



RESEARCH ARTICLE

# The distribution of focus and the mapping between syntax and information structure

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## Abstract

The availability of preverbal focus in Romance is still the subject of controversy in the relevant literature. In this paper, we investigate the distribution of information focus in three Romance languages: Catalan, Spanish and Italian. The main goal is to understand if and to what extent information focus can occur preverbally in these three languages. To this end, we applied a new technique (QUESTIONS WITH A DELAYED ANSWER) to elicit both production data and acceptability judgements. Our results show that preverbal foci are almost never produced in free speech under elicitation but are judged as acceptable by native speakers in rating tasks. The acceptability of preverbal foci, however, is subject to variation: they are more acceptable in Spanish but less so in Catalan and Italian. We interpret this difference across the three Romance languages in the light of the hypothesis formulated in Leonetti (2017), according to which Catalan and especially Italian are more restrictive than Spanish with respect to the mapping between syntax and information structure. While all languages resort to the dedicated word order with a more transparent information-structure partition for a focal subject (i.e. VS), Spanish is more permissive in also allowing a narrow focus interpretation of the subject in an SV order.

## 1. Introduction

Cross-linguistic and comparative studies have shown that the pragmatic interpretation associated with narrow focus is an essential factor for its syntactic distribution. In null-subject Romance languages like Catalan, Spanish and Italian, the focus of the sentence is typically placed after the verb; however, focus fronting (FF) to a preverbal, left-peripheral position is possible when the narrow focus is associated with a corrective/contrastive or with a mirative interpretation, as illustrated by the contrast of acceptability between Example (1C), on the one hand, and Example (2a–2b), on the other (see, e.g. Zubizarreta 1998, López 2009, Cruschina 2021 and references therein).

- (1) A: Què va llegir el Pere? (**Catalan**)  
 what PST.3SG read.INF the Pere  
 ‘What did Pere read?’
- B: Va llegir **l’Avui**. (**information focus**)  
 PST.3SG read.INF l’Avui  
 ‘He read l’Avui.’
- C: # **L’Avui** va llegir.  
 (López 2009: 59)
- (2) a. A: Ahir el Pere va llegir el Periòdic.  
 yesterday the Pere PST.3SG read.INF el Periòdic  
 ‘Yesterday Pere read el Periòdic.’
- B: **L’Avui** va llegir, no el Periòdic. (**corrective focus**)  
 l’Avui PST.3SG read.INF not el Periòdic  
 ‘He read l’Avui, not el Periòdic.’
- b. No m’ho puc creure! **L’Avui** va  
 not me = it = can.1SG believe.INF l’Avui PST.3SG  
 llegir el Pere! (**mirative focus**)  
 read.INF el Pere  
 ‘I can’t believe it! Pere read l’Avui!’

The CORRECTIVE FOCUS in Example (2a) operates over a previous statement, correcting a focal alternative that is explicitly present in the immediate discourse. With MIRATIVE FOCUS (cf. Example 2b), the set of focal alternatives evoked by narrow focus is pragmatically exploited in terms of a speaker’s expectations: the asserted proposition is presented as being more unlikely (and hence surprising) with respect to other alternative propositions; mirative focus can thus be defined as focus against expectations.

In most null-subject Romance languages, the availability of FF with corrective focus has long been recognized – more generally under the label of contrastive focus (see, e.g. Rizzi 1997, López 2009). The investigation into mirative focus is more recent (Cruschina 2012), but the possibility of having FF with this pragmatic type of focus does not seem to be the subject of controversy (see Ledgeway 2009, Jones 2013, Cruschina et al. 2015, Jiménez-Fernández 2015a,b, Giurgea 2016, and Cruschina 2019, 2021, 2022a; see also other studies that do not use the term MIRATIVE but that do make reference to an interpretation of surprise and unexpectedness: Vallduví 1992, 1995, Brunetti 2004, 2009, Paoli 2010 for Romance varieties, and Krifka 1995, Zimmermann 2007, 2008, Hartmann & Zimmermann 2007, Frey 2010, Trotzke 2017 for other languages).

Interestingly, it is with the type of narrow focus that is considered to be neutral or unmarked from a pragmatic viewpoint that the judgements reported in the literature about the availability of FF are more controversial. This is the case of INFORMATION FOCUS, which can be defined as the type of focus that introduces new information and gives rise to a contextually open set of alternatives. Information focus does not involve a direct contrast, either with a given alternative, as with corrective focus, or with more likely alternatives, as with mirative focus.

The controversies revolving around the syntactic distribution of information focus seem to mostly depend on the adopted methodology. On the one hand, work relying on the

authors' own intuitions claims that narrow focus must occur postverbally or sentence-finally, irrespective of its syntactic category. On the other hand, studies based on a quantitative method have shown that information focus can occur preverbally and is indeed accepted in this position. However, it has been pointed out that both lines of investigation, especially the latter, suffer from a number of methodological shortcomings related to the elicitation of information focus (Uth 2014, Escandell Vidal & Leonetti 2019, Cruschina 2021). To overcome these methodological problems, Cruschina & Mayol (2022) propose a new technique that aims to enhance the naturalness and reliability of elicited data with information focus: QUESTIONS with a DELAYED ANSWER (QDA). This technique is based on the question-answer test to elicit information focus and is presented as an improvement of the DISCOURSE COMPLETION TASK used in prosodic studies on the Romance languages (see Vanrell et al. 2018). With QDA, some material is inserted between the question and the point in which the participant is asked to answer the question; because of this (short) distance, participants would spontaneously reply to the question with a full sentence instead of a fragment, which would otherwise be the most natural answer to a wh-question.

Cruschina & Mayol (2022) implemented QDA in both a production and an acceptability-judgement experiment on Catalan. In this paper, we expand our investigation in a comparative direction, reproducing these experiments in Spanish and in Italian with the same experimental design and material, modulo the language of the stimuli. The results are very similar in all three null-subject Romance languages, especially in the production experiments, and support the more traditional view of the postverbal placement of information focus. At the same time, however, the results of the acceptability-judgement experiments show that the distribution of information focus is not unequivocal and clear-cut. Information focus is indeed accepted in a preverbal position, although to a lesser extent than postverbal information focus and to varying degrees across the three Romance languages under investigation.

After a review of the methodological problems related to the elicitation of information focus in Section 2, in Section 3, we will present the solutions adopted by Cruschina & Mayol (2022), which are at the basis of all the experiments reported here. The experiments will be described in Sections 4 and 5. For comparative purposes, and for ease of exposition, we will present the experiments reported in Cruschina & Mayol (2022) on Catalan together with the experiments on Spanish and Italian, which are original to this paper, starting with the production experiments (Section 4) and then moving to the acceptability-judgement experiments (Section 5). In Section 6, we will then try to explain the differences across the three languages in the light of the hypothesis formulated in Leonetti (2017), according to which Catalan and especially Italian are more restrictive than Spanish with respect to the mapping between syntax and information structure.

## 2. The Elicitation of Information Focus

The first studies on the syntactic distribution of information focus were based on introspection, that is, on the intuitions and grammaticality judgements of the authors. According to these studies, in non-null subject Romance languages, information focus – often just called focus or non-contrastive focus – must occur in a postverbal position (see, e.g. Zubizarreta 1998, Ordóñez 2000, Büring & Gutiérrez-Bravo 2001, Gutiérrez-Bravo 2006, 2008 on Spanish; Vallduví 2001, 2002, López 2009 on Catalan; Benincà 1988, Belletti & Shlonsky

1995, Belletti 2004, 2009 on Italian). The syntactic effects of the postverbal placement of the focus are opaque in the case of focal direct objects since they would independently occur in a postverbal position but are more tangible with focal subjects that undergo subject inversion, as shown in Examples (3) and (4) for Spanish and Italian, respectively:<sup>1</sup>

(3) Q: ¿Quién te regaló la botella de vino? (**Spanish**)  
 who to-you = gave the bottle of wine  
 ‘Who gave you the bottle of wine (as a present)?’

A1: #**María** me regaló la botella de vino.  
 Maria to-me = gave the bottle of wine

A2: Me regaló la botella de vino **María**.  
 to-me = gave the bottle of wine Maria  
 ‘Maria gave me the bottle of wine (as a present).’  
 (Zubizarreta 1998: 125–126)

(4) Q: Chi ha parlato? (**Italian**)  
 who has spoken  
 ‘Who spoke?’

A1: Ha parlato **Gianni**.  
 has spoken Gianni  
 ‘Gianni spoke.’

A2: # **Gianni** ha parlato.  
 Gianni has spoken  
 (Belletti 2004: 21)

These data, however, have been challenged and disputed in a series of studies that have adopted a different methodology characterized by the use, increasingly common among linguists, of quantitative methods to provide insights into linguistic data and phenomena. With some exceptions,<sup>2</sup> most of these studies have reported a different view on the availability of FF with information focus, especially with respect to the position of the focal subjects (see Gabriel 2010, Hoot 2012, 2016, Vanrell & Fernández-Soriano 2013, 2018, Jiménez-Fernández 2015a, 2015b, Leal et al. 2018; see Heidinger 2021, 2022 for a detailed overview on Spanish, and Frascarelli & Stortini 2019 on Italian). This has led to the growth of contrasting views in the relevant literature that have been described in terms of a tension

<sup>1</sup> Some native speakers of Italian, including an anonymous reviewer of this article, find the reply in Example (4A2) acceptable, as long as the sentence stress is on the initial subject – as indicated by the boldface font in the relevant example. In Example (4), we are reporting Belletti’s (2004) judgments, which are shared by most native speakers. As will be discussed later (cf. Sections 4 and 5), postverbal focal subjects like that in Example (4A1) are overwhelmingly preferred both in production and in rating tasks. However, the data from our acceptability-judgment experiment on Italian show that SV(O) with a prosodically focalized initial subject is indeed marginally acceptable. Our data, thus, seem to reflect the interspeaker variation concerning the felicity of the word order in Example (4A2) in the relevant context.

<sup>2</sup> The quantitative studies reported in Feldhausen & Vanrell (2014, 2015) do support the claim that focal subjects are mainly realized postverbally in (Peninsular) Spanish.

related to the source of the data: introspection versus quantitative analysis (see Uth & García García 2018, Hoot & Leal 2020, Hoot et al. 2020, Cruschina 2021, Heidinger 2022).

This tension has been particularly noticeable in Spanish. Indeed, most quantitative studies on the syntactic distribution of information focus are on Spanish; some also deal with Catalan (e.g. Feldhausen & Vanrell 2014, Vanrell & Fernández-Soriano 2013); and a few are on Italian (e.g. Frascarelli & Stortini 2019, Frascarelli et al. 2022, Ylinärä et al. 2023). This may be due to an important difference between the languages, that is, the fact that in Spanish, the mapping between syntax and information structure is less transparent than in Italian and in Catalan. In this respect, Leonetti (2017) points out that in Spanish, the same order is compatible with different interpretations and focus readings, while in Italian and in Catalan, the mapping between syntax and information structure is more straightforward and univocal. On the basis of this difference, Leonetti (2017) defines Romance languages like Spanish as ‘permissive’, while Italian and Catalan fall within the group of the ‘restrictive’ Romance languages. As will be discussed in Section 6, our experimental results confirm this distinction.

The challenges and the tension brought by the quantitative studies have also to be viewed in relation to certain methodological tendencies and issues. On the one hand, the experimental and quantitative work in the investigation of the syntactic position of focus has been a natural reaction to the increasing interest in and tendency towards more natural data, moving away from the initial tendency of generative syntacticians to analyse idealized data that are exclusively based on the evidence of a single person’s judgements and generalized to a whole community of speakers. This new approach, whereby the empirical basis of the syntactic work is considered more carefully, has resulted not only in the adoption of quantitative methods of investigation but also in the special attention to different types of speakers identified by factors such as dialectal variation, bilingualism and acquisitional differences (see Muntendam 2009, 2013, Hoot 2012, 2016, Jiménez-Fernández 2015a,b, Leal et al. 2018, Uth 2018, Sánchez-Alvarado 2018, Frascarelli & Stortini 2019, Hoot & Leal 2020). On the other hand, quantitative methods, and the experimental design in particular, require a controlled study: the number of conditions, the elicitation technique or task, the nature of the stimuli, the annotation and coding of the results and the presence of possible confounding variables are all aspects of the experimental method that have to be defined very carefully. So, the use of more data, speakers and contexts in the search for more reliable results, which overtly contrasts with the direct introspection method, may end up adding levels of complexity that may ultimately make the data difficult to interpret and analyse unequivocally.

Based on these considerations, we believe that the experimental method is definitely worth pursuing, but it needs scrupulous reflections and a careful design. With the help of the QDA technique in our production and rating experiments, we will show that the discrepancies between introspection and experimental studies are the result of several factors, such as the distinction between production and rating, the specific methodological solutions adopted in the experimental studies and the gradience of the judgements. On the one hand, our experimental results point to a very strong preference for postverbal foci in production when only one option is generally produced. These results confirm the more traditional view coming from the introspection of individual scholars; we attribute the differences with the previous experimental studies to possible methodological shortcomings (cf. Section 2.1). On the other hand, the results of our grammaticality-judgement experiment, based on a rating task, point towards a certain degree of optionality and variation. The data from the rating experiment show that the strong preference to place the information focus postverbally does not imply the total exclusion

of the preverbal option. Preverbal foci may also be accepted, even though this acceptability depends on the grammatical category of the focus and is subject to variation across the three languages. The gradience of the acceptability judgements is better reflected in the experimental studies rather than in the introspection analyses, especially in the case of Spanish. We will relate the language-specific variation to the distinction between restrictive and permissive languages (cf. Section 6).

In the next section, we review some of the methodological problems or controversial aspects that can be identified in the quantitative studies on the syntactic distribution of information focus. But before moving to this section, we would like to clarify and justify our terminological choices. Following a cartographic perspective, we assume that focalization always involves movement to a dedicated functional projection and that both preverbal focal objects and subjects are syntactically fronted to the left periphery of the sentence (i.e. in Spec/Foc, Rizzi 1997; see Bocci 2013, Feldhausen & Vanrell 2014, 2015, Hoot 2016 for evidence and discussion). Along the same lines, we assume that postverbal foci (vacuously) move to a dedicated focus projection in the left periphery of the vP, as proposed in Belletti (2004). However, since these assumptions are not directly relevant for the purposes of this paper, and for the sake of simplicity and terminological consistency, in the discussion of the experimental conditions and results, we will use the descriptive term ‘preverbal’ to refer to all fronted foci. Similarly, we will use the descriptive term ‘postverbal’ to refer to foci that occur after the verb.

We are aware that the terms ‘preverbal’ and the ‘postverbal’ are not equivalent for subject and object foci, both from a syntactic and a pragmatic viewpoint. Preverbal focal objects appear in a prominent position, which involves a rearrangement of the word order. Preverbal focal subjects, by contrast, occur in a position that coincides with the basic order of the constituents – this is why preverbal focal subjects are often called ‘subjects in situ’ in other studies. For a subject, it is rather postverbal focalization that makes it more prominent and that requires the rearrangement of the sentential word order. This is certainly an important difference to bear in mind, but at the same time, it must be clear that we simply use the labels ‘postverbal focus’ and ‘preverbal focus’ to make reference to the linear position with respect to the verb, in a pre-theoretical fashion and independently of markedness considerations.

### 2.1. The question-answer test

Since a wh-question asks for new information (*canonical* questions at least do so; see Farkas 2020), the question-answer test has been used as the classical method to elicit information focus. Indeed, in crosslinguistic research ‘wh questions and their answers are the most widespread and most widely accepted test for focus’ (van der Wal 2016: 265). This test relies on the assumption that the focus constituent in the answer corresponds to the wh-phrase in the question. The validity of this test is supported by semantic and prosodic analyses of focus (Paul [1880] 1995, Halliday 1967, von Stechow 1990, Roberts [1996/1998], 2012, Schwarzschild 1999, Krifka 2001, 2011, Reich 2002, and Zimmermann & Onea 2011, among others); however, it should be handled with care when studying the syntax of information focus. Cruschina & Mayol (2022: Section 2) identify a number of potential problems of this test related to the following three empirical observations:

- (5) a. Only congruent answers contain a narrow focus.
- b. The most natural answers are fragments.
- c. Not all foci in answers to wh-questions are information foci.

First of all, in line with the generalization in (5a), the question-answer test must be limited to congruent answers where the focus is the part of the answer that directly corresponds to the wh-phrase in the question, and the background in the answer is the same as the background in the question (see, e.g. von Stechow 1990, Krifka 2001, 2011, Reich 2002). This restriction is needed to guarantee a narrow focus interpretation of the new part of the answer to a wh-question. Suppose the goal of the test is to elicit information focus, therefore, pragmatically felicitous but incongruent answers should be excluded because they do not necessarily feature a narrow focus, as in Examples (6)–(8) (from Cruschina & Mayol 2022: Section 2.1):

- (6) A: Where is Diesel from?  
B: Diesel is an Italian clothing company.
- (7) A: Who did Mary see yesterday on the street?  
B: Mary saw that John went to the barber shop.
- (8) A: Who went to Italy on a holiday?  
B: John went to Siena.

The answer in Example (6B) clearly addresses and resolves the issue opened in the question (Example 6A), but it is not a congruent answer because the DP *an Italian clothing company* does not directly correspond to the wh-constituent of the question and, thus, it does not count as a narrow focus. In the reply (Example 7B), the constituent *John* roughly corresponds to the wh-constituent of the question (Example 7A), providing the missing information. However, there is no full congruence between the question and the answer since *Who* in the question and *John* in the answer have different syntactic functions within their respective sentence, and the background of the reply does not match that of the question. In addition, if *John* in Example (7B) were prosodically marked as focus, the answer would not qualify as a felicitous answer. Let us finally consider the answer in Example (8B). Not only is this an appropriate and felicitous reply to the question in Example (8A), but we also have a direct correspondence between the wh-phrase in the question (*Who*) and the constituent in the answer that provides the missing information (*John*). As a matter of fact, however, the constituent *John* in Example (8B) is not a narrow focus but a contrastive topic in the sense of Büring (1997, 2003, 2016). Unlike focus, contrastive topic does not imply the exclusion of alternatives but suggests a continuation with reference to the other members of the set (*John went to Siena, Mary went to Padua, Paul went to Venice*, etc.), thus proving a partial answer to the question (Krifka 2007). Contrastive topic is also prosodically different from focus, being marked by a specific pitch accent (Jackendoff 1972, Büring 1997, 2003).<sup>3</sup>

In the analysis of information focus and in the discussion of the results, most of the quantitative studies do not contain sufficient details to fully understand if the data were selected or classified to take the congruence requirement of the question-answer test into account (but see Leal et al. 2018 and Hoot et al. 2020 for a systematic classification).

The observation in (5b) is generally recognized as a drawback of the question-answer test and has to do with the naturalness of the data. It is well-known that the most natural type of congruent answers to wh-questions are fragments (see Merchant 2004, Krifka 2006, among

<sup>3</sup> As observed by an anonymous reviewer, in Example (7B) too, the subject *John* could bear the typical fall-rise ‘B-accent’ that characterizes contrastive topics (Jackendoff 1972, Büring 1997), thus providing a felicitous PARTIAL answer to the question (Example 7A).



others). Fragment answers only contain the focus of the answer and feature the ellipsis of the background or given material that the fragment answer shares with the question:

- (9) A: Who did she see?  
 B: [**John**] ~~she saw~~.  
 (Merchant 2004: 673–675)

Despite their naturalness, an elicited fragment is not useful in the study of the syntax of narrow focus because it makes it impossible to determine the position that information focus occupies within the sentence. In particular, it does not provide any decisive data in support or against the availability of preverbal information foci (see Brunetti 2004 for an analysis of the position of information focus that encompasses ellipsis).

According to Example (5c), not all foci in answers to *wh*-questions are information foci. The question-answer test to elicit information focus is so common and widespread that often little attention is paid to possible methodological and/or contextual factors that might affect the interpretation of the focus in the answer. Based on previous observations by Uth (2014), Escandell Vidal & Leonetti (2019: 208) and Cruschina (2021), Cruschina & Mayol (2022: 8) conclude that ‘the use of a focus to answer a *wh*-question is not per se a sufficient condition for the definition of information focus, in that not all foci in answers to questions are necessarily information foci; other types can also occur in this context’. In particular, Uth (2014) points out that, if images are used in a production task featuring the question-answer test, the answers may well encode a sense of obviousness or certainty that comes from the fact that the pictures illustrate the events of the questions, that is, the pictures overtly visualize the answers to the questions (see also Vanrell et al. 2018). A picture-based elicitation task is indeed employed in most production studies on information focus (cf., e.g. Gabriel 2007, 2010, Vanrell & Fernández-Soriano 2013, 2018, Frascarelli & Stortini 2019, Ylinärä et al. 2023; see Sánchez-Alvarado 2018 for discussion and for a different solution to this problem). A similar interpretative problem may also concern the use of video clips to guide the question-answer test, as in the production task described in Leal et al. (2018) and Hoot et al. (2020). These techniques featuring visual aids might have, therefore, compromised the speakers’ interpretation of the questions as genuine or canonical questions since they lack an important default assumption about canonical questions, namely, speaker ignorance, that is, the assumption that a speaker who asks a question does not know the answer (see Farkas 2020). Given this state of the common ground, where the speaker and the addressee of the question share the (visually presented) information about the answer, the question itself will be unexpected, and the neutrality of the answer will be undermined. In some cases, moreover, the context might have favoured a mirative interpretation of the focus in the answer and, therefore, a preverbal placement of the focus, which is indeed generally possible (see Cruschina & Mayol 2022: 8).

In an experimental study that targets a specific type of focus (e.g. information focus), it is therefore important to come up with an experimental design where the interpretation of the focus is controlled for and where special attention is paid to the possible methodological and contextual factors that might affect it.

## 2.2. The experimental design

Most studies on the distribution of focus have used acceptability-judgement tasks, which mainly aimed to assess the existing claims in the literature about the realization of focus.



Other scholars, however, have adopted production tasks, especially when they were mostly – or additionally – interested in the prosodic realization (see Gabriel 2007, 2010, Feldhausen & Vanrell 2014, Vanrell & Fernández-Soriano 2013, 2018, Sánchez-Alvarado 2018, Frascarelli & Stortini 2019; most of these studies used the discourse completion task, cf. Section 3). Even when the investigation only concerns the syntactic realization of information focus, production tasks are often considered to be preferable to acceptability judgements because they do not limit the possible responses to specific pre-determined structures chosen by the experimenters and may better reflect the speakers' preferences in a specific context (Leal et al. 2018; see also Hoot & Leal 2020 and Hoot et al. 2020 for both production and acceptability-judgement tasks).

The subjects participating in a production task certainly have more freedom in their responses than in an acceptability-judgement experiment based on a rating task; this freedom, however, is often limited by specific instructions which, in fact, steer the answers towards less natural and spontaneous choices. This is what happens when fragment answers are being avoided (cf. 5b) because they will be irrelevant in the study of the focus position. To this end, the experimenters have often included precise instructions for the participants as to which constituents should be used in the answers; for example, the participants were explicitly asked to use complete sentences, repeating the same predicate or all constituents of the question (see, e.g. Gabriel 2007, 2010, Feldhausen & Vanrell 2014, Vanrell & Fernández-Soriano 2013, 2018, Leal et al. 2018, Hoot et al. 2020):<sup>4,5</sup>

(10) A: ¿Quién secuestra a Tarzán? (**Argentinian Spanish**)  
 who kidnaps ACC Tarzan  
 'Who kidnaps Tarzan?'

B: **Blancanieves** secuestra a Tarzán.  
 Snow White kidnaps ACC Tarzan  
 'Snow White kidnaps Tarzan.'  
 (Gabriel 2007: 67)

(11) A: ¿Quién le da el diario a su hermano? (**Argentinian Spanish**)  
 who to-her = gives the newspaper to her/his brother  
 'Who gives the newspaper to her/his brother?'

B: **María** le está dando el diario a su hermano.  
 María to-him = is giving the newspaper to her brother  
 'María is giving the newspaper to her brother.'  
 (Gabriel 2010: 202)

<sup>4</sup> In Sánchez-Alvarado (2018), pre-determined structures were prompted to the participants by providing the beginning of the answer. The focus of this study, however, was on the prosodic realization.

<sup>5</sup> In the Spanish examples, we only specify the relevant dialect if this was clearly indicated as the object of investigation in the cited work. We use the general label Spanish either when this was given in the source of the example or to refer to our own data, which come from the varieties spoken in Peninsular Spain (cf. Sections 4 and 5).

(12) A: Who put a plate on the table?

B: **El señor del bigote** puso un plato sobre la mesa. (**Mexican and Chilean Spanish**)

‘The man with the moustache put a plate on the table.’

(Leal et al. 2018: 236)

These instructions not only have the drawback of hindering the most natural and spontaneous tendency to reply with a fragment, which was, in fact, a desideratum of the experimenters, but they were also inhibiting the recourse to the clitic-dislocation of the given constituents, which – with some minor differences across the Romance languages – is considered to be more or less obligatory in natural colloquial speech (see Mayol 2007, Cruschina 2010, 2022b, López 2009, Villalba 2009, 2011, among others). Even when the repetition of the predicate is justified by the syntactic need of the task to determine the preverbal or postverbal position of the focus, it is known that the repeated use of given constituents may affect the realization of the focus, especially in the case of focal subjects (see, e.g. Gabriel 2007, 2010, Belletti & Shlonsky 1995, Ordóñez 2000, Domínguez 2002, Heidinger 2013, Samek-Lodovici 2015, Dufter & Gabriel 2016, among others). The question arises of whether the participants would have produced a different order if they did not have to repeat all constituents in the question but had the freedom to resort to omission or clitic dislocation. The preverbal realization of the focal subject in the Examples (10)–(12) above could then be viewed as the consequence of a dislike for the VOS order over SVO. Note that although VOS is considered to be grammatical in Spanish (see Zubizarreta 1998, among others), the same order is less natural or at least controversial in Catalan and in Italian (see Belletti & Shlonsky 1995, Ordóñez 2000, Gupton 2017, Leonetti 2017; cf. also Section 6).<sup>6</sup> A comparison with different word orders and dislocation strategies would certainly be interesting, but at the same time, in an experiment that aims to investigate the distribution of focus, it would imply the addition of further complexity, a move that is not always desirable. This leads us to the next question about the design of the experiments: the experimental conditions.

In the research on the placement of focal constituents, the number of relevant factors is potentially high; depending on the original research hypotheses, these factors may include the syntactic category (subject, direct object, indirect object, adjunct), the type of verb (transitive, intransitive, unaccusative), or the lexical-semantic properties of the verb (e.g. motion, change of state, inherently reflexive, etc.) (cf., e.g. Frascarelli & Stortini 2019, Frascarelli et al. 2022, Ylinärä et al. 2023). One possible additional factor is the presence or the realization of other constituents, as we saw above, in relation to the position of focal subjects (cf. Examples (10)–(12)). We are aware that all these factors can play an important role in the distribution of focus, but we also believe that many factors can introduce complexity in the interpretation of the results and in the classification of the data for the analysis. To facilitate the interpretation of the data, we therefore decided to use the QDA technique in combination with an experimental design that involves a limited number of factors and conditions (cf. Sections 4 and 5).

<sup>6</sup> Even if the availability of VOS in Spanish is widely accepted, it is not entirely clear whether this word order is preferred or dispreferred with respect to (O)V(S)O featuring the cliticization of the direct object. The results of our production study seem to suggest that cliticization is also the most natural strategy for given constituents in Spanish (cf. Section 4.3).

### 3. Questions With a Delayed Answer (QDA) and How to Naturally Avoid Fragments

In this section, we report and discuss the solutions adopted by Cruschina & Mayol (2022) in their study of Catalan information focus to fully or partially overcome the methodological problems discussed in Section 2, both with respect to the question-answer test and the experimental design. It is important to emphasize that the same solutions have also been adopted in the original studies of the syntactic distribution of information focus in Spanish and in Italian that will be presented for the first time in Section 4.

The major problem with the question-answer test when studying the syntax of focus is that the most natural and spontaneous answers to *wh*-questions are fragments (cf. (5b) above). Complete sentences, which include at least the predicate, are, however, needed to determine the position of the focus within the sentence. To deal with this difficulty, the previous studies have tried to manipulate the answers, either by forcing the production of complete sentences with explicit instructions or by imposing pre-determined full sentences in rating tasks. Following Cruschina & Mayol (2022), we address this problem in a different way: instead of imposing conditions in the form of instructions that would lead to non-fragment answers but that would, in fact, limit the freedom in the responses, we try to make non-fragment answers the most natural and spontaneous options by manipulating the context of the question. This objective can be achieved with the QDA elicitation technique.

QDA is based on the same task used in the previous production studies on the elicitation of information focus, the discourse completion task, which, in turn, involves the question-answer test: a question is inserted at the end of a contextualized scenario, and the participants are asked to answer that question (see Vanrell et al. 2018 for an overview). QDA is designed as an improved version of the discourse completion task, aiming to enhance the naturalness and reliability of the question-answer test. This technique consists of the insertion of some lexical material after the question that is asked in the first turn of dialogue in a role-playing situation, as shown in Examples (13) and (14). Within this contextualized scenario, the participant is then asked to answer the question:

- (13) You go to your parents' place. You show your mum a watercolour portrait of yourself. She asks: '**Who drew it?**'. At that point you get a phone call. Somebody got the wrong number. You hang up and, to answer your mum, you say:
- (14) You are watching an adventure film with your roommate. Since she wakes up really early every day, she falls asleep and misses the ending. When you switch off the TV, she wakes up and asks you: '**What did they find?** I don't think I'll watch this movie again. I'm sure I would fall asleep again.' To reply you say:

This simple strategy overturns the preference for fragments over full sentences, favouring the spontaneous production of non-fragment answers.<sup>7</sup> Participants are not given answers to the questions and are free to produce the answer that they consider to be most fitting and appropriate in the given fictional context. Although this method is not fully equivalent to

<sup>7</sup> By 'full sentences', we do not mean sentences where all the constituents of the (transitive) sentence are present, but a sentence that, in addition to the focus constituent, also contains at least the finite verb. As will be discussed later (cf. Section 4.3), in our data, the non-focal material was very often pronominalized (in the case of non-focal direct objects) or elided (in the case of non-focal subjects).

spontaneous, naturalistic speech, it has the advantage of showing how speakers realize focus when they are free to create a fictional answer that fits the context.

Given the distance between the answer and the question, created by the intervening lexical material, the ellipsis of the given information in the answer (cf. [Section 2.2](#)) proves less natural. The naturalness of the non-fragment answer is supported by the fact that the question under discussion is not maximally salient at the time in which the answer is uttered, and it is exactly in these contexts that non-fragment answers prove most natural, and the background material is expressed overtly (see [Vallduví 2016](#), [Mayol & Vallduví 2020](#)).

From a methodological viewpoint, on the whole, the QDA technique offers significant advantages in the elicitation of informational focus, making the most of the question-answer test and without restricting the naturalness and spontaneity of the answers.

#### **4. The Production Experiments**

We used the QDA technique first in a production experiment and then in an acceptability-judgement experiment in all three languages: Catalan, Spanish and Italian. As will be discussed in the next sections, the design of the experiments and the choices adopted in the construction of the stimuli further contributed to tackling the methodological issues reviewed in [Sections 2.1](#) and [2.2](#). Recall that we first carried out the experiments on Catalan (cf. [Cruschina & Mayol 2022](#)), but since the Spanish and Italian experiments were exactly the same, we here present them together. Following the introspection studies (cf. [Section 2](#)), for all our experiments, we hypothesized that focus would be expressed in postverbal position, regardless of the languages tested and of its grammatical function. Let us now start with the description and discussion of the production experiments.

##### **4.1. Materials, procedure, participants and hypothesis**

This experiment was carried out in three null-subject Romance languages, Catalan, Spanish and Italian, using the same material in the target language: 16 critical items and 16 filler items. As explained (cf. [Section 3](#)), all the critical items contained a QDA in order to make non-fragment answers more natural. The fillers included other types of questions, such as polar or alternative questions.

In the design of the stimuli, we took specific measures to prevent the methodological problems discussed in the previous sections (cf. [Section 2](#)). Firstly, the scenarios were designed so as to guarantee a neutral interpretation of the focus (i.e. to elicit information focus). Efforts were made to construct the scenarios free of any contextual cues that could trigger a contextual accommodation of special meanings (e.g. mirative) in association with the focus constituent in the answer. Moreover, neither images nor videos were used in order to boost a canonical interpretation of the question and to avoid an obviousness answer. Our ultimate goal was to avoid that the focus in the answer could receive an interpretation other than information focus (cf. 5c). Secondly, few conditions were included in the experimental design. The factor ‘grammatical category’ was only manipulated according to two levels: subject versus object. To this end, only transitive verbs were included in our experimental stimuli. Accordingly, the 16 critical items featuring a QDA consisted of eight subject questions and eight object questions.

A total of 72 speakers participated in the production experiment: 20 native speakers of Catalan, 20 of Spanish and 32 of Italian. All participants received 15 euros in compensation for their time. All our Catalan participants (15 females, 5 males, mean age = 22) were also bilinguals with Spanish (as it is the case for almost all Catalan speakers); they declared that they spoke Catalan at home when growing up and considered Catalan to be their mother tongue. The Spanish participants (15 females, 5 males, mean age = 22.5) were originally from monolingual areas of Spain. Out of the 32 Italian participants (20 females, 12 males,<sup>8</sup> mean age = 39.7), 20 were from continental Italy, six from Sardinia and six from Sicily. We decided to have a larger sample of Italian participants, including speakers from Sardinia and Sicily, because it has been reported in the literature that these two varieties allow for FF with information focus, exactly in the question-answer context and in the absence of additional interpretative effects (see Jones 1993, 2013, Cruschina 2012, 2015, 2021). To control for a possible transfer from these two languages to the regional varieties of Italian spoken in the two islands, we kept the speakers who were originally from (and still living in) Sicily and Sardinia separate from the rest of the Italian speakers, who were from different other regions of the Italian Peninsula.

As for the procedure, each participant met online with an experimenter (there was an experimenter for each language who was also a native speaker of the variety under investigation) for an individual elicitation session. First, the experimenter asked participants some questions about their sociolinguistic background. Next, the task was explained. Participants were placed in a role-playing situation; they were told to imagine they were talking to someone they knew and that this person would ask them a question. Their task would be to answer the question as naturally as possible. After a short familiarization session, the experiment proper began. The context, including the question, was presented in written form and was also read aloud by the experimenter. The context always ended with a prompt for the participant to reply. Participants replied orally. The 32 items were presented in a pseudo-randomized order, alternating fillers and critical items. At the end, the experimenter briefed the participant about the goal of the study. Each session lasted approximately 20 minutes, and the video calls were recorded for subsequent analysis. All the materials for both experiments, as well as the results and the analysis code, are available at <https://osf.io/xdh7r/>.

#### 4.2. The results

We elicited a total of 1,152 answers (16 experimental items \* 72 participants), which were transcribed and annotated. We excluded from the analysis fragment and non-congruent answers (cf. Section 2.1). As for fragment answers, only a small percentage (5.5%) qualified as such (Catalan: 24 fragments, 7.5%; Spanish: 13, 4.0%; Italian: 27, 5.27%), meaning that the experimental setup was largely successful in eliciting full sentences (i.e. sentences with at least a finite verb and the focus constituent). Since the participants spontaneously responded with full sentences instead of fragments without being explicitly instructed to do so, it was then easy to control for the congruence of the answer with

<sup>8</sup> Our participants are admittedly not balanced with respect to gender, there being considerably fewer male than female participants. Nevertheless, we do not observe differences in the position of the focus between males and females (cf. footnote 10).

respect to the question. We have thus only selected congruent answers for the analysis of the results, excluding both answers that did not directly address the issue opened by the question and those in which the background was not matching that of the question – e.g. when a different predicate was used (cf. Section 2.1; see also Leal et al. 2018, Hoot & Leal 2020, Hoot et al. 2020). As for non-congruent answers, we excluded 167 answers (Catalan: 80; Spanish: 45; Italian: 41) that did not directly address the question or whose background was not the same as the one in the question, such as the Spanish examples in Example (15), where we give between brackets the question that appeared in the context. In Example (15a), the speaker chooses to refuse to answer the question. In Example (15b), the speaker does not directly answer the question under discussion since she denies the presupposition that someone taught her to play the guitar. In Example (15c), although the speaker does address the question under discussion, the answer does not meet the congruency requirement since the background does not fully match the content in the question (see Cruschina & Mayol 2022 for further examples of non-congruent answers in Catalan).

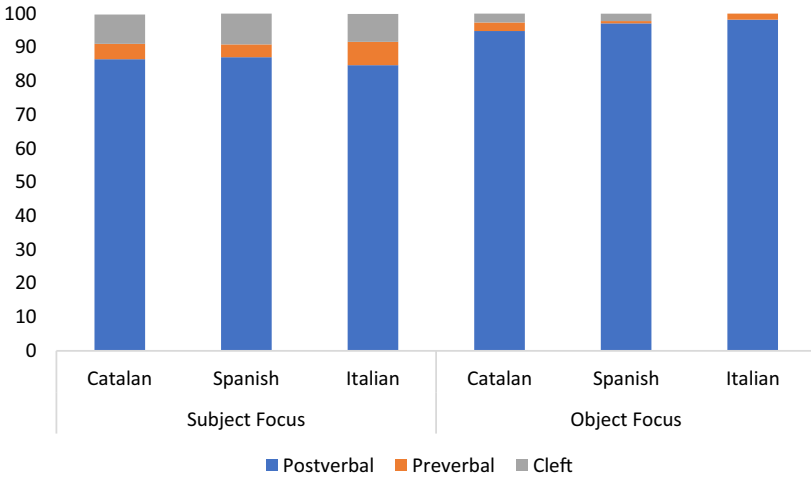
- (15) a. [What did they find at the end [of the movie]?] (Spanish)  
 Si quieres saber el final tendrás que verla.  
 ‘If you want to know the ending, you will have to watch it.’
- b. [Who taught you to play the guitar?]  
 Aprendí a tocar viendo vídeos de YouTube.  
 ‘I learned by watching YouTube videos.’
- c. [What did you erase in that picture?]  
 Estaban pasando dos personas por detrás y las he eliminado.  
 ‘Two people were walking behind and I eliminated them.’

The remaining data set consisted of 935 full sentences (Catalan = 220; Spanish = 271; Italian = 444) that were congruent answers to the question in the context. They were coded according to whether the focus appeared in preverbal position, in postverbal position or whether a cleft had been used. The results, which can be seen in Table 1 and Figure 1, are very similar in all languages.

Participants overwhelmingly produced postverbal foci both with subjects (85.8% overall), as shown in Examples (16)–(18), and with objects (95.6% overall), as in Examples (19)–(21), along with a reduced number of preverbal foci, as in Examples (22)–(24), and of clefts,

**Table 1.** Percentage (and counts) of elicited foci by language and construction

|            | Catalan   |            | Spanish    |            | Italian    |            |
|------------|-----------|------------|------------|------------|------------|------------|
|            | Subject   | Object     | Subject    | Object     | Subject    | Object     |
| Postverbal | 86.5 (90) | 94.8 (110) | 87.1 (115) | 97.1 (135) | 84.7 (183) | 98.2 (224) |
| Preverbal  | 4.8 (5)   | 2.6 (3)    | 3.8 (5)    | 0.7 (1)    | 6.9 (15)   | 1.8 (4)    |
| Cleft      | 8.7 (9)   | 2.6 (3)    | 9.1 (12)   | 2.2 (3)    | 8.3 (18)   | 0.0 (0)    |
| Total      | 100 (104) | 100 (116)  | 100 (132)  | 100 (139)  | 100 (216)  | 100 (228)  |



**Figure 1.** Results of the production experiments: % of elicited foci

which will be discussed in Section 4.4.<sup>9-10</sup> Answers with a preverbal focus, be it the subject (cf. Examples (22) and (23)) or the object (cf. Example 24), were produced with main stress on the preverbal constituent.

- (16) a. You've had some health issues during the last years and are seeing several specialists. Today your family doctor is seeing you and you are discussing the medication you are currently taking. She asks: '**Who prescribed these pills?**'. As you are about to answer, a nurse enters the office. The doctor and the nurse talk for a couple of minutes and then the nurse leaves. To answer the question the doctor had asked you say:
- b. Me les va receptar el doctor González. (**Catalan**)  
 me = them = prescribe.PST.3SG the doctor González  
 'Doctor González prescribed them to me.'
- (17) a. You are in a restaurant with some friends. Just before leaving, a friend at your table sees an old schoolmate from high school and goes to say hi. When he returns to your table, he notices that all the friends have already left and are waiting for him by the entrance. So he goes to them and asks: '**Who paid the bill?** I don't have cash, but we could quickly walk to the closest ATM, so that I can pay my share.' You reply:
- b. He pagado yo. (**Spanish**)  
 have.1SG paid I  
 'I have paid.'

<sup>9</sup> In Examples (16)–(24), we present an English translation of the context, followed by an actual answer elicited in the experiment. Originally, the context was presented in the same language being tested.

<sup>10</sup> As mentioned in footnote 8, we do not observe gender differences regarding the focus position: proportion of postverbal subject foci: females 86.2 and males 85.0; proportion of postverbal object foci: females 97.3 and males 96.6.



- (18) a. You are a high-school teacher. Often, you make your school kids check and correct the exercises among themselves and then you all comment on them. When you are commenting on them, one of school kids says: ‘**Who has corrected my exercises?** There is a correction here that I don’t understand and I would like to have a clarification.’ To reply you say:
- b. Li ha corretti Mattia. (**Italian**)  
 Them = has corrected Mattia  
 ‘Mattia corrected them.’
- (19) a. You go to your college tutor’s office. You explain that you are worried because you failed a course. He asks: ‘**Which subject did you fail?**’ Before you can answer, another student knocks at the door. The tutor asks him to wait until you have finished. To answer his question, you say:
- b. He suspès lingüística. (**Catalan**)  
 have.1SG failed linguistics  
 ‘I have failed linguistics.’
- (20) a. You go to class and sit down next to your friend Júlia. You chat a bit and at some point she asks: ‘By the way, **what did you buy yesterday?** I saw you in the Desigual shop, but I was in a hurry and I could not stop to come and talk to you.’ You reply:
- b. Me compré un jersey rojo. (**Spanish**)  
 me = bought.1SG a sweater red  
 ‘I bought myself a red sweater.’
- (21) a. You visit your brother and are talking about the TV shows both of you have been watching. You tell me you just finished a very cool show. He asks: ‘**Which TV show will you start watching now?**’. You are about to answer but someone knocks on the door. He answers and returns a couple of minutes after. To answer the question he had asked, you say:
- b. Adesso guarderò ‘The Office’. (**Italian**)  
 now watch.FUT.1SG ‘The Office’  
 ‘I will now watch “The Office”.’
- (22) a. You are in a party with some friends. Someone is playing the guitar. You ask if you can borrow it and play a song. Your friends, who were not aware of our music skills, are very surprised. Your friend Júlia asks ‘**Who taught you how to play?**’. Before you can answer another friend congratulates you and you spend a minute talking to him. Then you rejoin Júlia and to answer her question you say:
- b. Rebeca me enseñó a tocar. (**Spanish**)  
 Rebeca me = taught.3SG to play.INF  
 ‘Rebeca taught me to play.’

- (23) a. You are in the kitchen with Alba, your 15-year-old daughter, and are making custard together. Alba is checking all the ingredients on the table and at some point she asks: **'Who bought the lactose-free milk?'** We have always used with normal milk, but we might actually try with this one; I think it can still work well.' You reply:
- b. La mamma ha comprato il latte senza lattosio. **(Italian)**  
 the mum has bought the milk without lactose  
 'Mum bought the lactose-free milk.'
- (24) a. You are in a museum with your grandmother. At some point, you are both watching an artistic composition set in the countryside that you had never seen before. Your grandmother asks: **'What is the farmer eating?'** I forgot my glasses in the car, everything is so small and I cannot really see it.' (And you reply)
- b. Un tros de pa menja. **(Catalan)**  
 a piece of bread eat.3SG  
 'He is eating a piece of bread.'

To obtain estimates for our predictors, we performed a mixed-effect logistic regression, using R (R Core Team 2013) and LME4 (Bates et al. 2015), in which the dependent variable is the position of the focus: postverbal versus preverbal. We excluded clefts from the statistical analysis to concentrate on the preverbal/postverbal contrast, but clefts are briefly discussed in the next subsection. We entered grammatical function (subjects vs object), language (Catalan, Spanish and Italian) and their interaction as fixed effects, with Object as the reference level for grammatical function and Catalan as the reference level for language. The contrast scheme used for the predictors was treatment coding.<sup>11</sup> As random effects, we entered intercepts for subjects and items.<sup>12</sup> The results of this model can be seen in Table 2.

**Table 2.** Summary of the results of a mixed model logistic regression for the production data. Rating by position (Preverbal, Postverbal) and grammatical function (Subject, Object)

| Fixed effect    | Estimate | Standard Error | Z     | p      |
|-----------------|----------|----------------|-------|--------|
| Intercept       | -5.67    | 1.26           | -4.49 | <0.001 |
| Subject         | 0.76     | 0.83           | 0.92  | 0.35   |
| Spanish         | -1.03    | 1.52           | -0.67 | 0.49   |
| Italian         | -1.07    | 1.27           | -0.83 | 0.40   |
| Subject*Spanish | 1.11     | 1.39           | 0.79  | 0.42   |
| Subject*Italian | 1.39     | 1.11           | 1.25  | 0.21   |

<sup>11</sup> We use treatment coding since it is a standard practice, and we chose arbitrary reference levels. There are, however, other coding methods without reference levels. While we acknowledge that these other coding schemes may lead to different results, the resulting model would still be compatible with the overall picture of the phenomenon that we provide in this article.

<sup>12</sup> The model was  $\text{focusPosition} \sim \text{grammaticalFunction} * \text{language} + (1|\text{participant}) + (1|\text{item})$ . The model with random slopes for items and participants did not converge.

As can be seen, the realization of preverbal subjects is not significantly higher than preverbal objects. The effect of language, as well as the interaction between order and language, was also not significant. While this failure to reject the null hypothesis should not be taken to confirm the absence of an effect, the absence of significant effects is consistent with our hypothesis. Almost all speakers, irrespective of their geographical precedence, overwhelmingly produced postverbal foci, not only with objects but also with subjects.

Remember that in the Italian experiment, we had 20 continental speakers, six speakers from Sicily and six speakers from Sardinia. Excluding the speakers from Sicily and Sardinian does not greatly alter the pattern obtained for the whole sample: the rate of postverbal subject foci was 92.4 overall and 92.9 for continental speakers; the rate of postverbal object foci was 98.2 overall and 100.0 for continental speakers. It is, however, interesting to note that 40% of all **SV** utterances and 100% of all **OV** sentences were produced by one speaker from Sicily (cf. Table 2, under Italian), who used preverbal foci in 67% of her overall production. This is indeed a relevant finding with respect to the hypothesis of a possible transfer from Sicilian (cf. Section 4.1), also because, in the preliminary sociolinguistic questionnaire, this speaker stated that Sicilian was the main language spoken at home during her childhood. At any rate, these data are not enough to support the transfer hypothesis beyond this individual case, given that all other five Sicilian speakers did not resort to preverbal foci so frequently. Further research, with more attention to sociolinguistic variables, is indeed necessary before any tenable claim on this issue can be made.

In conclusion, the results of our production experiment differ considerably from those in previous experimental studies. As proposed by introspective studies, we found a strong tendency to place the information focus postverbally for the three languages and the two grammatical categories under study.

### 4.3. Non-focal constituents

In this section, we discuss in more detail the sentences produced in the experiment. As mentioned, the QDA technique was largely successful in eliciting full sentences. However, it is important to point out that not all constituents were repeated in the answers. In their free production, the participants rarely repeated the given constituents in the question: independently of the preverbal or postverbal realization of the focus, the direct objects of subject questions were cliticized, frequently without the dislocation of the given argument, as shown in Example (25), while the subjects of object questions were generally omitted, as in Example (26):<sup>13</sup>

<sup>13</sup> In the Catalan production experiment, the non-focal argument was only realized in 15% of the cases, either as a strong pronoun, when the non-focal argument was the subject, or a clitic-resumed DP in the case of objects. This type of realization was particularly frequent in those contexts that favoured a contrastive interpretation of the subject, as in Example (i), where the strong subject pronoun functions as a contrastive topic, or in Example (ii), where the speaker uses left-dislocation to restate the topic of question after the *ad-hoc* created delay in the scenario:

Example (i)

- (i) a. You to go a bar with a friend you haven't seen in a long time. You sit and your friend asks: 'What do you want to drink?'. Before you can answer, you friend gets a call. She speaks on the phone for a minute and hangs up. To answer her question, you say:

- (25) a. You are a high-school teacher. Often, you make your school kids check and correct the exercises among themselves and then you all comment on them. When you are commenting on them, one of school kids says: ‘**Who has corrected my exercises?** There is a correction here that I don’t understand and I would like to have a clarification.’ To reply you say:
- b. Els ha corregit el Joan. (Catalan)  
 them = has corrected the John  
 ‘Joan corrected them.’
- (26) a. You are in a museum with your grandmother. At some point, you are watching a painting where a farmhouse and a farmer appear. Your grandmother asks you: ‘**What is the farmer eating?** I left my glasses in the car and I can’t see well.’ To reply you say:
- b. Menja pa amb tomàquet.  
 eats bread with tomatoe  
 ‘He is eating tomato bread.’

In several cases, when the subject or the object was already salient in the description of the scenario, it was already omitted or cliticized in the question. See the pronominalization (with a null pronoun in the original stimuli) of the subject in the object question in Example (27) and the cliticization of the direct object in the subject question in Example (28):

- (27) a. You are watching an adventure film with your roommate. Since she wakes up really early every day, she falls asleep and misses the ending. When you switch off the TV, she wakes up and asks you: ‘**What did they find?** I don’t think I’ll watch this movie again. I’m sure I would fall asleep again.’ To reply you say:
- b. Han trobat un tresor. (Catalan)  
 have.3PL found a treasure  
 ‘They found a treasure.’
- (28) a. You go to your parents’ place. You show your mum a watercolour portrait of yourself. She asks ‘**Who drew it?**’. At that point you get a phone call. Somebody got the wrong number. You hang up and, to answer your mum, you say:

- 
- b. Jo vull una cervesa, i tu? (Catalan)  
 I want.1SG a beer and you?  
 ‘I want a beer, and you?’

*Example (ii)*

- (ii) a. You’ve had some health issues during the last years and are seeing several specialists. Today your family doctor is seeing you and you are discussing the medication you are currently taking. She asks: ‘Who prescribed these pills?’. As you are about to answer, a nurse enters the office. The doctor and the nurse talk for a couple of minutes and then the nurse leaves. To answer the question the doctor had asked you say:
- b. Aquestes pastilles me les va receptar el dermatòleg. (Catalan)  
 these pills me = them = prescribe.PST.3SG the dermatologist  
 ‘The dermatologist prescribed these pills to me.’

Similar results are found in the Spanish and in the Italian experiment. For Spanish, we additionally report the marginal production (i.e. three occurrences) of answers with a VOS order with a full lexical object and a final focal subject (see also footnote 17).

- b. Ho ha dibuixat una amiga. **(Catalan)**  
 it = has drawn a friend  
 ‘A friend drew it.’

This kind of data confirmed that the repetition of the given material appearing in the question is infrequent in natural production, and at the same time, it contributed to the simplicity of the analysis, which did not have to be concerned with the intervention of given material in the answers as a possible confounding variable. This potential problem was also avoided in the acceptability-judgement experiment, given that the answers that were the target of the rating task were directly taken from the data elicited in the production tasks (cf. Section 5).

#### 4.4. A note on clefts

Despite the fact that they qualify as congruent answers, we did not include clefts in our analysis. This choice was motivated by several considerations. First of all, we classified as ‘cleft’ different types of cleft constructions, including pseudo-clefts, for which it was not always obvious how to distinguish between the preverbal and postverbal position of the focus. Secondly, it has been shown that clefts as an answering strategy are sensitive to the syntactic category for the focus, being more frequent and common in answer to subject questions than with object questions (Belletti 2005). Thirdly, there are significant differences in the syntactic shape and in the frequency of cleft constructions across Romance languages (De Cesare 2017). For all these reasons, we decided to keep clefts as a separate category in our analysis, a decision that was further motivated by the reduced number of clefted foci in our results (cf. Table 1).

In this section, however, we briefly discuss the main differences across the three languages under consideration so as to provide an explanation for the different incidence in the production task. In Catalan and Spanish, only very few full subject clefts were produced, with either a postverbal or a preverbal focus, as shown in Example (29a) and (29b), respectively:

- (29) a. He estat jo que ho he dibuixat. **(subject cleft; Catalan)**  
 have.1SG been I that it = have.1SG drawn  
 ‘It was me who has drawn it.’
- b. Mi padre fue quien me enseñó a tocar. **(subject cleft; Spanish)**  
 my father was that me = taught.3SG to play.INF  
 ‘It was my father who taught me to play.’

Most of the other clefts produced were, in fact, reduced clefts, with an elided pseudo-relative clause and limited to subject clefts (e.g. Catalan: *He estat jo* ‘It was me’, Spanish: *Fue Paula* ‘It was Paula’) or pseudo-clefts of the kind illustrated in Example (30) for subject clefts and in Example (31) for object clefts:

- (Catalan)**
- (30) a. El qui em va receptar de les pastilles va ser  
 the who me = prescribed.3SG of the pills was  
 el doctor d’aquí el costat.  
 the doctor of here the side  
 ‘He who prescribed me those pills was the doctor from next-door.’

- b. Qui va matar la dona del tren va ser el lladre que  
 who killed.3SG the woman of-the train was the thief who  
 li havia robat el bolso.  
 her = had.3SG stolen the bag  
 ‘He who killed the woman from the train was the thief who had stolen her bag.’
- (31) a. La asignatura que he suspendido es econometria. (**Spanish**)  
 the subject that have1.SG failed is econometry  
 ‘The subject that I failed is econometry.’
- b. El que he esborrat és el cotxe del darrere. (**Catalan**)  
 the what have.1SG deleted is the car from-the back  
 ‘What I deleted is the car in the background.’

As for Italian, no pseudo-clefts were produced, and a radical asymmetry was found between subject (8.3%) and object (0.0%) clefts as answers to *wh*-questions. Most of the subject clefts (12 out of 18) were reduced clefts (e.g. *È stato mio nonno/il mio vicino* ‘It was my grandpa/my neighbour’). The remaining five clefts were full subject clefts. Given that neither full nor reduced clefts are readily available as an answering strategy for questions on the identification of the object (see Belletti 2005), the observed asymmetry and the absence of object clefts are not unexpected. Note that the marginal number of object clefts produced in Catalan and Spanish were, in fact, pseudo-clefts (cf. Example 31).

## 5. The Acceptability-Judgement Experiments

The production experiment showed a sizable preference for the postverbal placement of information focus. It was also observed that a reduced number of preverbal foci were produced in a somewhat larger proportion for subjects than objects. This difference was not statistically significant, but since much of the previous literature, especially with judgement tasks, has found preverbal subject focus to be acceptable (cf. Section 2), we decided to investigate the position of information focus further by means of an acceptability-judgement experiment. By asking participants to rate different options instead of producing only one form, we can gain more insight about the status of the dispreferred form in the production study (that is, the preverbal focus).

Our acceptability-judgement experiments had a simple 2\*2 factorial design, with only two factors with two levels each (1. *syntactic category*: subject vs object, 2. *focus position*: preverbal vs postverbal). These conditions were systematically crossed, allowing the examination of the interactions between factors (cf. Section 5.1). We used written stimuli in order to avoid the possible interference of factors related to prosody and prosodic variation, as well as the presentation of audio stimuli with marginal or unnatural prosodic contours. Our hypothesis is that postverbal foci will be rated higher than preverbal foci in the three languages and for both grammatical functions.

### 5.1. Materials, procedure, participants and hypothesis

We carried out an acceptability-judgement study in which participants were asked to rate how natural a sentence was as an answer to a question with a 7-point Likert scale whose extremes

were labelled as ‘impossible’ and ‘perfect’. We used the same stimuli as in the production experiment: a description of a context with a QDA, with the addition of an answer taken from the elicited data in the production experiment. Each answer was shown in two versions: with a preverbal focus and with a postverbal one, as shown in Examples (32)–(34) for Catalan, Spanish and Italian, which are answers to the questions in Examples (13), (14) and (18a), respectively. Recall that in the production experiment, participants mostly produced postverbal foci. This means that for this acceptability-judgement task, we have added a version of the answer with the alternative order (i.e. with a preverbal focus) that, in fact, was never – or almost never – produced in the first experiment. In line with the data from the production experiment (cf. Section 4.3), moreover, we consistently omitted or cliticized the non-focal argument of the sentence:<sup>14</sup>

- (32) a. Ho ha dibuixat una amiga. (**Catalan**)  
 b. Una amiga ho ha dibuixat.  
 ‘A friend drew it.’
- (33) a. Han encontrado un tesoro. (**Spanish**)  
 b. Un tesoro han encontrado.  
 ‘They found a treasure.’
- (34) a. Li ha corretti Giovanni. (**Italian**)  
 b. Giovanni li ha corretti.  
 ‘Giovanni corrected them.’

The experiment included 16 critical items: the QDA contexts from the production experiment (eight containing subject questions and eight with object questions) together with one answer with either a preverbal or a postverbal focus. Two lists were built so that each participant would only see one version of the answer. Each list also contained 16 fillers, which were also the same used in the production experiment. Since the fillers consisted of polar or alternative questions, they were only shown in one version, with no word order variation. Most of the fillers contained acceptable and felicitous answers, exactly as produced in the first experiment, but we also included a few fillers with answers that were either nonsensical, as in Example (35), or ungrammatical, as in Example (36) (the grammatical answer is shown in Example (36b’)). This was done for two reasons: on the one hand, to encourage participants to use the full scale and, on the other, to have a baseline to compare our items to fully unacceptable ones.

- (35) a. It’s Saturday morning. You are on the sofa, looking at your mobile phone. Your mother comes and tells you: ‘I am going to buy some clothes. Do you want to come along?’. To reply you say:  
 b. Non mi piace il tennis. (**Italian**)  
 not me = please.<sub>3SG</sub> the tennis  
 ‘I don’t like tennis.’

<sup>14</sup>The orthotypographical convention in Catalan is to separate the fronted constituent from the rest of the sentence by a comma (GIEC 2016), while postverbal foci are not marked. The stimuli in this experiment departed from this convention for consistency reasons so that preverbal and postverbal foci would not have different markings and so that the items in the three languages would be maximally similar (see footnote 15 for more discussion on this issue).



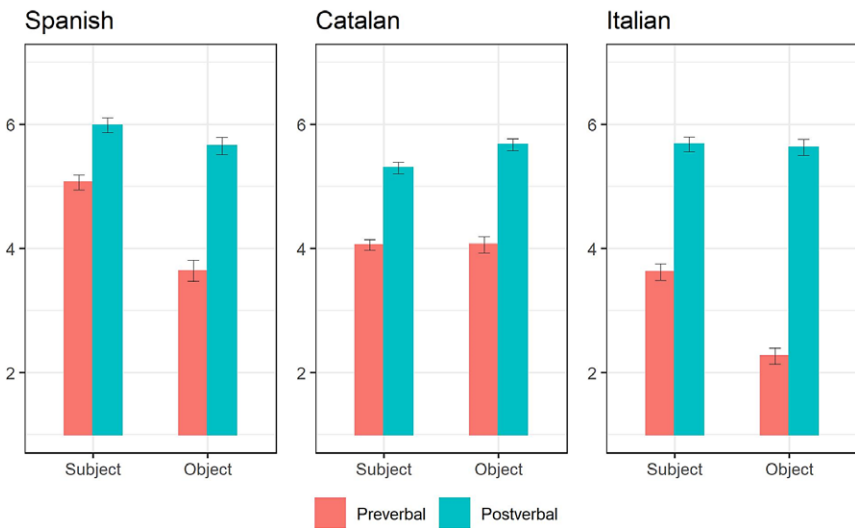
- (36) a. You are walking in the city centre with your father. You walk past a bookshop and you stop in front of the shop window. You stare at a book. Your father asks you: ‘Do you know this book?’. To reply you say:
- b. A mí interesante parece. (**Spanish**)  
to me interesting looks
- b’. (A mí) me parece interesante.  
‘It looks interesting to me.’

A total of 390 native speakers of Catalan, 197 native speakers of Peninsular Spanish and 200 native speakers of Italian took part in the experiment. Participants were recruited through Prolific (an online platform to recruit research participants for studies, surveys or experiments) or social networks, and the data were collected through Google Forms. First, participants read the instructions in which the procedure was explained. Then, each item was presented individually in a random order, and participants were asked to rate the degree of acceptability of each answer in the context in which it appeared. The task lasted 15 minutes approximately.

Before looking at the results, we would like to close this section with a brief discussion of the type of stimuli that can be used in a quantitative study (written vs auditory stimuli) and with a further justification of our choice to use written stimuli in the rating experiments. The majority of the previous studies that used acceptability judgements adopted written stimuli – with exception of Hoot (2012, 2016), which had auditory stimuli. As observed by Escandell Vidal & Leonetti (2019), prosodic cues are missing with written stimuli, making it difficult for the experiment to determine whether a sentence with an SVO order was interpreted as involving a marked initial focus subject (SVO) or rather a sentence with an unmarked SVO/(S)OV order (cf. Examples 32b, 33a, 34b), thus providing an explanation for the higher scores attributed to SVO as opposed with OVS, which only allows a focal reading of the object. This is indeed a shortcoming of written stimuli, but at the same time, it must be noted that the use of auditory stimuli would run into a number of risks. The prosodic features of the focal structure may distract the experimental participants or even shift their attention to the position of the pitch accents and to the acoustic realization of the prosodic contour. Different factors can influence these properties, including the type of focus and dialectal variation (see Prieto et al. 2015 and references therein; see also Bianchi et al. 2015, 2016 on the prosodic differences between corrective and mirative focus in Italian). Note also that the use of auditory stimuli would involve the production of word order options – to be recorded before the experiment and presented to the participants as experimental stimuli – that are already known to be marginal or totally unacceptable, thus running the risk of sounding artificial and unnatural. For all these reasons, we decided to use written stimuli in our rating experiments.

## 5.2. The results

The results of the acceptability-judgement experiment, shown in Figure 2, largely confirm the findings of the production experiment: in all languages, postverbal focus is always preferred over the two types of preverbal focus, both in the case of subjects and objects. Postverbal foci receive similar ratings in the three languages and with respect to the two grammatical functions. In contrast, the ratings for the preverbal foci vary across language. In Catalan, there is no difference between the ratings of preverbal subjects and objects (both are



**Figure 2.** Results of the acceptability-judgement experiments: Average ratings of raw scores as a function of focus position and grammatical category across languages.

4.06), while both in Italian and Spanish, preverbal subjects are rated higher than objects (5.96 vs 3.64 for Spanish and 3.62 vs 2.26 for Italian). In addition, the mean ratings for both types of preverbal foci are higher in Spanish than in Italian, while the rating for Catalan is intermediate between the two other languages.<sup>15</sup>

To test for the statistical significance of the data, we performed a mixed model ordinal regression for each of the three languages on the ratings, with grammatical function, position of the focus and their interaction as fixed effects, and participants and items as random effects.<sup>16</sup> In Catalan, the preverbal position significantly leads to lower ratings ( $\beta = -2.06$ ,  $p < 0.001$ ), but neither grammatical function ( $\beta = -0.45$ ,  $p = 0.45$ ) nor the interaction between the two effects is significant ( $\beta = 0.44$ ,  $p = 0.60$ ). In contrast, in Spanish, position of the focus and the interaction between position and grammatical function are significant (and the effect of grammatical function on its own is not). As in Catalan, the ratings of preverbal foci are significantly lower ( $\beta = -3.12$ ,  $p < 0.001$ ) than the ratings of postverbal foci. Unlike Catalan, however, in Spanish, the items with foci that were both subjects and preverbal received significantly higher ratings ( $\beta = 1.33$ ,  $p < 0.001$ ). Finally, in Italian, we find the same situation as in Spanish: the ratings of preverbal foci are significantly lower ( $\beta = -5.33$ ,  $p < 0.001$ ) than the scores assigned to postverbal foci, and the ratings of foci that

<sup>15</sup> As mentioned in footnote 14, preverbal foci are often marked by a comma in Catalan. In order to rule out that the lack of comma in our items had any effect on the results, we ran a second version of the experiment in which preverbal foci were marked by means of a comma (number of participants = 233). The results of this second version are very similar to the first one: postverbal subjects = 5.34, preverbal subject = 4.29, postverbal object = 5.8, preverbal object = 4.31.

<sup>16</sup> In the three languages, the model was the following: rating  $\sim$  position \* grammaticalFunction + (position|items) + (position\*grammaticalFunction|participants), with by-participant intercepts and slopes for the effect of the interaction of position and grammatical function and by-items intercepts and slopes for the effect of position (since items did not vary by grammatical function; they either contained a subject or an object focus).

**Table 3.** Mean ratings of fillers by language and acceptability compared with the mean ratings for preverbal foci

|                |                    | Catalan | Spanish | Italian |
|----------------|--------------------|---------|---------|---------|
| Fillers        | Acceptable         | 6.00    | 6.32    | 5.97    |
|                | Nonsensical        | 2.12    | 1.73    | 1.78    |
|                | Ungrammatical      | 1.10    | 1.37    | 1.14    |
| Preverbal foci | Preverbal subjects | 4.06    | 5.96    | 3.62    |
|                | Preverbal objects  | 4.06    | 3.64    | 2.26    |

are both subjects and preverbal are significantly higher ( $\beta = 2.13$ ,  $p = 0.001$ ) than those given to preverbal objects. Note that the effect of position for object is larger in Italian than in Spanish ( $-5.33$  vs  $-3.12$ ), which translates into lower ratings for preverbal foci in Italian than in Spanish. More details about the models for Catalan, Spanish and Italian can be found in the Appendix (cf. [Tables A1, A2 and A3](#)).

A striking result of this second task is that preverbal foci are not rated as unacceptable by our participants. Going back to the raw results, it is informative to compare the ratings of preverbal foci to the ratings of the fillers, as shown in [Table 3](#) (see Examples (35) and (36) above for examples of nonsensical and ungrammatical fillers).

It can be seen that both ungrammatical and nonsensical fillers obtain very low ratings. In contrast, sentences with preverbal foci received higher ratings, towards the middle of the scale, with the exception of preverbal objects in Italian. Thus, rather than being treated as unacceptable, sentences with preverbal foci are judged as marginally acceptable to some extent, particularly in the case for subjects. Interestingly, the three languages seem to form a continuum with respect to the degree of acceptability of those sentences: Spanish displays the highest degree (mean of 4.35), followed by Catalan (4.06) and Italian (2.94). In addition, two of the combinations of language and grammatical function clearly escape the area of what we have called marginal acceptability at both extremes of the scale: in Spanish, preverbal subjects are rated almost as high as postverbal subjects (5.06 vs 5.99), while, in Italian, preverbal objects are rated almost as low as the unacceptable fillers (2.26). Catalan, on the other hand, seems to be pretty happy with focus fronting of objects in information focus (4.06), more so than Spanish (3.64) or certainly Italian (2.26). Although postverbal focus is clearly preferred in Catalan, too, it is noteworthy that in this language, fronting the object is rated just as high as preverbal subjects (4.06).

To sum up, the acceptability-judgement experiment corroborated the main result from the production experiment: postverbal foci are preferred to preverbal foci in any of the combinations we tested. In addition, giving speakers the chance to rate all the different options also helped to paint a more complex picture of the distribution of preverbal foci. A focal interpretation of the preverbal constituent is available to some extent, particularly for subjects in Spanish, less so in Catalan, where both preverbal subjects and objects obtained marginal ratings, and even less so in Italian, where preverbal objects are unacceptable. The next section explores a way of making sense of this difference regarding how different languages map information structure to syntax.

## 6. Restrictive and Permissive Languages

Romance languages display an SVO order in canonical sentences and use variants of this word order to convey different informational values, as we saw for the different values of focus fronting (cf. Section 1). There is, however, significant variation in how available and productive these non-canonical orders are, which points to different ways of mapping information structure to syntax. In particular, Leonetti (2017) distinguishes two groups of languages within the Romance family: what he calls ‘restrictive’ and ‘permissive’ languages. Restrictive languages include Catalan, Italian and French, while permissive languages include Spanish, European Portuguese and Romanian.

Restrictive languages have a straightforward mapping between syntax and information structure: marked orders are only allowed for specific informational partitions, and specific informational partitions tend to be expressed through marked orders. This results in the avoidance of complex sentences without informational partitions; instead, clefts, dislocations or frontings are used to separate the focal and non-focal segments of an utterance. Another consequence is that wide-focus readings are restricted and incompatible with most non-canonical orders. In contrast, in permissive languages, the mapping between syntax and information structure is less transparent. The same order is compatible with different interpretations, such as narrow- or wide-focus readings, and it is possible that a marked order does not encode a clear informational partition.

Leonetti (2017) describes three phenomena in which the differences between the two groups of languages most clearly surface: the acceptability of constructions with subject inversion, the grammaticality of VSO and the productivity of non-focus fronting constructions (see also Leonetti 2014).

As for subject inversion, although it is possible in both groups of languages, its acceptability is subject to less constraints in permissive languages. For instance, in Spanish, inversions with unergative verbs can more easily receive a wide-focus interpretation. In Catalan and Italian, subject inversion with some unergative verbs, as in Example (37), would most likely be interpreted with narrow focus on the subject:

- (37) Sta piangendo **la bimba**. (**Italian**)  
 is crying the little girl  
 ‘The little girl is crying.’  
 (Leonetti 2017: 896)

A similar situation is also found with VOS sentences. In Catalan and Italian, this order encodes a clear topic-focus partition in which the postverbal subject is interpreted as narrow focus.

- (38) a. Ha mangiato la torta un gatto. (**Italian**)  
 has eaten the cake a cat  
 ‘It was a cat who ate the cake.’  
 b. Havia comprat la casa el metge. (**Catalan**)  
 had bought the house the doctor  
 ‘It was the doctor who bought the house.’  
 (Leonetti 2017: 899)

In addition, both languages often prefer a structure with less postverbal material in which the object is cliticized or dislocated.

- (39) a. (La torta,) l'ha mangiata un gatto (, la torta). **(Italian)**  
 'The cake, it was a cat that ate it.'
- b. (La casa,) l'havia comprat el metge (, la casa). **(Catalan)**  
 'The house, it was the doctor who had bought it.'

In Spanish, this strategy is much less frequent, and VOS sentences, such as Example (40), are compatible not only with narrow focus on the subject (Zubizarreta 1998, 1999: 125, 4233) but also with a wide focus reading (Leonetti 2017: 900–901).<sup>17</sup>

- (40) Ha comprado el edificio una empresa china. **(Spanish)**  
 have bought the building a company Chinese  
 'A Chinese company bought the building.'

An even more striking difference concerns the grammaticality of VSO orders. While they are available in Spanish, they are not in Catalan and Italian as shown in Example (41).<sup>18</sup>

- (41) a. Ha comprado Eva el periódico. **(Spanish)**  
 has bought Eva the newspaper
- b. \*Ha comprat l' Eva el diari. **(Catalan)**  
 has bought the Eva the newspaper
- c. \*Ha comprato Eva il giornale. **(Italian)**  
 has bought Eva the newspaper  
 'Eva bought the newspaper.'

Leonetti (2017) takes this contrast to be a consequence of the different behaviours of permissive and restrictive languages. In Spanish, a VSO sentence usually receives a wide-focus interpretation, so this would be an example of a marked order surfacing in a context

<sup>17</sup> In line with this observation, in our production task, VOS sentences were attested in the Spanish experiment but not in the Catalan and Italian counterparts. The number of VOS sentences with a full lexical object DP produced in the Spanish experiment, however, was very marginal: only three answers (e.g. *Me ha recetado [estas pastillas]<sub>Obj</sub> [el osteópata]<sub>Subj</sub>* 'The osteopath prescribed me those pills'). Because of this low incidence, sentences with this word order were excluded from the answers provided in the rating task, where all the items with a focal subject involved the cliticization of the object (cf. Section 4.3).

<sup>18</sup> Two answers with the VSO order were elicited in our production experiment in Italian, but it must be noted that this linear order was not produced in wide-focus contexts but rather in answers to a subject question, that is, with a postverbal focal subject in the answer, as shown in Example (ib):

*Example (i)*

- (i) a. Chi ha comprato il latte senza lattosio?  
 who has bought the milk without lactose  
 'Who bought lactose-free milk?'
- b. Ho comprato **io** il latte senza lattosio.  
 have bought I the milk without lactose  
 'I bought lactose-free milk.'

This VSO order is characterized by the lack of a resumptive clitic for the final direct object and is known in the Italian literature as 'marginalization'. More generally, marginalization refers to the post-focal discourse-given constituents that occur unstressed in situ (Cardinaletti 2001, 2002) and is limited to (Standard) Italian insofar as clitic resumption proves obligatory in the same contexts in other Romance varieties, including Catalan and Spanish (see Cruschina 2010).

without informational partitions. This state of affairs is not permitted in restrictive languages; an informational partition is required for a marked VSO order, but none is possible with two postverbal constituents.

Finally, non-focal fronting also sets apart the two groups of languages. In this construction, a non-focal element is fronted (and unlike dislocations, it does not display a resumptive clitic). The fronted constituent usually contains an anaphoric element, a comparative or a quantifier, as shown in Example (42) for Spanish. This construction is also available in Catalan and Italian, as shown in Examples (43) and (44), but it is certainly less productive than in Spanish. According to Leonetti (2017: Sections 3.2.1–3.2.2), for example, the counterparts of Example (42c) in Catalan and Italian are unacceptable:

- (42) a. Eso creo yo. (**Spanish**)  
 that think I  
 ‘That’s what I think.’
- b. Bastante trabajo tengo ya.  
 enough work have.1SG already  
 ‘I have enough work already.’
- c. Peor me pareció su anterior trabajo.  
 worse to-me = seemed his previous work  
 ‘His previous work seemed worse to me.’
- (43) a. Això em van dir. (**Catalan**)  
 that me = tell.PST.3PL  
 ‘That’s what I was told.’
- b. Algú hi trobaràs, a la casa.  
 someone there = find.FUT.2SG at the house  
 ‘(For sure) you will find someone at the house.’
- (44) a. Allo stesso modo si comportò suo figlio. (**Italian**)  
 at-the same way RFL = behave.PST.3SG his son  
 ‘His son behaved in the same way.’
- b. Qualcosa farò (non preoccuparti).  
 something do.FUT.1SG not worry.IMP  
 ‘Something I will do (don’t worry).’

Leonetti (2017) does not discuss the realization of information focus in permissive and restrictive languages. However, our experimental data fit nicely into the described pattern. While all three languages show a strong tendency to resort to a dedicated word order with a more transparent information-structure partition for focal subjects (i.e. VS), Spanish is more permissive than Catalan and Italian in also allowing a narrow-focus interpretation of the subject in an SV order.<sup>19</sup> In fact, instead of a dichotomy between restrictive and permissive languages, our data point towards a continuum from more permissive to less permissive

<sup>19</sup> Additional evidence for the distinction between restrictive and permissive Romance languages comes from the position of the subject in why-questions (see Bianchi et al. 2017, Kaiser et al. 2019, Schmid et al. 2021, Krieger & Kaiser 2023).

languages, where Catalan is less permissive than Spanish but more permissive than Italian in allowing a focal interpretation of preverbal subjects (cf. Figure 2, Section 5).

This continuum is clear if we simply look at the general mean scores of preverbal foci from our acceptability-judgement experiments (Spanish: 4.35, Catalan: 4.06, Italian: 2.94), but it is even more evident when the effects of the grammatical function are taken into account. These results show that the ratings of the preverbal foci vary across languages depending on whether the focus is a subject or an object (Spanish: 5.96 for preverbal subjects vs 3.64 for preverbal objects, Catalan: 4.06 for both preverbal subjects and preverbal objects, Italian: 3.62 for preverbal subjects vs 2.26 for preverbal objects). The grammatical category is irrelevant in Catalan, where there is no difference between the ratings of preverbal subjects and objects, but it has significant effects in Spanish and Italian, where preverbal subjects are rated higher than objects. This difference with respect to the sensitivity to the grammatical category of the focus is not captured by Leonetti's (2017) distinction between permissive and restrictive Romance languages, and it is certainly an interesting result that we will investigate further in future work.<sup>20</sup> At the same time, it is worth noticing that it reflects a long-standing and independent observation in the relevant literature about the general syntactic behaviour of Catalan, where information-structure conditions seem to be the most relevant factor in determining the surface word order (see Vallduví 1992, 1995, who defines Catalan as a 'discourse configuration language').

## 7. Conclusions

This paper has explored the realization of information focus in three Romance languages: Catalan, Spanish and Italian. Using a new methodology that greatly improves the naturalness of full sentences as answers to wh-questions, we show that information foci are preferably realized in a postverbal position in the three languages, in support of previous theoretical proposals, mostly based on introspection. The findings about the production of information focus are corroborated by an acceptability-judgement task: postverbal foci are always rated higher than preverbal foci. At the same time, however, the observation coming from more recent experimental studies that a focal interpretation of the preverbal constituent in answers to questions is possible finds a reflex in the data from our rating experiment. This interpretation is especially available with preverbal subjects in Spanish, showing an important difference between the three languages. Thus, the preverbal position of foci cannot totally be excluded and the extent to which they are acceptable varies from language to language: they are rated higher in Spanish, followed by Catalan and with Italian in the third place. We interpreted this difference in the light of the hypothesis that was independently formulated in Leonetti (2017), according to which Catalan and Italian are more restrictive than Spanish with respect to the mapping between syntax and information structure. Instead of a binary distinction, we propose a continuum from more permissive to more restrictive languages, according to which Italian is more restrictive than Catalan.

<sup>20</sup> Intuitively, the subject/object asymmetry in Spanish and Italian could simply be taken to reflect a preference for the syntactic options that coincide with the canonical order SVO. On the one hand, it could be that, in contrast with OV orders, SV is generally judged as acceptable by native speakers because it is constantly compared with the basic word order. On the other, the size differences between our three Romance languages with respect to the effects of the grammatical function speak against the hypothesis that this performance factor could be the sole factor determining this asymmetry.



In addition to empirical matters, this article contributes to methodological issues. Our experimental method allowed us to address and explore central questions that cannot otherwise be answered with traditional and less refined methods of data collection. In this study, we investigated the validity of the traditional and of the experimental methods adopted so far, but we also investigated the possible causes of the differences between production and rating tasks and the sources of the crosslinguistic differences. Although we believe that our experimental approach and empirical proposal are on the right track to explain both large- and small-scale differences in acceptability across the languages that we examined, we are aware that we have only begun to scratch the surface of the potentialities that experimental syntax offers to shed light on these questions. In particular, from a theoretical perspective, it will be necessary to provide a deeper characterization of restrictive and permissive languages that is able to explain the optionality of focus movement. This question is addressed in Bianchi & Bocci (2012), who propose the alternative spellout approach, according to which FF always takes place and what is optional is where the moved constituent is pronounced: either in its base position, yielding in-situ focus or in its landing site, giving rise to FF. Following Bobaljik & Wurmbrand (2012), Bianchi's (2019) refines further the alternative spellout approach to explain the optionality of FF in Italian, which in her analysis is regulated by soft constraints that operate at the interface between LF (Logical Form) and PF (Phonological Form).<sup>21</sup> In future work, we would like to apply and adapt this approach to the data presented in this paper in order to account not only for the optionality of movement but also for the gradience of the judgements that emerged in our rating experiment, thus providing a more principled explanation of the distinction between restrictive and permissive languages.

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<sup>21</sup> Some studies have pointed out that the optional availability and acceptability of FF seem to be sensitive to the interpretation of the focus (see Cruschina 2021). In this sense, it is important to point out that Bianchi & Bocci (2012) and Bianchi (2019) deal with corrective focus, while the analysis that we develop below is centred on information focus. For a different approach to the optionality problem, couched within Optimality Theory (i.e. stochastic OT), see Gabriel (2010).

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## Appendix

**Table A1.** Summary of a mixed model ordinal regression for the Catalan acceptability data. Rating by position (Preverbal, Postverbal) and grammatical function (Subject, Object). Model: rating ~ position \* grammaticalFunction + (position|items) + (position \* grammar|participants)

| Fixed effect      | Estimate | Standard Error | Z     | p       |
|-------------------|----------|----------------|-------|---------|
| Preverbal         | -2.06    | 0.61           | -3.3  | < 0.001 |
| Subject           | -0.45    | 0.61           | -0.74 | 0.45    |
| Preverbal*Subject | 0.44     | 0.86           | 0.51  | 0.60    |

**Table A2.** Summary of a mixed model ordinal regression for the Spanish acceptability data. Rating by position (Preverbal, Postverbal) and grammatical function (Subject, Object). Model: rating ~ position \* grammaticalFunction + (position|items) + (position \* grammar|participants)

| Fixed effect      | Estimate | Standard Error | Z      | p       |
|-------------------|----------|----------------|--------|---------|
| Preverbal         | -3.12    | 0.28           | -10.93 | < 0.001 |
| Subject           | 0.75     | 0.42           | 1.78   | 0.07    |
| Preverbal*Subject | 1.33     | 0.34           | 3.87   | < 0.001 |

**Table A3.** Summary of a mixed model ordinal regression for the Italian acceptability data. Rating by position (Preverbal, Postverbal) and grammatical function (Subject, Object). Model: rating ~ position \* grammaticalFunction + (position|items) + (position \* grammar|participants)

| Fixed effect      | Estimate | Standard Error | Z      | p       |
|-------------------|----------|----------------|--------|---------|
| Preverbal         | -5.33    | 0.41           | -12.97 | < 0.001 |
| Subject           | 0.03     | 0.54           | 0.06   | 0.94    |
| Preverbal*Subject | 2.13     | 0.52           | 0.52   | < 0.001 |