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Italian wh-questions and the low periphery

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Abstract: This article deals with Italian questions with a post-verbal wh-element, which are generally defined as *in situ*. We show that post-verbal wh-questions can be interpreted as information-seeking questions, and provide syntactic arguments supporting the hypothesis that the post-verbal wh-element is only apparently *in situ*. We claim that, in certain contexts, the post-verbal wh-element undergoes a syntactic movement targeting a low-peripheral focus position dedicated to the expression of informational focus. We integrate our analysis with the examination of a number of cases of low-peripheral wh-elements from the CLIPS and LIP corpora of spoken Italian. As for prosody, the available data show that a sentence-final wh-element carries the nuclear accent of the utterance. Moreover, low-peripheral wh-questions seem pragmatically more restricted compared to their counterparts with a fronted wh-. Although further investigation may reveal additional contexts for the questions at stake, low-peripheral wh-questions need to be linked to the preceding discourse context and can be used to add emphasis to the missing piece of information represented by the wh-element.

Our low-peripheral analysis complements the current left-peripheral analysis of Italian wh-questions: wh-elements in left and low periphery display different interpretive and prosodic properties, indicating that they are involved in different phenomena. The results of this study also support the view that the low periphery is more subject to pragmatic restrictions compared to the left periphery.

Keywords: *in situ* wh-elements; informational focus; Italian wh-questions; low periphery; post-verbal wh-elements; syntax-prosody interface

1 Introduction

This article deals with Italian questions with a wh-element appearing in post-verbal position, as in Example (1a). These questions are often referred to as

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in situ wh-questions in the literature since the wh-element does not appear in its typical fronted syntactic position (see [1b]).

- (1) a. *E arrivo dove?*
 And arrive-1S.PRS where
 ‘And I arrive where?’
 b. *E dove arrivo?*
 And where arrive-1S.PRS
 ‘And where do I arrive?’

We propose a syntactic, prosodic and pragmatic analysis of this type of interrogatives, arguing that, when the predicate preceding the wh-element is not topicalized, the so-called *in situ* wh-questions in Italian actually involve a syntactic movement targeting a low-peripheral focus projection à la Belletti (1999, 2001, 2004).

Post-verbal wh-elements are largely acceptable in Romance when the utterance is interpreted as an echo question, as in (2a)–(2d):

- (2) a. Italian
Avete mangia-to COSA?
 have.2P eat-PST.PRT what
 ‘Have you eaten WHAT?’
 b. French
Jean a acheté QUOI?
 Jean have-3S.PRS buy-PST.PRT what
 ‘Have you eaten WHAT?’
 (Kato 2019, Ex. 7b)
 c. Brazilian Portuguese
Você viu QUEM?
 Pro-2P.SG see-2S.PST what
 ‘Have you eaten WHAT?’
 (Kato 2019, Ex. 3a)
 d. Spanish
y tú vas a vestir
 and pro-2P.SG go-2S to wear-INF
para le fiesta CÓMO?
 for the party how
 ‘And you are going to dress for the party HOW?’
 (Jiménez 1997:15)

However, postverbal wh-questions are not restricted to echo contexts. In several Romance languages, post-verbal wh-elements are also allowed in information-

seeking questions (Cheng and Rooryck 2000; Kaiser and Quaglia 2015; Oushiro 2011; Pires and Taylor 2007), as in the following French, Portuguese and Spanish examples (adapted from Pires and Taylor 2007):

- (3) a. French
Marie a acheté quoi ?
 Marie have-2S.PRS buy-PST.PRT what
 'What did Marie buy?'
 b. Portuguese
A Maria comprou o quê?
 To Marie buy-PST.PRT the what
 'What did Maria buy?'
 c. Spanish
¿Juan compró qué?
 Juan buy-PST what
 'What did Juan buy?'

In the Italo-Romance domain, post-verbal wh-elements can appear in information-seeking questions in a number of Lombard and Venetan dialects, such as Bresciano, Trevigiano and Bellunese (Donzelli and Pescarini 2019; Lurà 1987; Munaro 1995; Munaro et al. 2001; Poletto and Pollock 2005, 2009; Poletto and Vanelli 1995).¹

- (4) a. Bellunese (Tignes d'Alpago)
Alo dit che?
 Have-3S.PRS say-3S.PRT what
 What did he say?
 (Poletto and Vanelli 1995:116)

¹ While post-verbal wh-questions may occur in a number of Romance varieties, as shown by the examples above, their frequency varies from one language to another. Although a large corpus-based study on Romance is still needed, post-verbal wh-questions seem relatively frequent in French, while their presence appears to be quantitatively reduced in languages such as Spanish or Italian. In particular, Kaiser and Quaglia (2015) analyzed the *Marseille Trilogy* written by the French novelist Jean-Claude Izzo, considering the original French versions as well their translations in Italian and Spanish. While the relevant wh-questions represented the 29.4% of all wh-questions of the French corpus, they were only the 0.6% of the Italian and the 0.4% of the Spanish corpora. Other data on Spanish are provided by Rosemeyer (2018), based on the analysis of three Spanish corpora (C-Oral, CORLEC and HC/HP). In this sample, consisting of more than 1.5 mln words, post-verbal (*in situ*) wh-questions appear with percentages ranging from 1.07% to 1.45% on the total of the wh-questions, according to the corpus considered. However, as an anonymous reviewer pointed out, the differences between French, Spanish and Italian might be quantitative as well as qualitative. These differences require further research.

b. Trevigiano

Si-tu ndaa parcossa al marcà²
 Is-you go-PST why to the market
 Why did you go to the market?
 (Bonan and Schlonsky 2017:2)

c. Bresciano

Fet fa què?
 Do-you do-2s.PRS what
 what have you done?

d. Monno

Fet majà ngont?
 Do-you eat-PST where
 Where do you eat?
 (Poletto and Pollock 2009:201)

Previous studies suggest that utterances with a post-verbal wh-element can be interpreted as information-seeking questions also in standard Italian, as exemplified by the following case (adapted from Kaiser and Quaglia 2015:99):

- (5) A: *Sei rimasto per questo? Avrei potuto...*
 Be-2s stay-PST for this have-1s.COND can-PST.PRT
 ‘Did you stay for this? You could have.’
- B: *Avresti potuto cosa?*
 Have-2s.COND can-PST.PRT what?
Piazzarti qui ad aspettar lo squillo del telefono?
 Place yourself here to wait-INF the ring of-the phone
 ‘You could have what? Place yourself here and wait for the phone to ring?’

It is a matter of discussion whether the interpretation of post-verbal wh-questions is fully equivalent to that of their counterparts with a fronted wh-. According to Cheng (1997:45), post-verbal wh-questions are associated with a “strongly presupposed context”, i.e., the question (3a), *Marie a acheté quoi?*, “is only felicitous if the speaker assumes the event of Mary’s buying something” (Cheng and Rooryck 2000:6). Similarly, these questions are claimed to require a strong link with the preceding discourse context also in Brazilian Portuguese (Oushiro 2011), Spanish (Etxepare and Uribe-Etxebarria 2005; Jiménez 1997; Uribe-Etxebarria 2002) and Italian (Kaiser and Quaglia 2015). Notice that the discourse linking which seems required by wh-questions may take the form of a topicalization, although this is not

² Notice that, in this variety, post-verbal/*in situ* wh-element co-occurs with clitic subject inversion.

always the case. As we will show in the following sections, the link between post-verbal wh-question and preceding context does not necessarily involve a clear topicalization of the preceding clausal material, but may also be represented by a weaker interpretive connection. In other words, post-verbal wh-questions are considered to be linked to the Common Ground. In terms of Krifka and Musan (2012), Common Ground is intended as “the information that is mutually known to be shared in communication”, i.e., the collection of mutual knowledge, beliefs, and assumptions that is the basis for communication between people (Clark and Brennan 1991; see also; Stalnaker 2002).

The specific interpretation of post-verbal wh-questions has been linked by a number of authors to their prosody. Cheng and Rooryck (2000) claim that in French these questions present a characteristic rising intonation that is similar to that of yes-no questions solely marked by a rising intonation (e.g., *Jean a acheté un livre?* ‘Jean bought a book?’, [Cheng and Rooryck 2000: 5]). These authors propose that the pragmatic limitations and the lack of overt movement in French wh-*in situ* questions depend on the presence of an intonational Q-morpheme in the numeration. The Q-morpheme, which is underspecified and can license both yes-no and wh-questions, checks the Q-feature in C, making the overt syntactic movement of the wh-element superfluous.

A link between prosody and syntax in post-verbal wh-questions has also been noticed for Spanish. In Spanish, the postposed wh-element must be aligned to the right edge of the intonational phrase in which it appears (Reglero and Ticio 2013). If this Sentence Final Requirement (SFR) is not met, the sentence becomes ungrammatical, as shown by Examples (6a) and (6b) (adapted from Reglero and Ticio 2013: 269): while sentence (6a), with a non-final wh-element, is ungrammatical, sentence (6b), in which a prosodic boundary separates the wh-element from the following NP, is acceptable:

- (6) a. *[y] tú le diste a quién la guitarra?
 and you CL gave-2S.PST to whom the guitar
 b. [y] tú le diste a quién # la guitarra?
 and you CL gave-2S.PST to whom the guitar
 ‘And to whom did you give the guitar?’

For Uribe-Etxebarria (2002), the desired word order complying with the SFR is reached through two syntactic movements: firstly, the wh-element moves to Spec, CP and, subsequently, the rest of the sentence undergoes remnant movement reaching an XP above C. In contrast, Reglero and Ticio (2013) argue against prosodic-driven syntactic movement (cf. Zubizarreta 1998). They apply the copy theory of movement (Chomsky 1993, 1995), according to which a syntactic movement leaves copies rather than traces, and only the highest copy, i.e., the head of a

non-trivial chain, can be spelled out at PF. Based on Stjepanovic (2003), Reglero and Ticio argue that in the case of *in situ* wh-questions, the copy that survives deletion at PF is a lower one and that its realization is determined by conditions in the phonological component (Bošković 2001, 2002; Corver and Nunes 2007; Nunes 2004, among others).³ For Reglero and Ticio, the sentence accent is assigned to a low copy of the wh-chain to meet the SFR.

As a whole, the studies on Romance summed up above indicate: (a) that post-verbal wh-questions can be interpreted as echo as well as information-seeking questions in several languages, including Italian; (b) that the occurrence of information-seeking questions with a post-verbal wh-element seems to be restricted to specific pragmatic contexts; and (c) that these questions might have a specific prosody.

In the following sections we discuss a number of syntactic (Section 2), pragmatic (Section 3) and prosodic (Section 3.1) properties of post-verbal wh-questions in Italian. Our analysis builds on previous works on low-peripheral informational focus in declaratives (Belletti 1999, 2001, 2004) and on low-peripheral mirative focus in echo wh-questions (Badan and Crocco 2018; Badan et al. 2017; Crocco and Badan 2016). In particular, we provide data expanding the research on post-verbal wh-questions in Standard Italian (cf. Kaiser and Quaglia 2015), showing that: (i) post-verbal wh-questions are attested in dialogical interactions; (ii) these wh-questions can express an informational focus that is licensed only under certain pragmatic conditions. Specifically, we observe that the post-verbal wh-questions are felicitous at least when they express a request for clarification relying on the preceding discourse context and when the request for information is emphatic, as, for instance, in a teaching context; (iii) post-verbal wh-questions express a focus that is different from the informational focus realized in left periphery (LP), and from the mirative focus of echo-questions; and (iv) within a cartographic approach to clause structure (Cinque 1999 and subsequent work; Rizzi 1997), the syntactic and prosodic properties of the post-verbal wh-element in information-seeking questions indicate that this element occupies a focus position in the low periphery (LowP) of the sentence (Belletti 1999, 2001, 2004). We also show that the LowP and the LP analyses of wh-interrogative structures are not incompatible, but account for different phenomena. Moreover, our analysis of the LowP suggests that this area can host at least two different types of focus: informational and mirative focus.

³ See also Bianchi (2019) for an analysis of interrogative wh-chains in Italian.

2 Analysis at syntax-prosody interface

In what follows, we show that the syntactic and prosodic properties of questions with post-verbal wh-elements – parallel to their interpretive and pragmatic properties – are different from those of other types of wh-questions. On the basis of these distinctive characteristics, we propose that the post-verbal wh-element in information-seeking questions calls for a specific structural analysis. We make a distinction between post-verbal wh-elements appearing in a clause which is entirely topicalized, and post-verbal wh-elements which appear in questions linked to the preceding discourse through a weaker interpretive connection. We argue that in the latter, the post-verbal wh-element occupies a focus position within LowP *à la* Belletti (1999, 2001, 2004).

2.1 Low informational focus in declaratives

The theoretical background of the syntactic analysis is represented by the account of the LP under the cartographic approach (Cinque 1999 and subsequent work; Rizzi 1997). This line of research shows that the clause external area can be split into different topic and focus functional projections. Each of these projections is associated to a specific interpretation, as well as to a prosodic representation built on a set of mapping rules (Bocci 2013; Frascarelli 2000; Frascarelli and Hinterözl 2007; Selkirk 1984, 2011; Truckenbrodt 2007, 2012, 2013). Following the cartographic approach, we assume that the wh-element in regular information-seeking questions, such as in (7), is moved to the LP of the sentence to check its informational focus features to an informational focus projection in a Spec-Head configuration.

- (7) *Dove sei andato per capodanno?*
Where be-2s go-PST.PRT for New Year's eve
'Where did you go for the New Year's eve?'

In this framework, Belletti (1999, 2001, 2004); shows that the area immediately above VP has significant similarities with the LP (see also Belletti and Shlonsky 1995; Jayaseelan 2001; Ndayiragije 1999). In particular, Belletti argues for the so-called LowP, which is an IP internal area dedicated to topic and focus projections:

- (8) [High Periphery CP [IP [Low Periphery[Low Focus] [Low Topic]] [[vP] [VP]]]

There is a general agreement that in Italian a post-verbal subject is interpreted as an informational focus, as in (9). On this basis, Belletti (2001, 2004) claims that the post-verbal position of the subject is a focus position within the LowP.

- (9) A: *Chi è partito?*
who be-3s.PRS leave-PST.PRT
‘Who left?’
- B: (i) *È partito Gianni.*
Be-3s.PRS leave-PST.PRT Gianni
(ii) *#Gianni è partito.*
Gianni be.PRS.3SG leave-PST.PRT
‘Gianni is left’
(Belletti 1999:3)

Specifically, according to Belletti (1999), post-verbal subjects in Italian occupy an informational focus position within LowP.

2.2 Low informational focus in wh-questions

In the spirit of cartography, different functional projections in the clause spine are associated with partly different intonations and interpretations. Inspired by this view, in previous works (Badan and Crocco 2018; Crocco and Badan 2016) we have demonstrated that the LowP is not restricted to the expression of informational focus in declaratives. On the basis of an analysis at the syntax-prosody interface, we argue that a post-verbal wh-element in echo questions also occupies a structural position within the LowP, which is dedicated to the expression of mirative focus (as in Figure 1) and is characterized by a specific prosody.

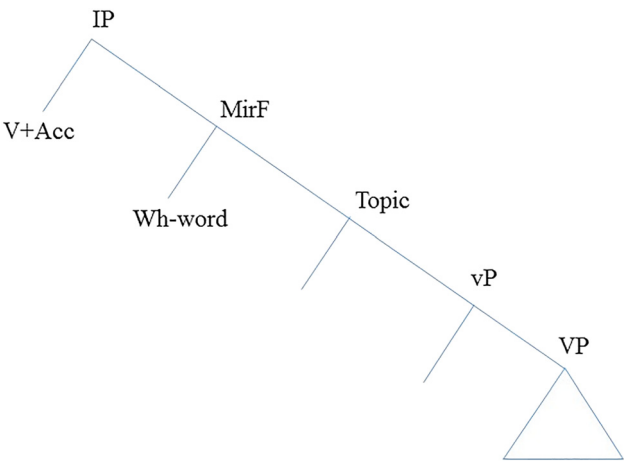


Figure 1: Mirative focus in LowP in echo wh-questions (from Badan and Crocco 2018).

In the present work, we continue the efforts to refine the description of the LowP, showing that also the post-verbal wh-element in information-seeking questions occupies an informational focus projection in the LowP.

In what follows, we adapt the syntactic tests applied by Belletti (1999 and subsequent work) to prove the low-peripheral position of the post-verbal subject to the case of the post-verbal wh-element. We test the position of the wh-element with respect to the adverb *bene* ‘well’ and the quantifier *tutto* ‘all’. According to Cinque’s (1999) typology, these elements are in the specifier of the lowest functional projections in the clause. Examples (10)–(11) show that in information-seeking questions, the post-verbal wh-element must appear to the right of the adverb or the quantifier. Compare the Examples (10a) and (11a), in which *tutto* and *bene* precede the wh-element, with those in (10b) and (11b), in which they follow it.

(10) CONTEXT:⁴

A: *Allora veniamo domani per la merce*
‘Ok, we come tomorrow for the merchandise’

B: *Va bene, mi trovate qui fino alle quattro*
‘Alright, I’ll be here until four’

A: *E scarichiamo tutto dove?*
‘Where do we unload everything?’

B: *eh, dove trovate posto*
‘eh, where you find space’

a. *E scarichiamo tutto dove?*
And unload-1P.PRS all where

b. *#E scarichiamo dove tutto?*
And unload-P.PRS where all

(11) CONTEXT

A: *Domani sera sono a Napoli. Che dici, che faccio?*
‘Tomorrow I am in Naples. What do you say, what can I do?’

B: *Ti vai a mangiare una pizza*
‘You go and eat a pizza’

A: *E la fanno bene dove?*
‘And where do they make a good one?’

B: *Più o meno dappertutto*
‘More or less everywhere’

⁴ For reasons of space, from now on in examples with extended context we gloss only the relevant wh-question.

- a.

E

la

fanno

bene

dove?

And

CL

make-3P.PRS

well

where
- b.

#E

la

fanno

dove

bene?

and

CL

make-3P.PRS

where

well

The positional restriction hints to the fact that the *wh*-element is very low in the clause structure (see also Cardinaletti 2001). Consider also that the *wh-dove* ‘where’ is not an argument of the verb, but rather an adjunct. Therefore, its syntactic position is expected to be less constrained than in the case of arguments. However, the Examples (10) and (11) show that the position of the *wh*-element is not free: by manipulating its site with respect to *tutto* ‘all’ and *bene* ‘well’ the sentences become more, or less felicitous. The positional restriction of the *wh*-element with respect to *tutto* and *bene*, therefore, supports the hypothesis that the *wh*-element is within the LowP.

However, as noticed by Belletti (1999:12, fn. 6) for the post-verbal subject, a VP containing verb + adverb, as in our Example (11a), could, in principle, be moved to the LP to a topic position. Under this analysis, the post-verbal position of the focus (the *wh*-element in our case), would be a byproduct of the topicalization of the VP. Although this analysis can be applied to cases where the clausal material preceding the *wh*-element is clearly a topic, it does not account satisfactorily for all cases. We need, therefore, make a distinction between post-verbal *wh*-items appearing after topical material, and those which do not follow a topicalization. Consider, for instance, the following examples in Table 1, extracted from the LIP corpus, and in Table 2, extracted from the LIP corpus (cf. Section 3):

Table 1: LIP, Florence, C.5.43.

A: <i>quale preferisci raccontare?</i>	A: do you want to tell us about which one?
B: <i>Scandinavia</i>	B: Scandinavia
A: <i>la Scandinavia bene sappiamo sempre di</i>	A: Scandinavia well we always know we have to
<i>dover seguire che cosa? Uno schema che vi siete</i>	<i>follow what? A scheme that you gave to yourself</i>
<i>dati voi (...)</i>	<i>(...)</i>

Table 2: Venice, map task B01.

p2G#180: <i>no no no <sp> rimani alla destra del bar</i>	no no no <short pause> stay at the right of
<i>diciamo vicino al mobiletto con le</i>	the bar, let’s say, nearby the cocktail
<i>bottiglie</i>	cabinet
p1F#181: <i>okay <sp> e c’è una forchetta ?</i>	Okay <short pause> and is there a fork?
p2G#182: <i><eh> c’è una forchetta dove ?</i>	<eh> there is a fork where?

The example in Table 1 is part of a dialogue between a teacher and a pupil, in which the pupil says she will talk about Scandinavia. The relevant sentence (*bene sappiamo sempre... cosa?*, ‘well we always know... what?’), while linked to the discourse context in the sense that it recalls something that the pupils should know, does not contain any topicalized material. In contrast, the case in Table 2 shows a case of wh-element following a topicalized clause: in the relevant wh-question (*c’è una forchetta dove?* ‘there is a fork where?’) the wh-element appears after a repetition of the sentence (*c’è una forchetta?* ‘is there a fork?’) uttered by the interlocutor. This repetition is not a question in its own right, but acts as topic for the wh-*dove* ‘where’. Notice that the relevant wh-question, *c’è una forchetta dove?* ‘there is a fork where?’ is an information-seeking questions and does not have an echo reading.

In cases such as the one presented in Table 1, an analysis in terms of syntactic topicalization should be excluded, since it is not pragmatically justified: as illustrated above, the question at stake expresses a genuine request for new information, in which the clausal material preceding the wh-element does not convey any topical information, but is simply contextually or inferentially accessible (Lambrecht 1994).⁵ Therefore, a topicalization movement is not justified.

A further syntactic test proposed by Belletti to demonstrate that the post-verbal subject is in LowP involves the use of tonic subject pronouns. This test shows that a post-verbal pronominal subject must be expressed by a strong pronoun, i.e., *lui* ‘him’. If the subject is expressed by a weak pronoun, i.e., *egli*, that by definition cannot be focal, the resulting sentence is excluded.⁶ We will adapt this test to the case of the post-verbal wh-element, by comparing sentences in which the wh-element co-occurs with the strong pronoun *lui*. Consider the examples in (12). In (12a)–(12b), the strong pronoun *lui* in post-verbal position must be focal, à la Belletti (1999). As it is shown by the unacceptable status of (12a)–(12b), the co-occurrence of *lui* and the wh-element is excluded, since both elements are focal and, therefore, compete for the same structural position. Notice that the co-occurrence of post-verbal *lui* and a wh-element is also excluded under an echo reading (12b). In contrast, the cases (12c)–(12d) are perfectly acceptable, since in these examples the strong pronoun *lui* is not focal but expresses a partial topic (Benincà and Poletto 2004; Büring 1997).

5 Notice that the verb expresses new information also in example in Figure 3 (*Riscendo fino dove?*) below. As indicated by the annotation, in this case there is an overlap between the interlocutors (turns 79 and 80, Table 4). In fact, the interlocutors utter a form of the verb *riscendere* ‘go down’ at the same time. Therefore, the verb *riscendo* ‘I go down’ uttered by the follower in turn F#80 is new and cannot be considered as already given in the dialogical context.

6 We report here for the reader’s convenience the relevant examples by Belletti (1999:18, Ex. 11–12): *Gianni parlerà lui/*egli con Maria*.

- (12) A: *I Tebaldi hanno divorziato. Lei ora se ne va in Polinesia*
 ‘The Tebaldi’s divorced. She will now go to Polynesia’
- B:
- a. #E va lui dove?
 and go-3s.PRS him where
 - b. #E va lui DOVE?
 and go-3s.PRS him where
 - c. E lui va dove?
 and him go-3s.PRS where
 - d. E va dove, lui?
 And go-3s.PRS where him
- ‘And where does he go?’

The tests proposed above bring us to the conclusion that the post-verbal wh-element in information-seeking questions occupies an informational focus position within the LowP.

Example (13) allows us additional consideration on the structural position of post-verbal wh-items:

- (13) a *vedere cosa?*
 to see-INF what
 ‘to see what?’

In this case, the post-verbal position of the argumental wh-element is in fact the only option available. This is illustrated by the comparison between Examples (14a) and (14c) on the one hand, and (14b) and (14d) on the other.

- (14) a. *Andiamo a vedere cosa?*
 go-1p.PRS to see-INF what
 lit. ‘We go to see what?’
- b. *A vedere cosa?*
 to see-INF what
 lit. ‘to see what?’
- c. *Cosa andiamo a vedere?*
 what g-1p.PRS to see-INF
 ‘What do we go to see?’
- d. **Cosa a vedere?*
 what to see-INF
 lit. ‘what to see?’

The ungrammaticality of (14d) is due to the absence of an inflected verb and, therefore, to the absence of a left-peripheral area to host the wh-element. We argue that when the LP is not available, the wh-element still occupies a focus position, but this position will necessarily be in the LowP, as in (14b). The alternation between (14a), (14b) and (14c) seems due to the interlace between pragmatic and syntactic

factors. When the inflected verb is absent, the wh-element is forced to appear in LowP. In contrast, when an inflected verb is present, the wh-element will appear in LP or in LowP according to the context. This analysis is corroborated by the fact that when the inflected verb is absent and the wh-element obligatorily occurs in LowP, as in (14b), the contextual cohesion of the conversational turns is crucial to the felicity of the utterance. The infinitive is licensed by the inflected verb appearing in a preceding turn and does not need to be overtly repeated in the relevant sentence.

In the following section we will comment upon a number of cases of low-peripheral wh-questions from a corpus of spoken Italian. These cases will allow us to make further considerations on the role of the context in licensing low-peripheral wh-questions.

3 Dialogical data

To corroborate the analysis proposed in the preceding section, we looked for non-fictional examples of post-verbal wh-questions produced in spontaneous contexts. These examples also allow us to explore the prosodic properties of low-peripheral wh-elements. To this purpose, we examined 90 dialogues taken from the CLIPS corpus (*Corpora e Lessici di Italiano Parlato e Scritto*, www.clips.unina.it),⁷ and the 469 texts composing the LIP corpus (*Lessico di frequenza dell'Italiano Parlato*, <http://badip.uni-graz.at/it/corpus-lip/descrizione>; De Mauro et al. 1993). CLIPS contains task-oriented interactions collected by using two different techniques, i.e., the *map task* (Anderson et al. 1991) and *spot-the-difference task* (Péan et al. 1993). The dialogues are produced by 45 male and 45 female speakers with university-level educations, aged 20–30, and native speakers of Italian living in 15 different Italian cities.⁸ LIP includes dialogical as well monological speech recorded in several contexts, such as face-to-face spontaneous interactions and school or university lectures.⁹ In both corpora we searched for occurrences of post-verbal *dove* ‘where’ and *cosa* ‘what’, in direct wh-questions.

7 The consistency of the CLIPS corpus in terms of graphic words is not provided in the documentation attached to the corpus. However, Marzo and Crocco (2015) counted 19,310 graphic words in the 24 dialogues produced by speakers from Florence, Milan, Rome and Naples. Extrapolating from these data, we can estimate the total amount of graphic words (90 dialogues collected in 15 Italian cities) to ca. 72,400 graphic words.

8 Milan, Bergamo, Turin, Venice, Genoa, Parma, Florence, Rome, Perugia, Naples, Cagliari, Catanzaro, Bari, Lecce and Palermo.

9 LIP contains a total of about 490,000 words, collected in four Italian cities (Milan, Florence, Rome and Naples).

In the whole CLIPS corpus we found 6 cases of interrogatives with post-verbal *dove* ‘where’ and 2 cases of post-verbal *cosa* ‘what’. As for the LIP, we found 16 cases of post-verbal *cosa* ‘what’ and 1 of post-verbal *dove* ‘where’. Out of these 25 cases, 4 (from CLIPS) and 2 (from LIP) involved a topicalization or an echo reading, and were, therefore, not considered further. In what follows, we comment upon the remaining 19 cases. Although the small number of occurrences is clearly not suitable for a quantitative analysis,¹⁰ these data are nevertheless relevant on a theoretical level, as they offer indications of the actual context in which post-verbal wh-questions arise, and provide material for a first prosodic analysis of these interrogatives.¹¹ While this small amount of cases indicates that that post-verbal wh-element is not frequent in information-seeking questions, it brings evidence of the existence and actual use of this construction in spoken Italian. Post-verbal wh-elements were found in southern (Palermo, Naples), as well as central (Florence, Perugia, Rome) and northern (Parma, Genoa, Milan) varieties of Italian. In what follows, we provide the relevant sentences from CLIPS (15)–(18) together with their dialogical contexts in Tables 3–6.¹² Table 7 summarizes the cases of low-peripheral wh-elements found in the LIP corpus.

- (15) *e arrivo dove?*
 and arrive-1S.PRS where
 lit.: ‘and I arrive where?’

¹⁰ A corpus-based, quantitative analysis of post-verbal wh-elements goes beyond the scope of the present paper.

¹¹ While the dialogic recordings from CLIPS are of a high quality, this is not the case for the LIP corpus, which was collected in informal conditions. Only a selection of the original analogic recordings of the LIP corpus are digitalized and are accessible (VOLIP: <http://www.parlaritaliano.it/index.php/it/volip>). However, not all the available digital material is of a quality suitable for prosodic analysis. Therefore, in this paper we consider for prosodic analysis only those cases whose quality was sufficiently good.

¹² The examples are transcribed according to the conventions used in CLIPS (http://www.clips.unina.it/it/documenti/11_specifiche_trascrizione_ortografica.pdf). The abbreviations and symbols used in the examples are the following: progressive turn number, non-lexical elements, non-vocal phenomena, noises and vowel/consonant lengthening are included among angle brackets < >; <lp> = long pause; <sp> = short pause; + = interrupted word/interrupted sentence with planning change; *eeh*, *ehm* = hesitations; the overlaps between the speakers are included with hashtags # identifying the relevant dialogical turns, and specifying the exact point where the overlapping takes place.

Table 3: Palermo, map task B03.

p1G#39:	<i>ecco circonda il gatto sali <sp> quindi adesso il gatto te lo trovi a sinistra!</i>	here, go around the cat go up <short pause> then now the cat is on your right!
p2F#40:	<i>sì</i>	yes
p1G#41:	<i>sali e<ee> ehm eeh dunque sali<ii> eeh come come ti posso spiegare <inspiration> sempre diciamo in senso verticale</i>	go up and ehm eeh well go up eeh how can I explain this to you <inspiration> always let's say in vertical
p2F#42:	<i>mh? e arrivo dove?</i>	mh? And I come where?
p1G#43:	<i>cioè in senso ehm eeh/questa linea che sale è parallela a quella di sinistra, mi spiego?</i>	well towards ehm eeh/this line that goes up is parallel to the one on the left, you get me?

- (16) *Riscendo* *fino* *dove?*
 Again-go down-1s.PRS until where?
 'I go down until where?'

Table 4: Perugia, map task A04.

p2F#78:	<i>quindi fatt+ <unclear> un giro tutto intorno alla #<G#79> macchina#</i>	Then don+ <unclear> a tour around the #<G#79> car#
p1G#79:	<i>#<F#78> {[screaming] bravo}# sì</i>	#<F#78> {[screaming] good}# yes
p2F#80:	<i>riscendo fino #<G#81> dove ?#</i>	I go down until #<G#81> where?#
p1G#81:	<i>#<F#80> riscendi# vai giù giù giù fino all'altra macchina</i>	#<F#80> go down# go down down down until the other car

- (17) *e* *io* *parto* *da* *dove?*
 and I leave1s.PRS from where
 lit.: 'and I leave from where?'

Table 5: Parma, map task B04.

p2G#288:	<i><mh> <inspiration> <sp> io la sedia e la barca [ce li ho distanti] sì, perché la barca è piccola il cuore è più grosso</i>	<mh> <inspiration> <short pause> for me chair and boat [are distant] yes, because the boat is small and the heart is bigger
p1F#289:	<i><ah!> <sp> <inspiration> va be', allora lasciali così</i>	<ah!> <short pause> <inspiration> alright, then leave them this way
p2G#290:	<i>comunque #<F#291> tu parti<ii>#</i>	anyway #<F#291> you leave#
p1F#291:	<i><G#290> e io parto da# dove?</i>	<G#290> e I leave from# where?
p2G#292:	<i>dal tuo cuore!</i>	From your heart!

- (18) *e mi fermo dove?*
 and to me stop-1s.PRS where
 lit.: ‘and I stop where?’

Table 6: Genoa, map task B01.

p2G#84:	<i>passando prima sotto dal cono fino ad arrivare sopra dove c'è la ciliegia</i>	going first under the ice cream cone until you arrive above where there is the cherry
p1F#85:	<i>passo in mezzo ai due cuori e devo arrivare sotto il gelato?</i>	I go between the two hearts and I must arrive under the ice cream?
p2G#86:	<i>sì</i>	Yes
p1F#87:	<i>e passo prima dal cono e mi fermo dove?</i>	and I pass first by the ice cream cone <u>and I stop where?</u> (lit.)
p2G#88:	<i>sopra dove c'è la ciliegia <sp> più o meno un pochino più avanti</i>	On the top where there is the cherry <short pause> more or less just up ahead

Table 7: Cases of low-peripheral wh-elements found in the LIP corpus.

Identifier	Text	
F.A.4.134.A FI, dialogue	A: <i>Che lei gli vada a dire ecco qui vengono a telefonare fanno convenevoli e dicono fanno che cosa? Allora gli ho scritto</i>	A: That she tells him here you go they come to call make pleasantries and <u>they say they do what?</u> So I wrote to him
F.B.9.20.C FI, teleph.	A: <i>volevo sape<re> se venivi al cinema?</i> B: <i>eh no (pause) no dove?</i> A: <i>all'Astra</i> B: <i>a vedere cosa?</i> A: <i>Risvegli</i>	A: I wanted to know if you were coming to the cinema? B: eh no (pause) no, where? A: at the Astra B: <u>to see what?</u> A: Awakenings
N.A.12.317.A NA, dialogue	A: <i>Allora lei adesso ritorna per dirmi che cosa? Per dirci che cosa? che ha letto e che s'è chiarita?</i> B: <i>beh sì (...)</i>	A: So she now comes back to tell me what? <u>To tell us what?</u> That she has read and that now things are clear to her? B: well yes (...)
F.C.5.43.A FI, exam	A: <i>(...) la Scandinavia bene sappiamo sempre di dover seguire che cosa? Uno schema che vi siete dati voi (...)</i>	A: (...) <u>Scandinavia well we always know we have to follow what?</u> A scheme that you have given yourself (...)
M.D.2.1.A MI, lecture	A: <i>allora qui salta fuori cosa? Un nuovo (unclear) di filosofia</i>	A: (lit.) <u>So here comes up what?</u> A new (unclear) of philosophy
M.D.2.1.A MI, lecture	A: <i>(...) eh questi rapporti son sostituiti con che cosa? Coi rapporti sociali (...)</i>	A: (...) eh these relationships <u>are replaced with what?</u> With social relations (...)
M.D.2.2.A MI, lecture	A: <i>(...) però di fatto si perde quell'equilibrio che c'era nei primi appunti a favore di che cosa? Della struttura che in questo caso non è (...)</i>	A: (...) but in fact <u>you lose the balance that there was in the first notes in favor of what?</u> Of the structure that in this case is not (...)

Table 7: (continued)

M.D.2.2.A MI, lecture	A: <i>la prima azione storica dell'uomo (pause) ha consistito in che cosa? (...)</i>	A: the first historical action of man (pause) <u>consisted of what? (...)</u>
M.D.2.2.A MI, lecture	A: (...) <i>e la generazione è intrinseca a questo istinto di conservazione (pause) eh giustificato da che cosa? Dal fatto che se non avesse gli altri non potrebbe produrre (...)</i>	A: (...) and generation is intrinsic to this instinct of conservation (pause) <u>eh justified by what? From the fact that if it did not have the others it could not produce (...)</u>
M.D.4.1.A MI, lecture	A: (...) <i>allora adesso supponiamo di fare la nostra brava espansione reversibile questa espansione è legata a che cosa? Se qui regna la pressione P uno e la temperatura P uno (...)</i>	A: (...) so now let's suppose we do our nice reversible expansion this expansion <u>is related to what?</u> If here we have the pressure P one and the temperature P one (...)
R.D.19.14.A RM, lecture	A: (...) <i>vi divertite? ecco vi divertite a fare che cosa?</i> B: <i>a presentare una scenetta cantata (...)</i>	A: (...) do you have fun? <u>Well you have fun doing what?</u> B: to present a sung scene (...)
R.C.10.57.A RM, exam	A: (...) <i>mi scusi poi però c'è nel finale l'opposizione tra questi due mondi non la dicotomia l'opposizione tra questi due mondi perché vediamo che cosa?</i> B: <i>allora perché...</i>	A: (...) Excuse me but then in the final scene there is the opposition between these two worlds not the dichotomy the opposition between these two worlds <u>because we see what?</u> B: well because ...
N.D.13.1.A NA, lecture	A: (...) <i>agli americani fotografi venivano insegnate che cosa? Di usare una scatola di latta con un foro piccolino un po' di carta oleata sul fondo (...)</i>	A: (...) American photographers <u>were taught what?</u> To use a tin box with a small hole a bit of greaseproof paper on the bottom (...)
N.C.10.14.A NA, exam	A: <i>mi scusi ma (pause) mi pare che stiamo passando su un arco cronologico sinceramente molto spostato in avanti e in realtà la la il modello classico di questionario risale in particolare a che cosa? a un atlante linguistico molto importante all'atlante italo svizzero (...)</i>	A: Excuse me but (pause) it seems to me that we are now considering a chronological period which honestly is very late in time in fact the classic model of questionnaire <u>dates back in particular to what?</u> to a very important linguistic atlas to the Italian-Swiss atlas
N.C.9.217.A NA, exam	A: <i>l'agnello dicemmo è simbolo di che cosa?</i> B: <i>eh del sacrificio</i> A: <i>ahah perché? perché è un simbolo del?</i> B: <i>eh</i> A: <i>del Cristo</i>	A: The lamb we said <u>is a symbol of what?</u> B: eh of sacrifice A: ahah why? Because it is a symbol of? B: eh A: Christ

Table 7: (continued)

N.C.9.165.A NA, exam	<i>B: (...) il poeta diciamo esprime la sua la sua impotenza contro eh (pause)</i> <i>A: in quanto poeta</i> <i>B: ah_ah</i> <i>A: in quanto poeta la sua impotenza di fronte a che cosa?</i> <i>B: diciamo a quello che a potersi esprimere come (pause) come più come più gli pareva diciamo</i>	<i>B: (...) the poet let's say expresses his his powerlessness in the face eh (pause)</i> <i>A: as a poet</i> <i>B: ahah (=yes)</i> <i>A: As a poet his powerlessness in the face of what?</i> <i>B: let's say of what of having the possibility to express himself as (pause) as he see fit let's say</i>
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The post-verbal wh-items in Tables (3)–(7) express an informational focus, since the contexts do not imply any contrast or correction, nor an echo or mirative reading. Notice that, if we force such an interpretation, the sentences reported above become infelicitous. As an example, we manipulate the original utterance in (15), presented below as (19).

- (19) p1G#41: [...] *dunque* *sali* [...] *sempre* *diciamo* *in*
well go.up-2s.IMP always say-1p.PRS in
senso *verticale*
direction vertical
'Well, go up always let's say in vertical'
p2F#42: *mh?* *#e* *arriv-o* *DOVE?*
mh? and arrive-1s.PRS where
'Mh? #And I arrive WHERE?'

In the questions summarized in Tables 3–7, the speaker (a) genuinely formulates an information request, asking for new information that is not available to her, or (b) emphasizes the missing piece of information represented by the wh-element.¹³ The examination of the contexts in Tables 3–7 also suggests that the post-verbal wh-element is linked to the preceding dialogical context in order to be felicitous. The link with the preceding dialogical context is in line with Cheng and Rooryck (2000) and Kaiser and Quaglia (2015), discussed in Section 1.

¹³ As an anonymous reviewer pointed out, in a number of examples extracted from LIP (see Table 7), we are dealing with specific dialogical situations. In these cases, either the speaker formulates a question and provides the relative answer or, s/he knows the answer, since s/he is a teacher interrogating a student during an exam. While these specific dialogical situations may require a more detailed analysis, these questions can nevertheless be considered information-seeking questions, at least in the sense that they do not express echo/mirative focus, nor are they rhetorical questions. However, we leave the description of the specific features of this type of question-answer pairs open for future research.

Whereas the distribution of the low-peripheral *wh*-element seems contextually restricted, a similar restriction does not apply to the left-peripheral *wh*-element. The following Example (20) is modeled on Example (15) from CLIPS. In (20), the position of the *wh*-element is manipulated so that it appears in sentence-initial position, i.e., in the LP. This manipulation, however, does not affect the felicity of the utterance:

- (20) p1G#41: [...] *dunque sal-i [...] sempre diciamo in*
 well go.up-2S.IMP always say-2P.PRS in
senso verticale
 direction vertical
 ‘Well, go up always let’s say in vertical’
 p2F#42: *mh? e dove arrivo?*
 mh? and where arrive-1S.PRS
 ‘Mh? And where do I arrive?’

The comparison between (15) and (20) suggests that there is an asymmetry between the informational focus expressed by a *wh*-element in sentence-initial and post-verbal position. This asymmetry indicates that the two positions are not complementary, since the sentence-initial *wh*-element does not require a particular context to be licensed.

In three of the CLIPS examples, i.e., (15), (17) and (18), the relevant question is introduced by the conjunction *e* ‘and’. In these cases, the particle does not have the typical connective function expected for the Italian coordinating conjunction *e*, i.e., linking two sentences forming a compound sentence, but acts as a discourse particle marking the turn-taking (Bazzanella 1995, 2005). The conjunction appears at the beginning of the sentence initiating the turn, and can be preceded by other discourse markers, as *mh?* in (15) Table 3.¹⁴ As a discourse particle, besides marking the turn-taking, the conjunction *e* also introduces the information-seeking question. Specifically, within the conversational exchange, this question acts as a request for clarification with respect to the information already available, linking the *wh*-question to the preceding dialogical context.¹⁵ Because of its intrinsic additive value, the conjunction *e* enhances the cohesion of the turns, by adding a new, more specific request on the top of what has been said up to that point of the interaction.

14 In this paper we follow Bazzanella's approach (see Bazzanella [2005] and subsequent work) to the classification of discourse particles. For the debate about a possible distinction between discourse markers and interjections see for instance, (Norrick 2009) and references cited there.

¹⁵ We owe this observation to an anonymous reviewer. Notice also that, according to Rosemeyer (2018), post-verbal *wh*-elements in Spanish can be used to require “clarification”.

This interpretation is in line with the conversational analysis of the *spot-the-difference* dialogue provided by Bazzanella (2005) for CLIPS, suggesting that this type of task-oriented dialogue is structured into sub-routines handling specific conversational topics. During the development of the dialogical sub-routines, speakers may produce conversational moves of request of clarification (Bazzanella 2005: 146). Notice that the production of clarification requests of the type under examination is not limited to task-oriented interactions such as the dialogues collected in CLIPS. In fact, similar requests of additional information for clarification are also attested in spontaneous speech. The following Example (21), Table 8, from the LIP corpus (repeated here for the reader’s convenience). The relevant utterance is produced by a speaker from Florence:

- (21) *a* *ved-ere* *cosa?*
 to see-INF what
 ‘to see what?’

Table 8: LIP, Florence B.9.20.

A:	<i>volevo sape<re> se venivi al cinema?</i>	I wanted to know if you were coming to the cinema?
B:	<i>eh no_ # no dove?</i>	eh no (pause) no, where?
A:	<i>all'Astra</i>	at the Astra
B:	<i>a vedere cosa?</i>	to see what?
A:	<i>Risvegli</i>	Awakenings

Notice that in (21), despite the absence of a discourse marker such as the conjunction *e* observed in CLIPS, a strong link between the turn containing the post-verbal *wh*-element and the preceding dialogical context is nevertheless present. In this case, in fact, the infinitive verb depends on the inflected verb *venivi* ‘you came’ uttered by the interlocutor three turns earlier.

3.1 Prosodic features

Under the cartographic approach, we expect that the interpretive and syntactic properties described above will also match with specific prosodic features. In what follows, we offer a prosodic analysis on the basis of the available cases from the CLIPS and LIP corpus.

Contrary to what happens in regular *wh*-questions, in low-peripheral *wh*-questions the main syntactic cue to interrogativity appears late in the sentence.

Consequently, prosody can be expected to play a role of primary importance in marking these sentences as questions (cf. Shiamizadeh et al. 2018). Although a post-verbal wh-element in Italian does not need to appear in sentence-final position (as it happens in languages such as Spanish, cf. Section 1),¹⁶ in the utterances from CLIPS and LIP examined in Section 3 this is the case. In these examples, therefore, the wh-element appears in the unmarked position of the nuclear accent in Italian (Ladd 2008[1996]; Nespor and Vogel 1986). In regular information-seeking wh-questions, where the wh-element occurs in the LP, there might be no association between the wh-element and the nuclear accent of the sentence. In particular, a wh-element such as *dove*, is not associated with the nuclear accent of the sentence, which occurs instead on the predicate or on the last lexical word of the sentence (Badan and Crocco 2018; Bocci 2013; Crocco and Badan 2016; Marotta 2002). In contrast, in other types of questions, such as echo-questions where the wh-element is in LowP and expresses mirative focus, the association of *dove* with a nuclear accent is blatant (Badan and Crocco 2018). The examples from the CLIPS corpus (Figures 2–5) and from the LIP corpus (Figure 6) indicate that when the wh-element is sentence-final, it is associated with the nuclear accent, as it happens in the case of mirative echo-questions.

Although more data are necessary to assess the phonological and phonetic properties of this pitch accent, the possibility for the post-verbal wh-element to carry a nuclear pitch accent is compatible with the LowP analysis presented in Section 3. The prosodic similarities between the wh-element in echo questions and in the information-seeking questions at stake, and the corresponding differences with the case of pre-verbal wh-element in regular information-seeking questions, support the hypothesis that the post-verbal wh-words occupy related structural positions.

16 Since the SFR requirement does not apply in Italian, the wh-element does not need to be sentence final or intonational phrase final (Reglero and Ticio 2013) in order to be grammatical. In fact, Italian admits both structures in (i)–(ii).

- (i) (e) *andate* *in* *vacanza* *dove?*
 (and) *go-2P.PRS* *in* *holiday* *where*
 Lit.: ‘Do you go on holiday where?’
- (ii) (e) *andate* *dove* *in* *vacanza?*
 (and) *go-2P.PRS* *where* *in* *holiday*
 Lit.: “Do you go where on holiday?”

To outline a more comprehensive picture of the intonational properties of low-peripheral wh-elements, it would also be necessary to analyze cases such as (i)–(ii) above, in which the wh-element is in non-final position. We leave this issue open for further research.

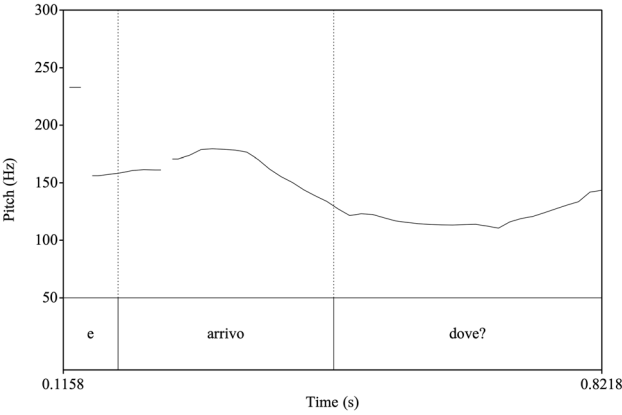


Figure 2: *E arrivo dove?* Utterance produced by a male speaker from Palermo. Associated audio-1 can be found in the online version of supplementary material.

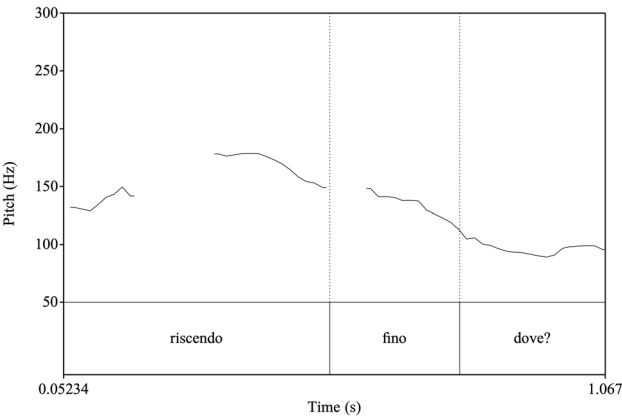


Figure 3: *Riscendo fino dove?* Utterance produced by a male speaker from Perugia. Associated audio-2 can be found in the online version of supplementary material.

4 Conclusions

In this paper we provide arguments supporting the hypothesis that Italian post-verbal wh-elements can occupy a specific syntactic position dedicated to the expression of informational focus. According to this analysis, when the preceding

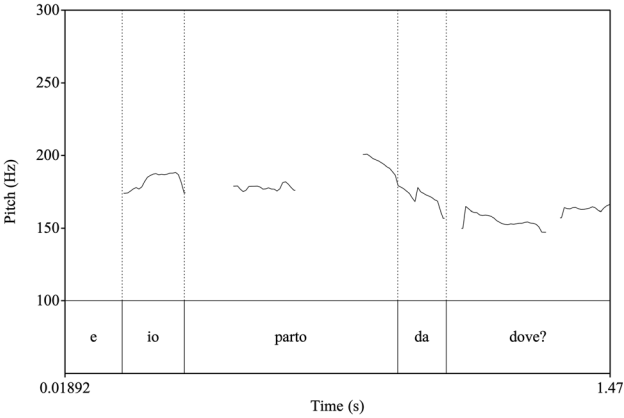


Figure 4: *E io parto da dove?* Utterance produced by a female speaker from Parma. Associated audio-3 can be found in the online version of supplementary material.

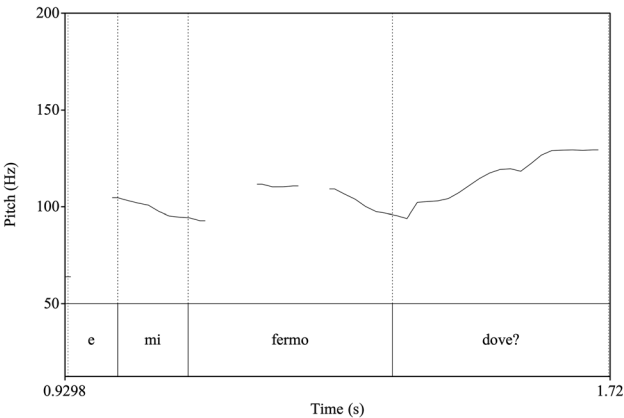


Figure 5: *E mi fermo dove?* Utterance produced by a male speaker from Genova. Associated audio-4 can be found in the online version of supplementary material.

clause material is not topicalized, the post-verbal wh-element is not *in situ*, but undergoes a syntactic movement targeting a low-peripheral focus position; therefore, we referred to these post-verbal wh-elements as low-peripheral wh-items.

Our analysis of the questions with low-peripheral wh-elements is based on the hypothesis that discourse phenomena involving post-verbal elements can be analyzed as the activation of low-peripheral functional projections. Along the lines

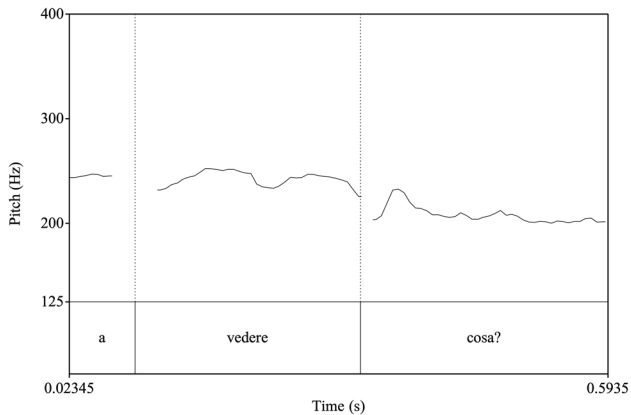


Figure 6: A *vedere cosa?* Utterance produced by a female speaker from Florence. Associated audio-5 can be found in the online version of supplementary material.

of Belletti ([1999] and subsequent work), and parallel to the detailed study of the functional projections in the LP, this study contributes to a finer analysis of the LowP. At the syntactic level, the cases examined in this paper show that the position of the *wh*-element is not free. In contrast, the *wh*-element must occupy a low-peripheral informational focus position endowed with specific pragmatic and prosodic features.

- (22) [Left Periphery CP[IP [Low Periphery[Low Focus *wh*-]] [[vP] [VP]]]

We can recognize at least two types of focus in the LowP, i.e., informational focus, for the subject (Belletti 1999) and the post-verbal *wh*-element, and mirative focus (Badan and Crocco 2018). The syntactic analysis of the post-verbal *wh*-element is corroborated by the prosodic data, as the *wh*-element can carry the nuclear pitch accent. With the contribution of the CLIPS and LIP examples, we argued that low-peripheral *wh*-questions can express a request for information, which requires a link to the preceding context to be felicitous. Moreover, low-peripheral *wh*-questions, while expressing a request of information, can be used to emphasize a missing piece of information represented by the *wh*-item. We also discussed the case of the discourse particle *e*, which marks turn-taking while, at the same time, linking the low-peripheral *wh*-question to the preceding context.

Finally, our study suggests that the LP and LowP analyses of *wh*-questions are not incompatible but complementary, since they account for different phenomena. In particular, the pragmatic restrictions observed for the low-peripheral *wh*-

elements support the view that LowP is more constrained, i.e., subject to stricter pragmatic requirements than LP.

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