery (Bocci, Avesani 2006; Bocci 2013).

<sup>7</sup> See Bianchi and Bocci (2012) for a complete discussion regarding the above points, and Bocci (2013) for the prosodic analyses.

#### 2.4 Mirative Focus

Mirative focus expresses unexpected or surprising information that is not yet part of the system of beliefs of the interlocutors (see Cruschina 2012). The non-focal material does not have to be given, and in fact mirative focus can also be uttered in an 'out-of-the-blue' context.

- (7) a. Pensa te! DI VENTI KILI è dimagrito! think you of twenty kilos he.lost.weight
  - b. Pensa te! È dimagrito DI VENTI KILI! think you he.lost.weight of twenty kilos 'Guess what! He lost twenty kilos!'

Sentences in (7) represent *mirative focalisation*. As in the case of corrective focus, it can be pronounced either clause-initially, (7a), or clause-finally, as in (7b). Mirative focus in Italian is realised with a special prosodic contour, distinct from the corrective one (Bianchi, Bocci, Cruschina 2015, 2016). Notice that in this case we do not need the presence of a salient proposition in the discourse. In fact, other alternatives more likely than the one expressed by the clause can be inferred from general background knowledge, if not from context. Alternatives are based on the expectations of the speaker. As noted by Bianchi (2015) the mirative import involves an evaluative component, because it is not only based on shared information, but also on a shared evaluative perspective.

#### 2.5 Exhaustive Focus

Exhaustive Focus can identify a unique referent from the context. The focused constituent is the only one that leads to a true assertion (or it is the strongest option to do so). In several languages such an interpretation can be obtained with some particles (see *solo* for Italian), whereas in others it can be obtained through focus fronting. This is claimed to be the trigger of such an interpretation in Hungarian (Kiss 1998).8

(8) Tegnap este MARINAK mutattam be Pétert. Last night Mary.dat I.introduced Peter.acc 'It was TO MARY that I introduced Peter last night.' (Kiss 1998, 247 example 5)

<sup>8</sup> But see Delfitto, Fiorin (2015) and Torregrossa (2012) for an analysis of fronted corrective focus in Italian as exhaustive.

A sentence like (8) means that, out of a set of individuals present in the domain of discourse, Mary was the only one that was introduced to Peter. According to Kiss (1998), the exhaustive interpretation of (8) is open only for foci of the corrective kind and moved to a preverbal position, but not for new information focus.

In some languages, this interpretation can be obtained with a cleft sentence. It is the case of Italian and English.

- (9) a. It was A HAT that Mary picked for herself.
  - b. Mary picked herself A HAT.
  - c. È GIANNI che Maria ha incontrato. is Gianni that Maria has met 'It is JOHN that Mary met.'
  - d. Maria ha incontrato GIANNI. Maria has met Gianni 'Mary met JOHN.'

(9a) means that the only thing that Mary chose from several pieces of clothing was a hat and nothing else, whereas in (9b) this interpretation is not available: in this case the hat is simply one of the possible things that Mary could have brought, but there is nothing that tells us that a hat was her only choice. The same goes for sentences in (9c) and (9d).

Quite interestingly, exhaustivity seems to be realised with a particle in Hausa, a Chadic language (Hartmann, Zimmermann 2007). In fact, in such a language, focused constituents are marked by the particle *nee/cee*. However, this has some special properties either when focus is in situ or fronted: it is optional, and it can associate with the focused constituent at a distance. If *nee/cee* is simply a focus marker, these properties are unexpected. However, *nee/cee* is dependent on focus: when it is used, a focus must occur in the sentence. Interestingly, it seems to trigger an exhaustive interpretation, and if the particle is dropped the exhaustivity effect disappears, showing that the semantic effect is detachable (Hartmann, Zimmermann 2007). Therefore it seems that we can consider the particle *nee/cee* a marker of exhaustivity.

#### 2.6 Some Unsolved Issues

To sum up the focus typology described in this section, in all the different realisations of focus we do find distinctions in the intonation connected to

**<sup>9</sup>** The exhaustive interpretation of fronted focus in Hungarian and cleft sentences in English is supported by lexical restrictions, in that these are not grammatical if expressed with universal quantifiers, *also*-phrases, *even*-phrases and *some*-phrases, which can be explained given the incompatibility of exhaustivity with the lexical items above.

them,<sup>10</sup> their distributional properties and their pragmatic contexts: the presuppositions for each focus type are different. Thus, we have to capture their different properties, and establish whether these are due to different projections in the structure.

A crucial point is that in Italian the left peripheral position is licensed only for two types of focus, i.e. corrective and mirative, whereas the in-situ position can be occupied by all of them. Focus fronting is therefore limited only to some focus types, and hence it is associated with some special effects on interpretation: the information falls outside the range of 'natural expectations', either of the interlocutor or of the speaker (Belletti, Rizzi 2015; Rizzi, Bocci 2017). We can say that focus fronting is associated with special effects on interpretation yielding out strengthening, unexpectedness, surprise, correction and exhaustivity, depending on the language considered. This is why focus typology plays such an important role in the establishment of the position hosting focus. Any hypothesis of focalisation must explain such different distributional properties.

# 3 A Critical Analysis of Previous Accounts

# 3.1 Criterial Approach

In cartographic approaches there is a one-to-one matching relation between the syntactic structure and its interpretation: interpretive effects are linked to specific positions. Therefore, the left periphery comprises a sequence of functional heads with a double role: in syntax they attract constituents with matching features, whereas at the interfaces they trigger interpretive procedures for the assignment of scope-discourse properties at LF, and the appropriate prosodic contour at PF. In the case of focus there is a [+ focus] feature that triggers movement of the focused constituent because of its need to be checked through a Spec-Head agreement with the focus head. In such a case, therefore, movement is obligatory, and the focused constituent must be displaced to the left periphery through A'-movement.<sup>11</sup>

- 10 As noted by Bocci (2013) the difference is signalled by pitch accents, but not by other prosodic properties.
- 11 The same Spec-Head relation has been proposed for many other constructions, as in the case of *wh* questions. A fundamental difference, however, should be kept in mind: as far as Italian is concerned, a *wh* constituent (and therefore its feature) always has to move in order to make the sentence grammatical. In the case of focus, there is no such requirement, given that it can also be in a low position. This approach is adopted by Rizzi (1997) for corrective focus, by Brunetti (2004) for both information and corrective focus, and by Belletti (2001, 2004) whose hypothesis nicely captures the differences between information and corrective focus, in that both of them have a dedicated projection: the latter in the left periphery of the sentence, the former in a clause internal periphery above *vP*.

This hypothesis can easily explain a sentence with the focalised phrase realised in a fronted position. The same however cannot be said for focus in situ. Given that it has to move in order to check its feature, there are two options. In the first case, after displacement of focus the rest of the sentence has to move to a higher position (assuming that it reaches the topic projection preceding focus). In the second case, the focal element moves only at LF, i.e. movement is covert. The latter option is problematic: as noted by Frascarelli (2000), if focus is interpreted only at LF, how can stress be correctly assigned to it? This problem has to do with the T-model (Chomsky 1995) and the connections between the interfaces. In fact, in such a case, stress can only be assigned if we assume that PF and LF can communicate even after Spell-Out. On the other hand, if we assume that the checking relation between the feature and its head can be satisfied at a distance, we have an additional problem: movement would never be the preferred option given that feature checking is realised anyway.

After the description of focus typology in section 2, it is also clear that a major issue for a criterial approach is that it does not adequately explain why some types of focus cannot be fronted at all. If a feature [+ focus] is responsible for movement we would expect that focus can always be fronted, which is not the case. In fact, only two kinds of foci can be displaced: corrective and mirative. Therefore, a [+ focus] feature cannot account for the distributional properties of different types of focalisation.

# 3.2 Prosody-Driven Approaches

A completely different approach is the one of prosody-driven analyses, where discourse-related properties are not dependent on syntax, but rather on prosodic requirements. For example, the proposal of in situ focalisation developed by Samek-Lodovici (2016) is connected to the role of prosody, since it provides the required alignment of stress with the position of prosodic prominence, i.e. the right edge of the clause in Italian

- 12 Following Agree (Chomsky 2000, 2001).
- 13 A major problematic point for any feature-driven approach, as noted by Zubizarreta (1998) and Szendrői (2001), is that the Inclusiveness Condition is violated, since features of discourse properties are not already contained in the lexicon entering the numeration. [+ focus] is considered as a diacritic introduced in the computation in order to account for something that is not directly related to the lexical item. However, see Aboh (2004) for the presence of focus (and topic) markers in some languages. This would favour the idea that a feature like focus is actually present in the lexicon.
- **14** Among others, see Reinhart (1995, 2006) Szendrői (2001, 2003, 2017), and Samek-Lodovici (2005, 2006, 2016).

(Zubizarreta 1998).<sup>15</sup> The major claim of such a hypothesis is that focus occurs in situ and has no unique and fixed projection. Moreover, it does not have to move because it does not have to check any feature.

Following such a proposal, we can easily explain focus in a clause-final position, since it coincides with the typical position of stress assignment in Italian, and in fact it is the most frequently used order for focus. In the hypothesis of Samek-Lodovici (2016) when focus is in a clause-internal position it is not because of its movement, but rather because the rest of the sentence has moved through right-dislocation. Focus in a clause-internal position, hence, is actually focus in a clause-final position occurring with the right dislocation of the constituents following it. Once again, the position of focus depends on the main stress: it is in a rightmost position in order to satisfy the stress-assignment requirement.

As with other prosody-based analyses, this approach has some typical issues that have been already pointed out in the literature: (i) syntactic operations are triggered by prosodic requirements, thus prosody determines the syntactic structure and not the other way around; (ii) a modification of the T-model (Chomsky 1995) is required, given that prosody and syntax can communicate. This implies that there has to be a connection between LF and PF; in fact stress, i.e. a property of PF, is the operation responsible for the focus interpretation of a constituent at LF. Thus, the two interfaces have to be visible even after Spell-Out, and must also be able to communicate with one another.

However, a major problem of prosody-driven approaches is that focus typology is not taken into account, and thus they are not able to explain why the availability of the fronted position is restricted only to some of the focus interpretations, whereas some others have to stay low in the structure. Such an asymmetry cannot possibly be due to the role of prosodic requirement or to the right dislocated, i.e. given, status of the constituents following focus. This is true especially for mirative focalisation given the fact that the non-focal material does not have to be given, as seen in § 2.4. Moreover, we cannot think of focus fronting as an instance of contrast-related fronting (Neeleman et al. 2009; Szendrői 2017), given that (i) contrast cannot cover fronting in the case of mirative focus, which is connected to unexpected or surprising information, (ii) contrast cannot cover fronting in the case of new information focus in Sicilian and Sardinian, and (iii) mere contrast is not enough in order to license focus fronting, given the impossibility of fronting contrastive focus in Italian.

15 See Bocci (2013) for a different approach and the claim that rightmostness is violated in the case of fronted focalisation.

### 3.3 The Double Nature of (Some) Foci

Notice that the approaches described so far cannot account for the asymmetries between a low focus position and a fronted one: why is it that displacement of a focused constituent is more constrained? Why does overt movement restrict the possible interpretations of focus? The hypothesis of Bianchi, Bocci and Cruschina (2015, 2016) takes these issues into account, and two projections are hypothesized in order to accommodate the data regarding the asymmetry between a fronted and a low position. The higher one, in the left periphery, can only host corrective and mirative focalisation, whereas the lower one can be occupied by all kinds of focus. Note that in order to maintain the T-model of grammar, there must be some active features in the syntactic structure triggering corrective or mirative interpretation, and providing instructions for the prosodic component as well. The solution proposed by Bianchi, Bocci and Cruschina (2015) can be found in (10):

$$(10) \qquad \left[ {}_{FP}\operatorname{Force} \ldots \right[ {}_{FaiP}\operatorname{FAI^0}_{[mir]/[corr]} \left[ {}_{FocP}\operatorname{\textbf{YP}}_{i[+foc]}\operatorname{Foc^0}_{[+foc]} \ldots \right[ {}_{TP} \ldots < \operatorname{\textbf{YP}}_i^> \ldots ] ] ] ]$$

Whenever focus is realised lower in the structure, it has no assigned projection and it is realised in situ. 16 This is the basic order that is available for all kinds of foci. Given that in Italian corrective and mirative focalisation may also be realised in a fronted position, a projection in the left periphery is needed. The proposal of Bianchi, Bocci and Cruschina (2015) is that correction and mirativity are to be considered as conventional implicatures (CIs) in the sense of Potts (2007). CIs can add an additional meaning to the one expressed by at-issue entailments, therefore being syntactically encoded, and can be projected in the structure. Hence, CIs are associated with the activation of a left peripheral functional projection, whose head bears an implicature-triggering feature called FAI, i.e. 'focus-associated implicature' (Bianchi, Bocci and Cruschina 2015). This head activates a FocP below it, triggering the movement of a focused constituent to the specifier of the criterial Foc head. Therefore, in the case of corrective or mirative focus, a FAI projection carrying either the corrective or mirative import of the sentence and a focus one are also activated in the left periphery of the clause.

Focus movement always applies and optionality depends on the syntaxprosody interface: both copies are present at PF and, following the copy deletion theory, only one is spelt out. The optionality depends therefore on the alternative linearization of one of the copies of the movement chain

<sup>16</sup> Note that this part of the analysis is similar to the one offered by Samek-Lodovici (2016), given the lack of a feature that needs checking and of movement.

and copy deletion can be applied either to the higher or the lower copy. In the former case focus in situ is obtained, whereas in the latter we have focus fronting.

The proposal described here therefore solves not only the problem of optionality of movement, but can also account for focus typology and for the connection between the position of focalisation and its interpretation. However, as it will be explained in the next paragraph, a double-copy theory has to face some problems with the data regarding the licensing of negative items and of parasitic gaps.

# 4 Syntactic Properties of Focalisation

In this paragraph, I will deal with some syntactic aspects of focused constituents in order to argue that (i) focus is moved when fronted in the left periphery, but not when it is in its base position, and that (ii) the projection dedicated to focus is one only.

### 4.1 On Movement Operations

As seen above, there is yet no agreement regarding whether focused constituents have to undergo movement: criterial models predict that there is always movement, both when it is fronted and when it is in a low position, whereas an approach á la Samek-Lodovici (2016) assumes that there is no movement at all. I will take into account three main aspects regarding this issue: (i) WCO effect, (ii) n-words licensing, and (iii) parasitic gaps licensing.

#### 4.1.1 WCO Effect

Weak Cross-Over is a phenomenon that blocks co-reference between a pronoun and its antecedent if the antecedent is a quantified expression that binds a variable, and such variable follows the pronoun. Therefore, we can use WCO effect as a diagnostic tool to detect whether movement has applied in focused constituents.<sup>17</sup> Thus compare sentences in (11):

- a. Sua<sub>i</sub>madre ha sempre apprezzato GIANNI<sub>i</sub> (, non Piero). his mother has always appreciated Gianni not Piero
  - b. ??/\*GIANNI,, sua madre ha sempre apprezzato (non Piero).

17 Notice that the WCO effect in fronted constituents will be applied only to corrective and mirative focalisation, given what we saw regarding other types of foci.

Gianni his mother has always appreciated not Piero 'It is JOHN, that his, mother always appreciated (, not Piero).

Sentence in (11b) was used by Rizzi (1997) in order to show that, whenever corrective focalisation is found in a fronted position, it is the result of a movement operation. In fact, in such a case we obtain WCO effect, i.e. coreference between the pronoun sua and Gianni, the antecedent, is blocked. The same cannot be said about (11a): focus is here in its base position, and no WCO effect arises, meaning that there has been no movement. Considering (11a), hence, there is something wrong with an analysis  $\acute{a}$  la Rizzi (1997): in this case, it would not be correct to postulate movement to a fronted position, otherwise we also expect that (11a) cannot be accepted.

# 4.1.2 N-Words Licensing

A summary of the properties of Italian negative items is needed before presenting the relevant data. If negative items are realised lower than TP, they must be c-commanded by a proper licenser, either a sentential negative marker, as in (12a), or another n-word, as in (12b). If the n-word is not properly c-commanded, the sentence is ungrammatical as in (12c). The same is not true when the n-word occurs preverbally: if the negative word c-commands the finite verb, it can occur as the only negative element in the clause (12d).<sup>18</sup>

- (12) a. Non è venuto nessuno. Not is come nobody 'Nobody came.'
  - b. Nessuno ha detto niente. Nobody has said nothing 'Nobody said anything.'
  - c. \*È venuto nessuno. is come nobody 'Nobody came.'
  - d .Nessuno è venuto. nobody is come 'Nobody came.'

The same properties are expected when focalisation is involved, and therefore in a sentence like (13a) the focused negative phrase *nessuno* has to be in a c-command relation with its licenser, in this case *non*, whereas in a case like (13b) no c-command relation is expected.

**18** Note that c-command must hold at surface, and not under reconstruction (Samek-Lodovici 2016, 299).

- (13) a. Non ho visto NESSUNO. not I.have seen nobody
  - b. NESSUNO ho visto. Nobody I.have seen 'I saw NOBODY.'

As already noted by Cardinaletti (2001) and Samek-Lodovici (2016) such a relation is not respected under a left-peripheral approach. In an analysis à la Rizzi (1997), the negative focused phrase moves to SpecFocP, and the rest of the sentence is then moved to SpecTopP preceding the focus projection, so that the linear order is respected. The result of these operations is that non does not actually c-command the negative phrase, thus (13a) should be ungrammatical, but this prediction is not borne out. Moreover, in a left peripheral approach, the two focused negative items in (13a) and (13b) occupy the same position: SpecFocP. Their derivations would be similar, in that the focused n-words are hosted in a high preverbal position and therefore must not be c-commanded by another negative item. This is indeed the correct prediction for sentence in (13b), where the negative word actually occurs in a preverbal position and hence does not require licensing. However, the negative item in (13a) must be c-commanded, but this difference is not accounted for.

Interestingly, if we take focus to be realised in situ, we can explain these sentences. Since focus is in situ in (13a), the n-word is c-commanded by another negative element and the expected licensing relation is obtained. In the case of (13b), the focused constituent is in a higher projection than TP and for this reason no c-command relation is expected.

The hypothesis of Bianchi, Bocci and Cruschina (2015, 2016) correctly accounts for sentences in (13). In fact, in (13a) focus is in a postverbal position, and therefore it needs to be c-commanded by another negative element. In this case, the licensing is respected and the focused element nessuno is c-commanded by the sentential negative marker. In (13b) the copy that gets spelt out is the higher one, i.e. the one realised in the left periphery. Nessuno is therefore realised preverbally and does not need to be c-commanded by another constituent, so the sentence is grammatical. However, a double copy theory has a bigger problem: under Bianchi, Bocci and Cruschina (2015) optionality of movement is attributed to the PF interface, since both copies are present in syntax. If this is the case, the theory cannot account for any of the licensing relations seen above. In fact, licensing takes place in syntax, i.e. prior to PF. How would be possible to establish whether a n-word needs a licensor or not in this approach? The syntactic component would have to work with contrasting information.

### 4.1.3 The Case of Parasitic Gaps

Another problem having to do with licensing conditions is constituted by parasitic gaps, i.e. gaps that depend on the presence of another gap in the same sentence. A parasitic gap is licensed by the antecedent of another real gap created by movement. When the parasitic gap occurs with focalisation, it can be licensed only by a clause-initial focus, and not by a postverbal one. Note the contrast between (14) and (15):

- (14) [L'ARTICOLO] [Silvia ha recensito \_] [senza leggere \_] (, non il libro). [the article] [Silvia has reviewed \_] [without to.read \_] not the book 'Silvia reviewed the article without reading (, not the book).'
- \*Silvia ha recensito [l'ARTICOLO], [senza leggere \_ ] (, non il libro).
  Silvia has reviewed [the article] [without to.read \_ ] not the book
  'Silvia reviewed the article without reading (, not the book).'

Such a contrast cannot be explained in an analysis à la Rizzi (1997). In both (14) and (15) the focused object has to move to the left periphery and is hosted in SpecFocP. Its position correctly explains the grammaticality of (14), given that the parasitic gap is licensed by the gap created by movement of focus. However in the case of (15) the ungrammaticality cannot be accounted for: since the focused phrase reaches SpecFocP in a preverbal position, it is able to license the parasitic gap, and the sentence should be grammatical.

A hypothesis  $\grave{a}$  la Samek-Lodovici (2016) can account for both (14) and (15): (15) is ungrammatical because if we consider focus to be in situ, it is hosted in a postverbal position and therefore cannot c-command the parasitic gap, being too low. The grammaticality of (14) is instead accounted for because focus evacuates the right dislocated constituent and adjoins the TP, reaching a position from where it can correctly license the parasitic gap.

Apparently, the proposal by Bianchi, Bocci and Cruschina (2016) is also able to explain this asymmetry, in that in (14) the focused object is realised in a left peripheral position, i.e. the in situ copy is not pronounced, and it can therefore license the parasitic gap respecting the required c-commanding relation. It is not the same with (15), where the focused object is realised in its base position lower than VP, thus too low to c-command the parasitic gap. However, the double-copy hypothesis has to face another problem, namely the fact that, independently of the copy that gets spelt out, one of them has to undergo movement, hence licensing the parasitic gap, and therefore not explaining the ungrammaticality of (15). In fact, the only way to account for it would be to state that the licensing of parasitic gaps takes place in PF rather than in syntax.

### 4.2 How Many Projections are There?

Turning to another crucial issue, I will now deal with how many projections dedicated to focus are present in a structure. Notice that several hypotheses were proposed in this respect: there is a unique and fixed position according to Rizzi (1997), Frascarelli (2000) and Brunetti (2004), whereas two fixed positions can be found in the analyses of Belletti (2001, 2004) and of Benincà and Poletto (2004).

When dealing with this problem, there is a crucial piece of evidence, namely the uniqueness of focus. There cannot be more than one focus per sentence, and this seems to be a universal rule: there are no languages allowing two foci in the same sentence. I will not deal here with the reasons why, other than the syntactic ones and I will not take into account whether these are connected to an interpretive problem (Rizzi 1997) or to a prosodic one. Notice at this point sentences in (16):

- (16) a. \*MARIA con GIANNI ha parlato, non Sara con Andrea.
  Maria with Gianni has spoken not Sara with Andrea
  - b. \*MARIA ha parlato con GIANNI, non Sara con Andrea.

    Maria has spoken with Gianni not Sara with Andrea
  - c. \*Ha parlato MARIA CON GIANNI, non Sara con Andrea. Has spoken Maria with Gianni not Sara with Andrea. 'It was MARY who spoke to JOHN, not Sara to Andrea.'

No co-occurrences of foci are possible, independently of their position in the sentence, as shown by the ungrammatical sentences in (16). However, notice that sentences in (16) all deal with the same type of focus, i.e. corrective focalisation. Therefore, one may wonder whether co-occurrence of different types of foci is still possible. Sentence in (17) show that this is not the case:

(17) Non posso crederci! UN ANELLO, A LEO vogliono comprare! not I.can believe.it a ring to Leo they.want to.buy 'I can't believe it! They want to buy a RING for LEO!'

The data presented here show therefore that we should postulate a unique

- 19 Notice that there seems to be at least one case in Italian in which two constituents can be focalised, i.e. when direct and indirect object are simultaneously in focus, as in (i):
- (i) Ho dato UN LIBRO A GIANNI, non una penna a Maria.I.have given a book to Gianni not a pen to Mary'It was A BOOK that I gave TO JOHN, not a pen to Mary.'

Depending on the syntactic analysis proposed for double object constructions, one might argue that in this case what is focalised is the macro-constituent formed by direct and indirect object. Thanks to one of the anonymous reviewers for pointing this out.

projection dedicated to focus in each structure. I will deal later with where such a projection should be located.

## 5 Explaining Focus

A crucial issue at this point regards movement, lack of movement and its optionality (at least as far as Italian is concerned). We need to establish what triggers movement of focus, and clearly the [+ focus] feature postulated in criterial models cannot be responsible, because otherwise we would expect all foci to be displaceable. Focus typology has actually an important role in the establishment of the position hosting focus, and any hypothesis must explain such different distributional properties among them. Given what we saw in § 2, movement cannot be simply triggered by contrast (Vallduví, Vilkuna 1998), givenness (Samek-Lodovici 2016), exhaustivity (Horvath 2010), or by relevance (Cruschina 2012).

# 5.1 On the Compositionality of Features

If we keep into account the focus typology seen above and the differences involving several modules of grammar, we are forced to assume that these foci are syntactically different. I argue that such a difference can be accounted for under a further specification of the features they are made of, and therefore that the difference in their syntactic behaviour lies in the composition of their features. However, a general notion that can cover all the interpretive effects and the differences seen so far would be preferable to the option of assuming the existence of many focus categories associated with several features allowing (or not allowing) movement. Therefore, I propose that each focus type has a [+ focus] feature which can be connected and further specified with (at least) another one. Focus is considered as a macro-feature that has to be connected with (at least) another sub-feature, thus forming feature bundles (Neeleman et al. 2009). Focus is enriched with different features that can be combined among them.

Such a proposal would explain why there cannot be more than one focus per sentence: independently from its specification, any element marked by [+ focus] cannot co-occur with another one, i.e. each sentence can have at most one member belonging to the [+ focus] set.

Let us now consider how to describe the focus typology explained above. In the case of new information focus the composition would be a simple one: [+ focus] is connected to a [+ new] feature, given that it expresses new information but no contrast is actually involved or implied. We should keep in mind that for communicative purposes, each sentence contains information focus (Gundel 1999), because such a requirement follows from

a necessary articulation of the sentence imposed by the grammar for information processing reasons (Cruschina 2012). This led some authors to question the status of new information focus, especially whether this can actually be considered a type of focus at all (Bianchi, Bocci and Cruschina 2015). It has often been argued that the structure of new information focus (and the contexts in which it occurs) is actually parallel to an out-of-the-blue sentence: its syntactic properties are identical to those of a normal sentence, and apparently it is not connected to a particular intonation. <sup>20</sup> I will leave open for now the existence of a [+ new] feature, and assume that it has to be present given the cases of Sicilian and Sardinian, where new information focus can be moved to the left periphery.

Merely contrastive focus is instead made of [+ focus] and [+ contrast]. A [+ new] feature is not present given that the role of contrastive focus is evoking a closed set of alternatives within the same utterance. Moreover, the non-focal part does not have to be given, which means that an entire sentence containing contrastive focus can be new. Notice also that contrastive focus is not always connected to new information, at least from a referential point of view: pronouns can be focused. The presence of a [+ contrast] feature was already proposed in Vallduví & Vilkuna (1998), and Frascarelli & Hinterhölzl (2007), and is supported by Finnish data on focalisation and topicalization, where it seems to require a special formal realisation, i.e. the position in the left periphery (Vallduví, Vilkuna 1998).

On the other hand, corrective focus needs a further specification. Its role is, as in the case of contrastive focus, to introduce a closed set of alternatives, but with a further specification, i.e. correction of a previous utterance. Therefore, it can be considered as a subtype of contrastive focalisation (Bianchi, Bocci and Cruschina 2015) and hence described as [+ focus], [+ contrast] and [+ correction]. The [+ correction] is also needed given the asymmetries between corrective and contrastive focus seen for Italian.

Mirative focalisation can be described as [+ focus] and [+ mirativity], whereas exhaustive focus is made of [+ focus] and [+ exhaustivity]. The existence of a [+ exhaustive] feature is supported by the data from Hausa described in § 2.5, and in particular by the presence of what seems to be a particle dedicated to such an interpretation.

20 But see Belletti (2004) with respect to the different positions that are used by new information focus.

### 5.2 The Position of Focus and Its Movement (or Lack Of)

Where should we represent focus in a structure? Considering the data on WCO effect, n-words licensing and parasitic gaps we know that there has to be a distinction among a focused constituent that is low and one that is higher. Such a distinction regards movement: the former does not move while the latter does. Therefore, I claim that focused constituents can occupy two positions, but only the higher one is a dedicated projection. This is in the left periphery and is somehow restricted, at least in Italian where it can be occupied only by corrective and mirative focalisation. Such a projection accounts for (i) general cases of fronted focused constituents; (ii) the presence of focus markers in some languages, as in the case of Gungbe (Aboh 2004), and possibly of Hausa; (iii) V2 phenomena in some languages, such as Armenian and Kashmiri, where the head of the focus projection seems to be required as a landing site for the verb (see Giorgi, Haroutyunian 2016).

The lower position is not actually dedicated to focus: I assume that whenever focus is realised low it is actually in its in situ position rather than in a dedicated lower projection  $\acute{a}$  la Belletti (2004). In so doing, no movement needs to be applied and thus we can account for (i) licensing relation of n-words, (ii) lack of licensing relation of parasitic gaps with corrective focus in situ, (iii) lack of WCO effect when focus is realised lower in the sentence.

It may actually be the case that the presence of a [+focus] feature is able to activate the left peripheral projection, but such a feature by itself is not enough for a constituent to move. It is actually the combination with other features that allows movement of focus. Whenever a [+ focus] element is present in a sentence, the connected position in the left periphery is activated, and this gives information regarding the prosody and interpretation of the focused constituent even at a distance. In fact, only some of the features mentioned in § 5.1 can let focus move to a fronted position, whereas in some other cases displacement is not an option.<sup>21</sup>

The distributional properties of foci are different from a cross-linguistic point of view. In the account proposed here, the possibility of movement is explained with parametrization of the features described above. Depending on the language and the type of focus considered, the projection in the left periphery can be used, obtaining focus fronting, or it can be blocked. These possibilities are regulated by features and their composition. I will briefly explain how this works with some example of different languages, but this section needs further investigation.

In Italian, a constituent made of [focus] + [new] or [focus] + [contrast] have to stay in situ, whereas [focus] + [contrast] + [correction] and [focus]

21 I will not deal with the role of movement as needed to satisfy a feature checking relation.

+ [mirativity] can either stay in situ or be fronted.<sup>22</sup> The case of Sicilian and Sardinian is different as far as new information focus is considered, given that it can be moved to a fronted position (Cruschina 2012; Jones 1993). In these languages [focus] + [new] moves to the focus projection in the left periphery, in a position adjacent to the verb. In case of a fronted information focus in Italian, as the example discussed in footnote 2, the composition is made of [+focus], [+ new] and [+ mirativity]. It is thus the [+ mirativity] interpretation that offers the option of displacement to the focused constituent. If this is not present, the fronted position is not available.

In languages with exhaustive focus, we find different patterns. For example, in Hungarian [focus] + [exhaustivity] moves to the left periphery, whereas in Hausa it can either stay in situ or be fronted, but it has to be marked with the particle *nee/cee* (Hartmann, Zimmermann 2007). Notice that there is also parametrization with respect to *how* focus is realised: depending on the language, it may be realised by means of syntax (as in the case of focus fronting), prosody or morphology, but it may also be a combination of different modules of grammar.

#### 6 Conclusion

In this article I showed that an undifferentiated notion of focus is too general and cannot account for all the properties of this phenomenon. In particular, it is inadequate to capture the syntactic distribution of focused constituents. If we consider focus as a macro-feature that needs to be decomposed into smaller primitive features, several properties can be explained. The sub-features can modulate the macro-feature of focus and they can be combined to determine the different types of focus attested cross-linguistically. These features are parametrized depending on the language: some of them allows fronting of the focused constituent, as in the case of correction and mirativity in Italian, but others do not, as in the case of contrast or new information in Italian.

22 Optionality of movement is still an issue that I will leave open in this work. Moreover, it is not clear how to formally distinguish between features that induce overt focus movement and features that do not, since all of them are equally [+interpretable], that is, must be computed at the LF interface producing distinct interpretive effects. Thanks to one of the anonymous reviewers for pointing this out.

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