

THE CAUSAL VALUE OF *CÓMO*: FACTIVITY, MIRATIVITY AND ILLOCUTIONARY FORCES

Bernat Castro

Universitat Autònoma de Barcelona

ABSTRACT. The interrogative element *cómo* ‘how’ of Spanish has a double meaning: that of manner and that causal. With the former, it behaves typically, but, with the latter, its behavior manifests the specificities of *por qué* ‘why’. Two analyses are proposed, both in cartographic terms: one for *cómo* with a causal value and another one for *cómo* with this value in front of *es que* ‘is that’ (*cómo es que*). Indeed, the conditions for embedding for these two types are different (much more restricted for the first one than for the second one). It is proposed that sentences with *cómo* without *es que* have an exclamative illocutionary force with an interrogative component, while the force of sentences with *cómo es que* would be a variant of the interrogative one (interro-exclamative force). In both cases, their factual and mirative nature is syntactically relevant. The general analysis proposal is finally applied to a poorly studied element, *que cosa que* (Ripacurtian Catalan and Aragonese).

Keywords. factivity; mirativity; left periphery; interrogative elements; illocutionary force

RESUMEN. El elemento interrogativo *cómo* del español tiene un doble significado: el de manera y el causal. Con el primero se comporta como un elemento interrogativo típico, no así con el segundo: entonces se asemeja a *por qué*. Se proponen dos análisis, en términos cartográficos: uno para *cómo* con un valor causal y otro para *cómo* con este valor ante *es que* (*cómo es que*). En efecto, las condiciones de subordinación no son las mismas en ambos casos (mucho más restringidas en el primero que en el segundo). Se propone que las oraciones con *cómo* sin *es que* tienen una fuerza ilocutiva exclamativa con un componente interrogativo, mientras que la fuerza de las oraciones con *cómo es que* sería una variante de la interrogativa (interro-exclamativa). En ambos casos es relevante sintácticamente su carácter factivo y mirativo. La propuesta general se adapta finalmente a un elemento muy poco estudiado, *que cosa que* (catalán ribagorzano y aragonés).

Palabras clave. factividad; miratividad; periferia izquierda; elementos interrogativos; fuerza ilocutiva

1. Introduction

In different languages, there is an interrogative element corresponding to causes associated with an extra meaning, that of surprise or counter-expectation.¹ In general, this interrogative element has the same form of that used in questions for manners, that is, that whose meaning is roughly equivalent to ‘in which way’. In some languages, like English, it contains this element (*how come*); in others, like Spanish, it has the exact form of this element (*cómo* ‘how’). The “causes” that constitute the unknown in these interrogative sentences are what can be better called “explanations”: the speaker

¹ I acknowledge the funding from the projects FFI2014-56968-C4-1-P, FFI2017-87140-C4-1-P and FFI2016-81750-REDT of the Spanish Government and from the project 2017SGR634 of the Generalitat of Catalonia and, in addition, from the scholarship FPU15/04194 of the Spanish Government. I thank Maria Lluïsa Hernanz and the assistants to Recent Issues in the Syntax of Questions (University of Konstanz), the XIII Congreso Internacional de Lingüística Xeral (University of Vigo) and the 28th Colloquium on Generative Grammar (Rovira i Virgili University), all of them in 2018, for their comments and, for the same reason, two anonymous reviewers. Usual disclaimers apply.

requires the information that can help him/her understand (in other words, the information that is looked for is that that would have avoided the speaker's shock).

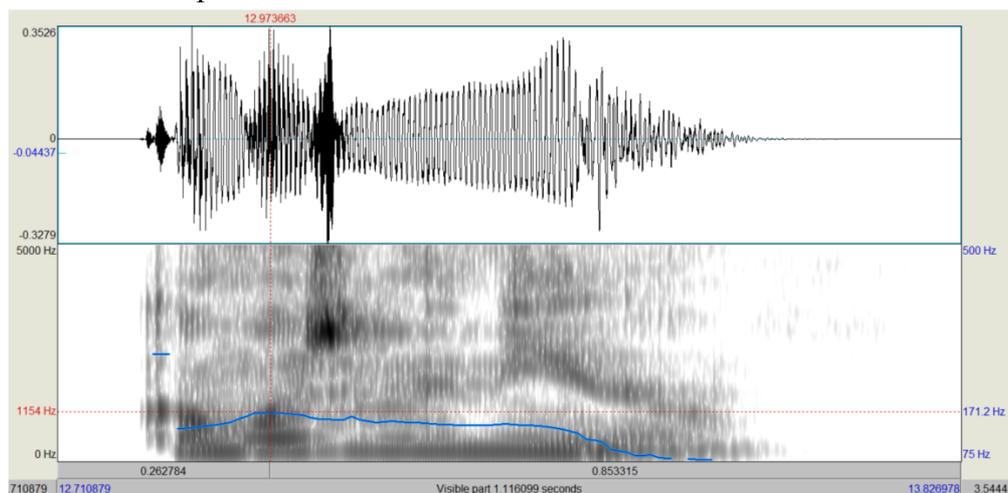
Observe in (1): (1a) can be answered with (1b), if it is interpreted as a question for manners, or with (1c), if it is interpreted as a question for causes with the nuance that the speaker is shocked: s/he had a counter-expectation about that person coming (this is associated with some degree of disapproval; this was also detected by Obenauer (2004) for some interrogative sentences of Pagotto, a north-eastern variety of Italian).

- (1) a. *¿Cómo has venido?*
how have_{2Sing} come?
 'How have you come?' / 'How come you came?'
- b. *En tren*
by train
- c. *Quería saludarte.*
wanted_{1Sing} to.say.hello.to.you
 'I wanted to say hello to you.'

Note that, by adding certain information, it is possible to pragmatically direct the question towards the second interpretation, the causal one. For example, '... being ill', as in *¿Cómo has venido, estando enferma?* In this case, the sentence tends to be interpreted as a question for a cause in which the proposition under interrogation is strongly shocking to the speaker and the motivation for this attitude is made explicit. This surprise or counter-expectation meaning corresponds to the typological notion of mirativity, which was established as such by DeLancey (1997, 2012) and refined by Aikhenvald (2012).

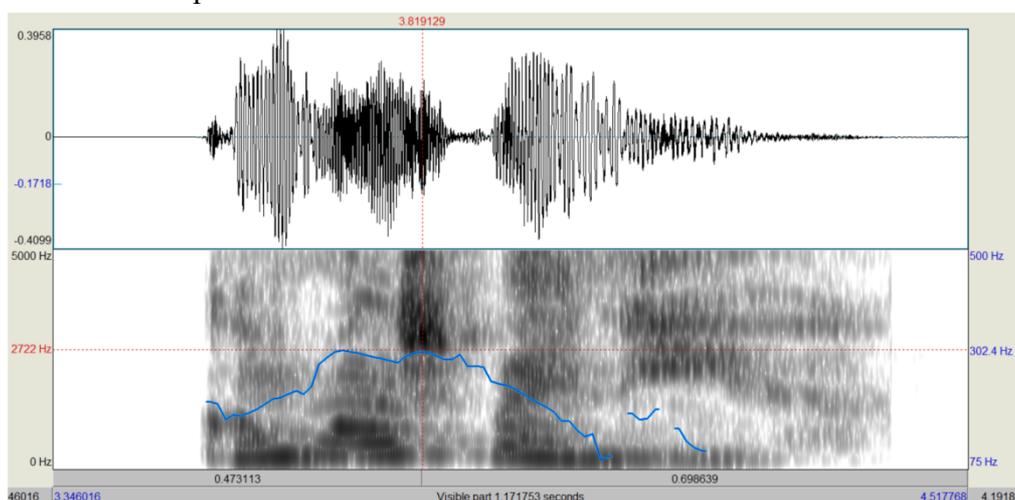
Note also that the intonation would be different depending on the interpretation. This is presented in (2) in a tentative manner, since this is an issue that merits specific attention (the computer program used is Praat). The blue line indicates the intonation. (2a) shows the typical descendent pattern of interrogative sentences; it corresponds to the manner interpretation of (1). (2b) shows a similar pattern, but clearly steeper, with an important raising at the end of the interrogative word. (The importance of giving some information about the intonation was suggested by a reviewer; more is presented at the end of section 4, considering the example (25).)

(2) a. Manner interpretation



¿Cómo has venido?

b. Causal interpretation



¿Cómo has venido?

There is a possibility for the Spanish interrogative element *cómo* with a causal value that is not shared by elements with a similar meaning and form in other languages: this *cómo* can appear in front of what seems to be a cleft structure (with the verb *ser* ‘to be’ and a conjunction, *que* ‘that’), *cómo es que*. This is presented in (3). Both questions with *cómo* alone and with *cómo es que* can have a causal value, which is the relevant one in this paper, but, in spite of this, their meaning is not identical.² (It is very difficult

² There is an English structure that seems the literal equivalent of *cómo es que*: *how is it that*. This structure is not going to be studied here, but note that it is unusual to use *how* with a causal value, so the alternation found in Spanish does not appear to be shared by this language. However, it is possible to find some instances of *how* with a semantic value that can be considered causal (note in (ia) and (ib) the compatibility with negation and see the comments on example (8) below):

- (i) a. More like, how don’t you use The Spread? (thatsthespread.com)
- b. How didn’t he note the smell the first time he’d entered the forge? It took magic to tell him something that was in plain sight?
(books.google.es > Dragon Forged: Chronicles of Dragon Aerie, Travis Simmons)
- c. How did you sleep after that?!

to interpret a sentence like (3) as a question for manners in European Spanish, so it almost necessarily has a causal meaning in this variety, but the manner interpretation is available in some American varieties.)

- (3) ¿Cómo es que has venido?
how is that have_{2Sing} come?
 ‘How come you come?’

Given this situation in Spanish,³ should it be considered that there is a single interrogative element with two values or two completely different interrogative elements that happen to be homophones? It seems that it is possible to defend (and, therefore, it must be defended, since it is the most elegant solution) that there are two almost identical interrogative elements, differentiated only by some feature.⁴

Although this is not the focus of this article, it seems interesting to note that, in semantic terms, it is not difficult to perceive the existence of a link between causes and manners: the notion ‘manner’ is remarkably broad and includes, crucially, procedures, which have results. For example, the question *How do you prepare the cocktail?* can be answered with *I mix it and then I beat it*, which is a procedure, and the application in this procedure results in the cocktail (i.e. the cocktail prepared). One can also think of a recipe: it is the presentation of a way to prepare a meal, and implicitly it has a result (a cake, for example). Therefore, the relation between the notions of ‘procedure’ and ‘cause’, on one hand, and the notions (respectively linked to the previous ones) of ‘result’ and ‘consequence’, on the other hand, seems clear.

In addition, it should be noted that many languages have an interrogative “element” or “structure” for explanations in front of situations that are somewhat shocking or surprising. As it has been said, it usually contains the word *that*, by itself, is the interrogative element for manners. In English, it is *how come*. See in (4) some of them:

- (4) *how come* (English), *come mai* (Italian), *wieso* (German), *com així* (Balearic Catalan), *cómo así (que)* (American Spanish)

It is interesting to note that the second “word” in these structures is notoriously different depending on the language: it may look like an adverb (Italian *mai*, Balearic

(https://www.reddit.com/r/UnresolvedMysteries/comments/6t1ri2/have_any_of_you_had_a_ny_creepy_experiences_with/)

d. How have you been so successful in winning key brands in the last 18 months? / I always come back to one simple reason – our people
 (primeq.com.au/starting-technology-business/)

³ For many Catalan speakers it is not possible to use *com* (the equivalent of Spanish *cómo*) with a causal value, except when it combines with a modal verb (*Com pot comportar-se així?* ‘How can s/he behave like this?’; these are basically rhetorical sentences) and when it appears with *és que* (*com és que*; Spanish, *cómo es que*). In the section 7 of this paper some Catalan data is relevant: it belongs to the Ripacurtian variety, in which *com* with a causal value behaves like the Spanish *cómo* with the same value (this variety of Catalan is significantly influenced by Spanish at the lexical level). Note also that the structure *com és que* with a causal value is available for all Catalan speakers (including those who also use *com així* [see the list in (4)] and those who also use *que cosa que* [see section 7]).

⁴ And it seems that these different features are relevant basically in formal terms, rather than semantic ones. See footnote 22 and the commentaries on the situation of *cómo* in the CP considering the analyses in (31) (section 5), for *cómo*, and (38) (section 6), for *cómo es que*. In general, what is crucial is that *cómo* with a manner value is generated as an adjunct to the verb, unlike *cómo* with a causal value.

Catalan *així*, American Spanish *así*,⁵ German *so*) or like a verb (English *come* in *how come*, general Spanish *es* in *cómo es que*, general Catalan *és* in *com és que*). It should also be observed that Spanish and Catalan use in some varieties some structures that appear to be more similar to, for instance, the Italian *come mai* than *cómo es que* and *com és que* are, in the sense that they do not contain a verb.

These structures appear also (with some familiar variation) in non-Indo-European languages, like Chinese, according to Tsai (2008). In this case, the interrogative element *zenme* can have a manner value, a causal value and a denial value (it seems reasonable to call this last one “rhetorical”). This author also indicates (2008: 85) that in Japanese there is also an interrogative element that has a manner interpretation in some cases and a causal value in some others; in this last case, it is completed with some specific material, so it does not seem very different from the forms in (4). This element is *doo* and, with a causal value, it appears as *doo-si-te* (*si* is the verb ‘to do’ and *te* is a gerundive marker). He adds that the same happens in a very different language, Tsou (a language from the Austronesian family spoken in Taiwan); the element has in this case the form *ainenu* for both uses (2008: 87).

The grammatical status of the “structures” in (4) is far from obvious. For example, the English element *how come* has been the target of several studies at least since Zwicky & Zwicky (1971). They include Collins (1990), Fitzpatrick (2005), Ochi (2004) or Kim & Kim (2011) (this last one is particularly interesting for the attention that it gives to the vestigial verbal nature of *come*). Radford (2017) provides an analysis that takes into account this quite long tradition (considering generative-oriented studies) and works simultaneously with different idiolectal varieties of this structure (*how the hell come...*, *How come did he come?*, *how come that...*). He bases his analysis on data about the Japanese equivalent structure (or one of them), provided by Yoshio Endo: *ko-nai-to* is used with a factive-related conjunction that also appears in exclamative sentences, *koto*. The crucial role of factivity (and its syntactization) is shared by the analysis that will be presented here.

There is not a syntactic analysis for *cómo* with a causal value in Spanish. It has not been studied how this element contributes to the structure *cómo es que*. These elements present a behavior that is atypical of interrogative elements, in the first case, and of cleft structures, in the second one, despite the appearances. In fact, the singularities of these elements extend to the sentential and discursive levels, since the sentences containing them show a mixture of characteristics typical of interrogative clauses and of exclamative clauses. The purpose of this paper is to provide a syntactic explanation for their behavior, for the composition of *cómo es que* and for their relationship with other clauses (i.e. embeddability). Even if the analysis is centered in Spanish, it intends to be relevant for other languages and varieties. In addition, some insight is provided about the link between movement and features in the cartographic framework.

The paper is organized as follows. Section 2 presents the behavior of *cómo* with a causal value. Section 3 situates it in the general framework of a cartographic analysis of the left periphery. Section 4 compares *cómo* and *cómo es que*, considering both their meaning and their ability to be embedded. Section 5 proposes an analysis of *cómo* considering, among other factors, its illocutionary force, which is argued to be exclamative; this analysis shows an adaptation of the mechanisms for explaining movement that are generally used in strict minimalism that is compatible with the criterial approach, typically accepted in cartography. Similarly, section 6 proposes an analysis of *cómo es que*;

⁵ Considering the data from the corpus CREA (Real Academia Española), *cómo así* is used in Venezuela, Peru and Colombia and in this last country it is also possible to use *cómo así que*.

in this case, it is defended that there exists a distinct interro-exclamative force and that sentences containing this structure are manifestations of it. Section 7 shows that the proposed analyses can be consistently applied to a similar structure that had never been syntactically examined. Finally, section 8 concludes.

2. *Cómo* with a causal value

The interrogative element *cómo* of Spanish manifests a singular behavior when it has a causal value. In particular, it allows the subject to appear before the verb, something that tends to be impossible for the other interrogative elements, including *cómo* with a manner value:

- (5) ¿Cómo María fue a la fiesta?
how Mary went to the party?
 ‘How come Mary went to the party?’
- (6) %¿Cuándo María fue a la fiesta?
when Mary went to the party?
 ‘When did Mary go to the party?’

(5) is grammatical with a causal value and it is basically ungrammatical with a manner value. (6) is generally ungrammatical, even if in some circumstances it is not (therefore it is marked with “%”): it is acceptable when it is a rhetorical question or when the possible answers are restricted (i.e. there is a list). In principle, (5) with a manner value should also be grammatical with these two particular interpretations, but it is very difficult to obtain them with this interrogative element (however, (8) is an interrogative sentence for manners, with *cómo*, that accepts them).⁶ On the other hand, (7) is ambiguous, since it may be a question for causes or a question for manners, with the subject at any of the two possible post-verbal positions:

- (7) ¿Cómo fue {María} a la fiesta {María}?
how went Mary to the party Mary?
 ‘How did Mary go to the party?’ / ‘How come Mary went to the party?’

In addition, *cómo* with a causal value is perfectly compatible with negation, in the sense that it is possible with no restrictions that the proposition under interrogation is a negative one.

- (8) ¿Cómo no lo intentó?
how not that_{pronoun} tried_{3Sing}?
 ‘How come s/he did not try?’

It is not easy to interpret (8) as a question for manners (*How did Mary not try?*), but it is possible if the same conditions that were relevant for (6) being grammatical apply: if (8) is a rhetorical question for manners (‘Mary tried in all ways’) or if it is a question whose answers are controlled or restricted, forming a list. These same restrictions are

⁶ One reviewer pointed out that the original writing of this paragraph was confusing about the grammaticality of (5). Another reviewer pointed out that for him/her this example contained a focalization of the subject; in fact, this is not expected here. Grammaticality judgments about *cómo* with a causal value tend to be delicate; one needs to think about a context in which the proposition under interrogation results surprising, and this is not always obvious. In this case, one can imagine that the speaker thinks that, since she had no friends there, Mary should not have gone to that party.

relevant for other regular interrogative elements combined with negation, like *cuándo* ‘when’ in (9). In other words, (9) is generally ungrammatical, but it is grammatical if it receives one of these two very specific interpretations.

- (9) %¿Cuándo no vino?
when not came?
 ‘When did s/he not come?’

In any case, *cómo* with a causal value is perfectly compatible with subjects appearing before the verb and with negative propositions, with no restrictions, and this makes it different from common Spanish interrogative elements and similar to *por qué* ‘why’. Observe both conditions combined in (10):⁷

- (10) ¿Por qué María no vino?
why Mary not went?
 ‘Why did Mary not go?’

This indicates that there is a syntactic affinity between *cómo* with a causal value and *por qué*, which is, of course, the typical (“unmarked”) causal interrogative element in Spanish.

3. *Cómo* and the left periphery of the clause

In many languages, constituents that are discourse-related (by their nature, like interrogative elements, or by being treated in that manner, like focalized constituents) appear in an area of the syntactic structure of the clause known as “left periphery”. In the generative tradition, the phrase that contains those elements that, pertaining to the syntactic component of the language, relate it with the discourse is the Complementizer Phrase (CP). The cartographic project has defended the decomposition of this phrase in different phrases, all of them motivated by discourse semantics. According to this project, there are several projections for topicalized constituents, probably one for every kind of topic (familiar topic, contrastive topic, etc.); one projection for focalized constituents; one projection for adverbs that have sentential scope (called “ModP”; probably it can be decomposed in turn), etc. The cartographic project considers the ordering of the different discourse-related constituents and their incompatibilities. Crucially, there are two basic projections: one encoding the illocutionary force of the sentence, ForceP, and another one, FinitenessP (FinP), encoding the relation between the left periphery of the clause and the TenseP (TP) (a sentence may not be anchored, or not fully anchored, in temporal terms; this is usually possible when the sentence is embedded).⁸ (11) is the generally assumed structure of the left periphery (Rizzi & Bocci 2017):

⁷ It is not necessary that, with causal *cómo* (see (7)) and *por qué* ‘why’, the subject appears before the verb. However, if the subject appears at the end it is interpreted as a focalized constituent:

- (i) a. ¿Cómo lo ha comprado Juan, (siendo María la encargada)?
how that_{pronoun} has bought John, (being Mary the responsible.for.this)?
 ‘How come John bought that, (having Mary been tasked with this)?’
 b. ¿Por qué lo ha comprado Juan, (de entre todos ellos)?
why that_{pronoun} has bought John, (of among all them)?
 ‘Why did John buy that, (among all of them)?’ (*them* = ‘possible buyers’)

⁸ FinP may be dependent on ForceP: at least the exclamative force (or a variety of it, which is relevant

- (12) a. ¿Cuándo va a la playa?
when goes to the beach?
 ‘When does s/he go to the beach?’
 b. ¿Cuándo es que va a la playa?
when is that goes to the beach?
 ‘When is it that the s/he goes to the beach?’

The situation for *cómo* is more complex. (13a) is an ambiguous sentence that can be interpreted as a question for manners or as a question for an explanation. (13b) tends to be interpreted as a question for an explanation, at least in European Spanish, in the sense that the speaker looks for an explanation for the fact that the subject cuts something, a situation that s/he finds strange; however, it is not impossible to interpret it as a cleft question for manners (in fact, this is normal for some American speakers; in European Spanish this interpretation is not easily accessible, but it is possible if the utterer knew how the subject cut something, maybe some kind of food, but does not recall that way of proceeding).

- (13) a. ¿Cómo lo corta?
how that_{pronoun} cuts?
 ‘How does s/he cut it?’ / ‘How come s/he cuts it?’
 b. ¿Cómo es que lo corta?
how is that that_{pronoun} cuts?
 ‘How is it that s/he cuts it?’ (also in the sense of ‘How come s/he cuts it?’)

This data could be interpreted as implying that *cómo es que* with a causal value is the cleft interrogative sentence corresponding to *cómo* with a causal value. But this explanation does not hold, since the use of *cómo es que* is not restricted in the same manner as that of cleft interrogative sentences is in European Spanish.¹² In practical terms, no European Spanish speaker would have to think a lot about a context in which a *cómo es que* question could be used, but probably it will not be easy for him/her to find a context that could be appropriate for any cleft interrogative sentence.

In addition, the meaning of *cómo* and *cómo es que*, both of them with a causal value, is not identical. It is certainly similar, but *cómo* involves the idea that the proposition under interrogation is clearly against the knowledge or the judgments that the speaker has: it should not have happened. This opposition is nuanced in the case of *cómo es que*: the proposition under interrogation is just somewhat surprising. This does not parallel the difference between (12a) and (12b).

In (14), (14a) conveys that the speaker thinks that the hearer has committed a clear mistake by telling the truth to someone, i.e. s/he should in no case have told the truth to that person. This means, in pragmatic terms, that (14a) can be used as a reproach, something that is not possible for (14b):

- (14) a. ¿Cómo le dices la verdad?
how to.him tell_{2Sing} the truth?
 ‘How come you tell him/her the truth?’

¹² The same can be said about the Catalan *com és que*, considering the varieties in which the use of these interrogations is severely restricted. See the last footnote.

- b. ¿Cómo es que le dices la verdad?
how is that to.him tell_{2Sing} the truth?
 ‘How come you tell him/her the truth?’

(15) shows this same contrast. (15a) emerges from the perception that there is something that should make raining impossible, since it is opposed to it (‘being sunny’). In (15b) the counter-expectation about raining is nuanced and it is not considered as something impossible, but just as something that does not easily fit into the speaker’s previous knowledge: maybe ‘raining’ was not announced by the weather forecast.

- (15) a. ¿Cómo llueve con este sol que hace?
how rains with this sun that does?
 ‘How come it rains, being so sunny?’
 b. ¿Cómo es que llueve?
how is that rains?
 ‘How come it rains?’

Finally, observe this same contrast in (16):

- (16) a. ¿Cómo sabe francés?
how knows French?
 ‘How come s/he knows French?’
 b. ¿Cómo es que sabe francés?
how is that knows French?
 ‘How come s/he knows French?’

In (16a) ‘knowing French’, predicated of the subject, was considered as (almost) impossible by the speaker (*s/he would have never thought that...*); (16b) conveys surprise for the existence of such a state of affairs while taking into account that there might well be some circumstances that favored it or explain it (i.e. an answer conveying that the subject has relatives in a francophone country would not be shocking for or corrective to the speaker).¹³

Intuitively, it can be said that questions with *cómo es que* are less rhetorical and less exclamative-like than those with *cómo* alone. In fact, sentences with *cómo* (without *es que*) are very difficult to embed and, in this sense, they are similar to typical exclamative sentences.¹⁴ Sentences with *cómo es que* are easier to embed: they show a more

¹³ There is, of course, a contrast between these sentences, which convey mirativity, and sentences with *por qué* ‘why’, which do not. In some cases this may be particularly clear. For example, *¿Por qué sabe francés?* ‘Why do you speak French?’ (*speak* = ‘to know’) is quite a strange question and it tends to be interpreted as a “scientific question” (i.e. of the kind that interests Bromberger (1992), so perhaps it can be paraphrased as *What makes you know French?*); it would be asked, maybe, by a Linguistics professor.

¹⁴ The fact that exclamative sentences are unembeddable under *decir* ‘to say’ and similar verbs (presumably, all *verba dicendi*) does not imply that they are completely unembeddable. They are embeddable under some predicates, quite restricted, which are not *verba dicendi* (they do not accept direct quotations) and, hence, according to the point of view adopted in this paper, do not impose an illocutionary force over embedded sentences. They seem to accept any sentences that has an interrogative character (i.e. that contain an unknown). These predicates are *no saber* ‘to not know’, *preguntarse* ‘to wonder’, *gustar* (in Conditional) *saber* (*me gustaría saber...*) ‘to like to know’ (‘I would like to know...’), *no explicarse* ‘to not explain to oneself’ and *no entender* ‘to not understand’. (In addition, it is worth pointing out that *exclamar* ‘to exclaim’ seems to be a peculiar verb, since, being a *verbum dicendi*, it should be able to impose an illocutionary force over embedded clauses, but this does not seem

typically-interrogative behavior. Observe this contrast in (17) and (18); note that all three sentences in (17) would be at least acceptable if *cómo* had a manner interpretation and the pool of possible answers was restricted.

- (17) a. *Ha dicho cómo no ha ido.
has said how not has gone
 ‘S/he_i has said how come s/he_j did not go.’
 b. *Preguntó cómo no había ido.
asked_{3Sing} how not had_{3Sing} gone
 ‘S/he_i asked how come s/he_j had not gone.’
 c. *Ha explicado cómo no ha ido.
has explained how not has gone
 ‘S/he_i explained how come s/he_j did not go.’
- (18) a. ?Ha dicho cómo es que no ha ido.
has said how is that not has gone
 ‘S/he_i has said how come s/he_j did not go.’
 b. Preguntó cómo era que no había ido.
asked_{3Sing} how was that not had_{3Sing} gone
 ‘S/he_i asked how come s/he_j had not gone.’
 c. Ha explicado cómo es que no ha ido.
has explained how is that not has gone
 ‘S/he_i explained how come s/he_j did not go.’

However, the embedding of *cómo es que* with some verbs can be difficult. In particular, some speakers find (18a), with the verb *decir* ‘to say’, quite degraded (this is also found at least with *comunicar* ‘to communicate’). Indeed, it is difficult to interpret that the unknown expressed by a question with *cómo es que* is in fact known, and this seems to be the problem that these speakers have with this embedding. Observe that this “known unknown” or “solved unknown” meaning is that normally conveyed by embedded questions under verbs like *decir* ‘to say’ in Spanish:

- (19) Ha dicho por qué no han ido.
has said why not have_{3Pl} gone
 ‘S/he has said why they did not go.’
 (= ‘She said the reasons why they did not go.’)

(19) is the adaptation of (18a) with *por qué* ‘why’ instead of *cómo es que* ‘how come’. It is a perfectly grammatical sentence, with no hesitation for any Spanish speaker: the utterer knows the reasons for the subject of the embedded clause not going, or at least s/he is in the situation of knowing them, but s/he does not make them explicit. Observe that what happens with embedded interrogative clauses in Spanish (and Catalan) is that they essentially lose their interrogative nature, i.e. their interrogative illocutionary force. In fact, these languages have the possibility to maintain this force: the conjunction *que* ‘that’ is then used, as in (20); this embedded clause is interpreted as a

to be the case; exclamative sentences, which would be the best candidates, and declarative and interrogative sentences cannot be embedded under *exclamar* ‘to exclaim’; however, all of them, including sentences with *cómo* and *cómo es que*, are embeddable under it if the conjunction *que* introduces them and, hence, their illocutionary force is preserved; see (20) for comments on this possibility.) The presentation of this information in this part of the paper was suggested by a reviewer.

quote (i.e. it is indirect speech, so it is a form of reproduction of the utterance *¿Por qué no han ido?* ‘Why did they not go?’).¹⁵

- (20) Ha dicho que por qué no han ido.
has said that why not have_{3Pl} gone
 ‘S/he has asked why they did not go.’

Note that the embedding of *cómo es que* with *decir* ‘to say’ and with no *que* ‘that’ is clearly grammatical in some specific contexts: in particular, the use of the future tense,¹⁶ shown in (21), implies that the speaker conveys that s/he is going to know the reasons, i.e. s/he considers them accessible, but s/he does not already know them.

- (21) Después nos dirá cómo es que no fue.
later to.us will.tell how is that not went
 ‘S/he will later tell us how come s/he did not go.’

As expected, sentences with *cómo es que* can be embedded under *decir* ‘to say’ with no hesitation about their grammaticality when their illocutionary force is preserved (i.e. when *que* ‘that’ appears):

- (22) Ha dicho que cómo es que no han ido.
has said that how is that not have_{3Pl} gone
 ‘S/he has asked how come they did not go.’

In fact, sentences with *cómo* without *es que* can also be embedded with their appropriate illocutionary force (contrast this with (17a)):

- (23) Ha dicho que cómo no han ido.
has said that how not have_{3Pl} gone
 ‘S/he has asked how come they did not go.’

It is reasonable to propose that the problem that can arise with the embedding of *cómo es que* ‘how come’ when it is not introduced by the conjunction *que* ‘that’ does not have a direct syntactic explanation (even if this proposal remains coherent with the analysis that will be presented in section 6). Specifically, it may be that the mixture of the interrogative and the mirative meanings poses difficulties for the imposition of a declarative illocutionary force, which is required for the embedding under *decir* ‘to say’

¹⁵ The absence of *que* ‘that’ in (19) corresponds to this lack of interrogative force, which can be intuitively understood as a “loss”. It is the presence of the conjunction *que* ‘that’ in (20) that has usually interested different authors (Plann 1982, Brucart 1993), but it seems interesting to suggest that the reverse point of view may be relevant: the absence of *que* ‘that’ corresponds to the loss of the force that would normally be that of the clause that is embedded.

¹⁶ A reviewer indicates that the crucial factor for this embedding becoming possible seems to be simply tense. Tense certainly provides an appropriate context, but not necessarily the only one. Consider for example (i), in which the speaker, who is making a call, is listening a speaker in a different conversation well enough to know the general content (i.e. the subject) of what s/he is saying, but not all the content, with precision. In such a case it is also possible to embed *cómo es que* with no *que*, so the crucial factor seems to be the degree of knowledge that the speaker has.

- (i) Ahora justo ha dicho cómo es que no fue.
how just has said how is that not came_{3Sing}
 “Just now he has said why she did not come”.

(as in (18a)). Indeed, if a proposition is judged as surprising, it is not obvious to simultaneously communicate that you have some important information about it (its explanation, in particular). In other words, if someone knows the explanation for a proposition (and communicates that s/he has this knowledge by embedding the clause under ‘to say’), it is not evident that at the same time s/he expresses that the proposition is shocking to him/her. However, if this is a matter of degree, it is natural that, when this degree is low (i.e. the degree of knowledge that speaker has about the embedded proposition), the embedding of *cómo es que* under *decir* ‘to say’ or *comunicar* ‘to communicate’ is possible (as in (21); in addition, it may be that there is some idiolectal variation, but this is not going to be addressed here).

In any case, the embedding of *cómo es que* is far easier than that of *cómo* with a causal value (recall the contrast (17)-(18)). This situation is reminiscent of the impossibility of embedding exclamative clauses with verbs that allow the embedding of interrogative clauses, like *decir* ‘to say’, or seem good candidates for the embedding of sentences conveying exclamative-like meaning, like *exclamar* ‘to exclaim’:¹⁷

- (24) a. *Dijo qué vestido tan bonito que llevaba María.
*said*_{3Sing} *what.a dress so beautiful that wore*_{3Sing} *Mary*
 ‘S/he said at what point Mary’s dress was beautiful.’
 b. *Exclamó qué vestido tan bonito que llevaba María.
*exclaimed*_{3Sing} *what.a dress so beautiful that wore*_{3Sing} *Mary*
 ‘S/he exclaimed at what point Mary’s dress was beautiful.’

This data regarding the embedding conditions of *cómo* and *cómo es que* shows that their analysis cannot be identical, even if it is obvious that it should be similar, given the affinity in meaning and the casual value of *cómo* in both. Note that it is in any case important to distinguish such a value from the manner one, which has already been presented, and also from that found in typical exclamative sentences like (25).

- (25) ¡Cómo ha cantado María!
how has sung Mary!
 ‘The way Mary has sung!’

(25), ignoring the exclamation marks and the corresponding intonation, is an ambiguous sentence: as has been said, it can be interpreted as an exclamative one, meaning ‘Mary has sung very well’ or ‘... very bad’ or ‘... very strangely’,¹⁸ but it is also possible to interpret it as an interrogative one. In this last case, it could be interpreted as a question for manners (and its answer could be *very loud*) or as a question for an explanation

¹⁷ Exactly as it happens with (17) (consider their contrast with (23)), the examples in (24) would become grammatical if they were embedded with *que* ‘that’ (that would preserve their exclamative force). (24a) corresponds to (ia) and (24b), to (ib).

- (i) a. Dijo que qué vestido tan bonito que llevaba María.
 b. Exclamó que qué vestido tan bonito que llevaba María.

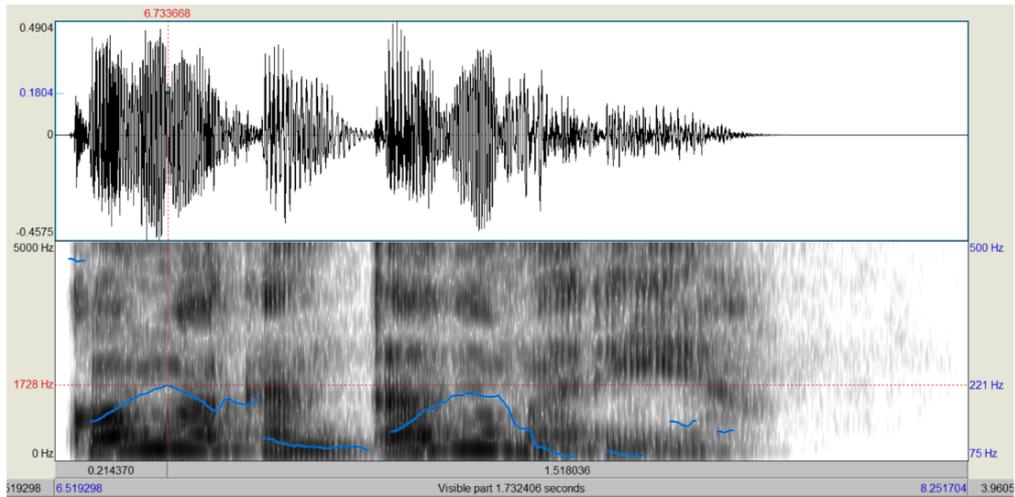
¹⁸ If it is an exclamative clause, it is unembeddable, as (i) shows (with *que* ‘that’ between the verb and *cómo*, the exclamative force would be preserved and it would be grammatical):

- (i) *Ha dicho cómo canta María.
has said how sings Mary
 ‘S/he has said that Mary sings very well.’

(in this case, the speaker negatively judges the fact that Mary sings and looks for an answer like *Well, it was not easy to tell her she couldn't*).

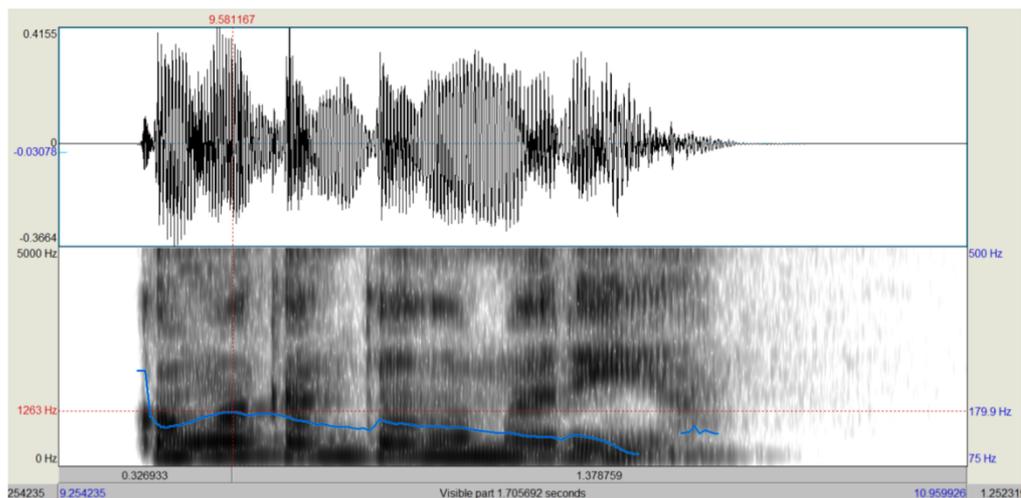
(26) shows, in a tentative manner, the intonation patterns for these three interpretations (this issue requires more specific attention). The computer program Praat has been used. Observe in (26a) that the exclamative sentence starts with a raising-declining pattern that is immediately reproduced. The interrogative sentence with a manner value, presented in (26b), shows a generally declining pattern. The interrogative sentence with a causal value, shown in (26c), is not extremely different from the previous one, but it is clear that the raising pattern at the end of the interrogative word, which in (26b) is very small, is in this case very clear and followed by an equally steep descent.

(26) a. Exclamative sentence



¡Cómo ha cantado María!

b. Interrogative sentence with a manner value



¿Cómo ha cantado María?

‘obviously’) followed by the conjunction *que* ‘that’; the sentences in which these structures appear are exclamative. González i Planas (2010: 66, 75) suggests an adaptation of his own analysis for this specific kind of structures, but he does not give a representation of it; however, considering his explanation, (30) can be proposed:²³

- (30) a. ¡Evidentemente que María está enfadada!
of.course that Mary is upset!
 ‘Of course Mary is upset!’
 b. [FactiveP *evidentemente*_[ig] [Factive° *que*_[ug] [EvidentialP *evidentemente*_[ig] [FamiliarP dislocation [Familiar° [ForceP_{decl} [Force°_[idecl] ...]]]]]]]]

An Evaluative projection has also been used by Ambar (2003) for the analysis of some exclamative sentences in Portuguese. And, crucially, it is also used in Munaro & Obenauer (1999) for the analysis of some interrogative sentences in Pagotto (a sub-variety of Bellunese, an Italian dialect spoken in the north-east area of the country) that convey surprise.

Radford (2017) takes into account the analysis of *how come* provided by Fitzpatrick (2005) and developed by Conroy (2006), which explains the difference between *how come* and *why* on the basis that the first one generates factivity and the second one does not (in coherence with the tradition of study of the syntactic repercussion of factivity initiated by Kiparsky & Kiparsky (1970)). By adopting a cartographic analysis, Radford (2017) postulates a FactiveP in the left periphery of the clause and claims that its head is phonetically manifested in the rare idiolectal form *how come that* by the conjunction *that*. He suggests that this analysis can be extended to *how come* if it is assumed that the head of FactiveP can be activated without being phonetically realized.

The analysis here presented assumes that defended by Radford (2017) and adapts it trying to explain something that that one left unaccounted: the mirative nature of *how come*. Factivity seems as relevant for *how come* as it is for *cómo* with a causal value and for *cómo es que*.²⁴ In fact, this combination seems to be a common property of all the structures presented in (4) and in the paragraph that follows this list.

²³ González i Planas (2010: 75) proposes that this kind of sentences has a declarative force (“decl”) considering that evidential adverbs cannot appear in exclamative sentences (of the types he analyzes, with exclamative phrases conveying extreme degree) and the fact that it is not possible to defend that the conjunction *que* ‘that’ appears precisely at the head of ForceP, contrary to what happens, according to his analysis, in some exclamative sentences of the abovementioned type.

²⁴ The examples in (i) show some evidences that *cómo es que* generates factivity and *por qué* does not. If *cómo es que* were substituted by *cómo* with a causal value, the results would be the same. In (ia) it is shown that it is difficult (i.e. inappropriate) to express doubt about the truth value of the proposition after having uttered such a question; the impossibility of a distributive interpretation in (ib) can be interpreted as the effect of an intervention created by factivity.

- (i) a. ¿Cómo es que has ido, (#si has ido)?
how is that have_{2Sing} gone, (if have_{2Sing} gone)?
 ‘How come you went, (if you did go)?’
 a’. ¿Por qué has ido, (si has ido)?
why have_{2Sing} gone, (if have_{2Sing} gone)?
 ‘Why did you go, (if you went)?’
 b. ¿Cómo es que cada uno de vosotros quiere al perro?
how is that each one of you_{Pl} loves D.O.M..the dog?
 ‘How come each of you loves the dog?’ [unitary interpretation]
 b’. ¿Por qué cada uno de vosotros quiere al perro?
why each one of you_{Pl} loves D.O.M..the dog?
 ‘Why does each of you love the dog?’ [distributive or unitary interpretation]

This paper is also an attempt to take profit of the machinery that is commonly used in the strict version of the minimalist program for explaining the movement in a cartographic frame. The conception of features in these two approaches is notoriously different: while the general view in strict minimalism is that there are non-interpretable features that have to be eliminated in the derivation and attract constituents with the corresponding interpretable features in order to make this checking feasible, the cartographic project adopts a criterial approach, which assumes that there are some constituents that have to move to a certain phrase, endowed with the same feature they are endowed with, in order to be properly interpreted. The idea that some constituents move in order to comply with a certain criterion is interesting because it provides an immediate correspondence between the relevant syntactic configurations and their interpretation (syntax-semantics interface) and their prosody (syntax-phonetics interface) (Rizzi & Bocci (2017) and references therein). For example, if a constituent appears in the specifier of TopP, it is interpreted as a topic, while the complement of TopP is interpreted as a comment, and there is a special prosody consistent with this division. In other words, Top^o structures the interpretation of its specifier and its complement and indicates what intonation is to be attributed to a sentence with such a constituent.

Is it possible to adopt this criterial approach while using the generally assumed mechanisms guiding movement? It is not obvious, but there have been some proposals in this sense, like Aboh (2010). It will be assumed in this paper that criterial projections in the left periphery are endowed with interpretable [iX] or uninterpretable [uX] features and these second ones must be checked by agreeing with a constituent endowed with [iX]; this constituent is probably copied in the specifier of the relevant projection (only if [uX] is associated with an Extended Projection Principle feature, EPP), [uX] gets valued (and not eliminated) and, hence, can function as a criterial feature. It is possible for a criterial feature to be [iX] (such a feature cannot function as a probe). In addition, some lexical items are endowed with [uX] features that need to enter into an agreement relation that allows them to get valued (i.e. they must have a different [iX] feature that is the one probed). (EPP is not going to be indicated in this paper, but it is assumed if the contrary is not specified.)

In the case of sentences with *cómo* with a causal value (without *es que*), it seems, considering the extreme difficulty of embedding them, that they are exclamative sentences with an interrogative component.²⁵ In other words, their illocutionary force is

²⁵ Presumably, sentences conveying the idea of surprise of the type of (i), studied for the Bellunese variety of Italian by Munaro & Obenauer (1999), could also be treated as exclamative sentences with an interrogative component. Indeed, they are unembeddable, (ii) ((iia) is marked with “%” because it is grammatical if the embedded clause is a typical interrogative sentence, that is, if the speaker is not surprised by the unknown; in (iib) *cossa* has a causal value).

- (i) a. *Cossa zighe-tu (che)?!* (their (13a))
what shout-cl (what)?!
 ‘Why are you shouting?!’
- b. *Cossa compre-tu n’altro giornal (par al to amigo) (par far) che?!* (their (14b))
what buy-cl another newspaper (for your friend) (for do) what?
 ‘There is no need for you to buy another newspaper.’
- (ii) a. %*Me domande cossa che i à fat.* (their (23a))
myself ask what that cl-have done
 ‘I wonder what they have done.’
- b. **Me domande cossa che ‘l compra n’altro giornal.* (their (23b))
myself ask what that cl-buys another newspaper
 ‘I wonder why he buys another newspaper.’

- (32) ¿Cómo las pastillas has dicho que no te las envolvieran?
how the pills have_{2Sing} said that not to.you them wrapped_{3Sing}?
 ‘How come you said that you did not want the pills wrapped?’

In (32) *las pastillas* ‘the pills’ is a topicalized constituent. However, this ordering is impossible with *cómo es que*, as (33) shows:

- (33) *¿Cómo las pastillas es que no te las han envuelto?
how the pills is that not to.you them have_{3Pl} enveloped?
 ‘How come they did not envelop your pills?’

(33) is ungrammatical, and this is not expected if *cómo* is situated at the specifier of IntP, since, in that case, the possibility presented in (32) should manifest. This difference suggests that *cómo*, with the verb *ser* ‘to be’, is situated not at the specifier of IntP, but at the usual projection for interrogative elements, the specifier of FocP. This helps explaining why any topicalized element must appear in a higher projection (i.e. at the left of FocP and, of course, of any interrogative element at it), since FocP is a low projection in the left periphery (this is shown in (34a), in which the interrogative intonation excludes the topicalization *las pastillas*). See (47) for more discussion about the compatibility of *cómo es que* with topicalized constituents. In addition, note that with *cómo es que* there is second CP involved, that of the embedded clause (*que...*), and that it is possible to find topicalized, (34b), and focalized, (34c), constituents at it.²⁹

- (34) a. La libreta, ¿cómo es que te la han envuelto?
the notebook, how is that to.you it have_{3Pl} wrapped?
 ‘The notebook, how come they did not wrap?’
 b. ¿Cómo es que la libreta te la han envuelto?
how is that the notebook to.you it have_{3Pl} wrapped?
 ‘How come the notebook they did not wrap?’
 c. ¿Cómo es que la libreta, te han envuelto?
how is that the notebook to.you have_{3Pl} wrapped?
 ‘How come it was the notebook what they did not wrap?’

there is simply no place available for a focalized constituent before or after *cómo*, since it will be defended that this element is precisely at the specifier of FocP.

- (i) ?¿Cómo una libreta, compró, (y no hojas sueltas)?
how a notebook, bought, and not leaves loose?
 ‘How come s/he bought a notebook, rather than loose leaves?’
 (ii) ?¿Cómo una libreta dijo que le compraran, (y no hojas sueltas)?
how a notebook said that to.him bought, (and not leaves loose)?
 ‘How come a notebook, he said he wanted them to buy, (and not loose leaves)?’
 (iii) *¿Cómo una libreta es que le compraron, (y no hojas sueltas)?
how a notebook is that to.him bought, (and not leaves loose)?
 ‘How come a notebook, they bought to him, (and not loose leaves)?’

²⁹ For the compatibility of *cómo* with a causal value with focalizations, see footnote 28. Note in any case that, if *cómo* in *cómo es que* is situated at the specifier of FocP, focalizations in this CP are immediately excluded, since there would be competition for a single position, with *cómo* being generated closer to it.

There is no obvious justification for this different behavior of *cómo* with the verb *ser* ‘to be’ and with any other verb.³⁰ It may be due to the fact that in this structure *cómo* is generated either as a logical subject in a predicative relation established with the embedded clause (and then moved to the specifier of the TP corresponding to *es* ‘is’) or as the syntactic subject of the verb *es* ‘is’ (i.e. generated at the specifier of TP). Note that, in any case, this generation would be different from that that can be attributed to *cómo* with a causal value with any other verb: in these cases, it can be defended that it is generated in the left periphery and, hence, has no direct relation with the TP. It may be that, from any position inside the TP, an interrogative element has no other option but moving to the specifier of FocP.³¹

In any case, any analysis of *cómo es que* must explain the mirative and factive nature of the sentences in which it appears, which is shared by those with *cómo*, while accounting for the fact that the embedding conditions of both kinds of sentences clearly differ. The difference in embeddability can be accounted for by postulating that there is a distinct interro-exclamative illocutionary force (“int-excl”) and that it behaves similarly to the interrogative force in terms of embedding (i.e. it can be eliminated by some main predicates that can impose an illocutionary force, like *decir* ‘to say’ and its declarative force, and *preguntar* ‘to ask’ and its interrogative force).

This nature, manifested in ForceP, would be that of sentences with *cómo es que*, and, at least in appearance, it is also that of sentences like those in (35): in (35a) an interrogative element is combined with a *hell*-element (*cuándo demonios* ‘when the.hell’) and (35b) is a yes-no question with a mirative value. Recall that, contrary to

³⁰ A reviewer proposes that this incompatibility is due to the fact that *cómo* in *cómo es que* is focalized or, at least, treated in a similar manner. In fact, it is here defended that *cómo* is situated at the specifier of FocP. S/he suggests an extension of this point of view to cleft interrogative sentences. The semantic value of these sentences seems to be quite different from that of *cómo es que* (and, crucially, the manner interpretation of *cómo es que*, i.e. as a regular cleft interrogative sentence, is not impossible). In any case, it is clear that the relation between this structure and cleft interrogative sentences (and these ones by themselves) merits more attention, which will be the object of future research.

³¹ The inaccessibility of IntP for an interrogative element that is not generated in that same left periphery but moved to it from TP is well-known in the case of long-construal structures with the Spanish *por qué*, the Italian *perché* or the Romanian *de ce* (Shlonsky & Soare 2011), ‘why’. Note that in such a case the interrogative element is presumably generated in a left periphery, but an embedded one, so it must move across a TP, that of the main verb. For example, (ia) can be interpreted as a question for the reasons that Mary has for saying such a thing (short construal) or as a question for the reasons that John has for resigning (long construal); (ib), instead, can only be a question for the reasons that Mary has for saying this (short construal): in this second case, the subject appears in front of the verb, one of the crucial possibilities justifying that *por qué* is at a special projection (IntP) when it does not move from an embedded projection. This is commonly interpreted as implying that IntP is inaccessible for a (long-)moved *por qué*.

- (i) a. ¿Por qué dijo María que Juan dimitirá?
 why said_{3Sing} Mary that John will.resign_{3Sing}?
 b. ¿Por qué María dijo que Juan dimitirá?
 why Mary said_{3Sing} that John will.resign_{3Sing}?
 ‘Why did Mary say John will resign?’

What happens in cleft interrogative sentences? It may be that the interrogative elements are generated inside the attribute and then moved to the left periphery of the matrix verb (i.e. ‘to be’). This could explain why it is impossible to find a topicalized constituent between the interrogative element *por qué* ‘why’ and the verb *ser* ‘to be’ in this kind of interrogative sentences (¿*Por qué es que*...? ‘Why is it that...’): this unavailability would not be expected if *por qué* was situated at the specifier of IntP, but it is expected if it behaves like a regular interrogative element and, hence, it is at FocP.

this, sentences with *cómo* alone (without *es que*) should be considered exclamative sentences with an interrogative component.

- (35) a. ¿Cuándo demonios lo oyó?
when the.hell that_{pronoun} heard_{3Sing?}
 ‘When the hell did s/he heard that?’
 b. ¿Es que no ha venido Juan!?
is that not has come John?
 ‘Is this due to the fact that John has not come!?’

However, sentences with *cómo es que* and *es que*, on one hand, and sentences with a *hell*-interrogative element, on the other hand, are not parallel. In particular, sentences with a *hell*-element have an interrogative element that conveys mirativity: there is an unknown and the speaker conveys that, however it is solved, the solution (i.e. the answer) must be surprising, unexpected (this is coherent with their description by Pesetsky (1987: 111)). On the other hand, in sentences with *cómo es que* and *es que* it is the proposition under interrogation that is presented as surprising or unexpected, not the unknown. Considering this description, it seems that these three kinds of sentences convey mirativity, but not in the same manner: in the case of *hell*-interrogative sentences, there is an interrogative element endowed with a mirative feature; in the case of interrogative sentences with *cómo es que* and *es que*, there is a mirative criterial feature in a head in the left periphery that implies that its complement is mirative. This suggests that these three kinds of sentences involve a mirative feature [iMir], but not in the same manner: while those with *cómo es que* and *es que* are endowed with it structurally (they have an interro-exclamative illocutionary force), those with a *hell*-interrogative element have a mirative nature because they incorporate a word with a mirative feature (so, probably, they have a “simple” interrogative force).

Specifically, why is it important to postulate the existence of an interro-exclamative force? If the force was interrogative, it would be difficult, considering the composition of the left periphery presented in (10), to explain why the head of FactiveP is endowed with a mirative feature ([iMir]). The interro-exclamative illocutionary force implies the activation of an interrogative head, but also the existence of an exclamative-related feature, criterial in nature. Observe that the exclamative force (of sentences with *cómo* without *es que*, for example) can be considered compatible with an interrogative component since there is a specifically interrogative projection in the left periphery, IntP. Contrasting with this, there is not a specific exclamative projection, but the criterial features related with exclamative-ness are situated at the head of at least two projections: FocP and FactiveP. Both of them are compatible with non-exclamative constituents, so the fact that they contain a criterial feature is crucial for the specification of their meaning.³²

It may be that there is at least another class of interrogative sentences in Spanish with an interro-exclamative force, those starting with *acaso*, but this is not going to be developed here:

- (36) ¿Acaso no se lo has dicho?
is.it.not.the.case not to.him that_{pronoun} have_{2Sing} told?
 ‘Is it not the case that you have told him?’

³² However, Alcázar (2017) suggests that the use of a specific Mirative phrase could be relevant for the analysis of some atypical interrogative elements or sentences (with *hell*-elements, for example).

Sentences in (37), which have an interro-exclamative force or, at least, contain a mirative interrogative element can be embedded without a strong degradation of grammaticality, although there may be problems in some contexts.³³ This situation parallels that described for *cómo es que* sentences, considering (18) and (21).³⁴

- (37) a. [?]Les dijo cuándo demonios lo había oído.
to.them said_{3Sing} when the.hell that_{pronoun} had_{3Sing} heard
 ‘S/he said when the hell s/he heard that.’
- a’. Después les dirá cuándo demonios lo oyó.
later to.them will.tell_{3Sing} when the.hell that_{pronoun} heard_{3Sing}
 ‘S/he will later tell us when the hell s/he had heard that.’
- b. [?]Nos ha dicho si es que no ha venido Juan.
to.us has said if is that not has come John
 ‘He told us if what is happens is that John has not come.’
- b’. Después nos dirá si es que no ha venido Juan.
later to.us will.tell_{3Sing} if is that not has come John
 ‘S/he will later tell us if what happens is that John has not come.’

What is the specific syntactic analysis for interrogative sentences with *cómo es que*? As it has been seen, the interrogative element is situated at ForceP and, coherently, the verb moves to the head of this projection. The features that explain this movement are those that can be considered relevant for any regular *wh*-interrogative sentence in Spanish: it seems that the movement of the interrogative element is motivated by its focal nature and it can be argued that the verb moves because an interrogative feature needs to be valued (see footnote 9). In coherence, it is postulated that the head of FocP is endowed with [uFoc] and [uQ]; the interrogative element is understood to be [iFoc] and the verb, as having an interrogative nature, with a [iQ] feature.

In addition, in the case of *cómo es que*, it seems that the verb *es* enters in a relation of agreement with the head of FactiveP: it is here proposed that this is motivated by an unvalued mirative feature at its head, [uFac], which is also present, in the valued version [iFac], in the verb *es*. Probably, *es* moves to this head. In addition, it can be argued that

³³ See footnote 16; it clarifies (as requested by a reviewer) in which sense these embeddings are problematic.

³⁴ It is possible to interpret (37b) as containing an embedded clause whose interrogative nature is preserved. In that case, it is grammatical. To the best of my knowledge, the fact that *si* ‘whether’ behaves differently in this respect from interrogative elements has remained unnoticed. In that case, the embedded clause is not an assertion corresponding to the affirmative or the negative version of the proposition; this information remains completely unknown and, crucially, an answer is required. This is independent of the illocutionary force being interro-exclamative or (purely) interrogative:

- (i) a. A to B: ¿Juan se lo contó?
John to.him that_{pronoun} told_{3Sing}?
 ‘Did John tell him about it?’
- b. B to C: Dice si Juan se lo contó.
says if John to.him that_{pronoun} told_{3Sing}
 ‘S/he asks if John told him about it.’

The most natural interpretation for (ib) is that of ‘S/he said: “Did John tell him about that?”’ (note that (ia) can be a question with no mirativity). Even if (ia) was not given and, hence, (ib) was left without a context, an interpretation of this last one equivalent to ‘S/he said that John {told / did not tell} him about that’ would be rarely preferred.

In (42), *cuándo demonios*, generated as an adjunct inside TP, is copied like a regular interrogative element, at the specifier of FocP; the verb is copied at the head of this projection (in this example, *llegó* ‘arrived_{3Sing}’ is used), and the head of FactiveP is endowed with a [iFac] feature.³⁸ In (43), *cómo demonios* is directly generated at the specifier of IntP, where it is realized.

Considering this data, why is a sentence like (41a) ungrammatical, at least for some Spanish speakers? It seems that this is due to the link existent between *hell*-interrogative elements and factivity: the interrogative sentences containing them convey factivity (i.e. the proposition under interrogation is presupposed), so it seems that the use of such an element is associated with the use of a FactiveP endowed with [iFac] in its head (there does not seem to be an element that, by the means of agreement, values this criterial feature, but it appears to be generated as such; indeed, *hell*-interrogative elements do not seem to be more or less factive by themselves than other interrogative elements are³⁹ and it is the proposition under interrogation that is presupposed).⁴⁰

What happens in the case of *cómo demonios es que*? It may be that some speakers strictly associate the use of a *hell*-interrogative element with the selection of a FactiveP endowed with [iFac]. If this happens, the verb *es* ‘is’ cannot check its [uMir] feature: it may be that the [iMir] feature in the head of FactiveP does not exist (as it happens in (42), with a regular *hell*-interrogative element) or it may be that it does exist but, in this case, the verb cannot be probed by this head, since it is not endowed with a [uFac] feature (i.e. a probe). The first option is represented in (44)⁴¹ and the second one, in (45).

- (44) * $[\text{Force}_{\text{int}} [\text{Top}^* [\text{Int} [\text{Top}^* [\text{Foc}' \text{ cómo demonios}_{[\text{iFac}][\text{iMir}]}] [\text{Foc}^{\circ}_{[\text{uFac}][\text{uQ}]} \text{es}_{[\text{iQ}][\text{iFac}][\text{uMir}]}] [\text{Top}^* [\text{Factive}^{\circ}_{[\text{iFac}]}] [\text{Top}^* [\text{Fin} [\text{T}' \text{ cómo demonios}_{[\text{iFac}][\text{iMir}]}] [\text{T}^{\circ} \text{ es}_{[\text{iQ}][\text{iFac}][\text{uMir}]} \dots]]]]]]]]]]]$
- (45) * $[\text{Force}_{\text{int-excl}} [\text{Top}^* [\text{Int} [\text{Top}^* [\text{Foc}' \text{ cómo demonios}_{[\text{iFac}][\text{iMir}]}] [\text{Foc}^{\circ}_{[\text{uFac}][\text{uQ}]} \text{es}_{[\text{iQ}][\text{iFac}][\text{uMir}]}] [\text{Top}^* [\text{Factive}^{\circ}_{[\text{iFac}][\text{iMir}]}] [\text{Top}^* [\text{Fin} [\text{T}' \text{ cómo demonios}_{[\text{iFac}][\text{iMir}]}] [\text{T}^{\circ} \text{ es}_{[\text{iQ}][\text{iFac}][\text{uMir}]} \dots]]]]]]]]]]]$

There is another possibility, represented in (46). In this case, FactiveP is generated as it is typical for a sentence with an interro-exclamative force: FactiveP is endowed with two features, [uFac][iMir], and, as a consequence, it contains a probe. This probe establishes an agreement relation with the [iFac] feature in *ser* ‘to be’, this verb is probably copied at this head and, in any case, the [uFac] feature gets valued (its complement is factive); the *hell*-interrogative element *cómo demonios* is copied at the specifier of FocP (like a regular interrogative element, with a *hell*-element or not) and the factivity that it requires is provided by the valued [uFac] feature in the head of FactiveP (i.e. valued by $\text{es}_{[\text{iFac}]}$). Therefore, (46) is the analysis for those speakers who judge *cómo demonios es que* grammatical: they are able to ignore the association of *hell*-elements

³⁸ It is here assumed that *hell*-interrogative elements generate factivity. Oguro (2017: 113) defends that they generate “existential presupposition”. This was already suggested by Szabolcsi & Zwarts (1993: 261): “[*Who the hell saw John on the way home?*], on the other hand, can only be asked if we have unquestionable evidence that someone saw John, and merely wish to identify the person(s)”.

³⁹ D-linked interrogative elements, like “which X” (*which book*), appear to convey presupposition. By using them, one assumes that there is a limited set of options that could be answers to the question.

⁴⁰ Sentences with *cómo* with a causal value (without *es que*) always convey factivity, as it is normal for exclamative sentences, so the use of a *hell*-element does not imply any difference in this sense.

⁴¹ The existence of a [iMir] feature in the head of FactiveP, in (45), is coherent with an interro-exclamative force, which is used with *cómo* with a causal value when it is generated inside the TP (i.e. with *es que*). If this head is not endowed with such a feature, it seems plausible to suppose that the sentence has a (purely) interrogative force, as in (44).

- (48) a. ¿Cómo fue que no quisisteis ir?
how was that not wanted_{2Pl} to.go?
 ‘How come you_{pl} did not want to go?’
- b. Nos preguntó cómo era que no queríamos ir.
to.us asked how was that not wanted_{1Pl} to.go?
 ‘S/he asked us how come we did not want to go?’
- c. ¿Cómo puede ser que ya no se acuerde?
how can_{3Sing} be that already not himself recalls?
 ‘How is it possible that he has yet forgotten?’

The kind of structure that Spanish uses in the relevant questions, *cómo es que* (or at least some of its varieties), is not without (at least partial) equivalents in other languages, like the English *how is it that* and the French *comment se fait-il que*. In both cases they appear to contain a non-grammaticalized verb.

7. Can this analysis be useful for other similar forms?

Even if this paper focuses on Spanish, it would be important to try to relate the analysis of *cómo* and *cómo es que* with that that could be relevant for similar elements and structures in other languages, like those presented in the list in (4). However, such a development would exceed the ambitions of this paper.

In any case, it may be interesting to check if this analysis is useful for a better understanding of one interrogative element that has been left basically unstudied: *que cosa que*, used in a variety of Catalan, Ripacurtian, and in Aragonese (Nagore Laín 2007).⁴³

-
- (i) a. ¿Cómo fue que conocistes a tu novio?
how was that met_{2Sing} D.O.M. your boyfriend?
 ‘How did you meet your boyfriend?’
- b. ¿Cómo fue que te sumaste a la nueva película de D.? / El director [...] es un hermano para mí. Le ofrecieron hacerla y me convocó
how was that yourself joined_{2Sing} in the new film by D.? / The director [...] is a brother for me. to.him offered_{3Pl} making.it and me invited_{3Sing}
 ‘How did you join in the new film by D.? / The director is a brother for me. They offered him to make it and he invited me.’
- c. ¿Cómo fue que empezó? / Yo un día fui al restaurant, y lo vi.
how was that started_{3Sing}? / I a day went to.the restaurant, and him saw_{1Sing}.
 Y me quedé loco
and myself left_{1Sing} crazy
 ‘How did it start? / One day I went to the restaurant, and I saw him. And was left crazy.’
- d. ¿Y cómo fue que comenzó a trabajar ahí? / Bueno, yo empecé a trabajar ahí dando todos mis exámenes reglamentarios en la prefectura
and how was that started_{2Sing} to work there? / well, I started to work there giving all my exams regulatory in the prefecture
 ‘And how did you start working there? / Well, I started working there by presenting all my regulatory exams in the prefecture.’
- e. yo a los dieciséis años fue que supe cómo era que se procreaba
I in the sixteen years was that knew_{1Sing} how was that IMPERS. procreated_{3Sing}
 un nené
a baby
 ‘it was at sixteen years old that I knew how a baby was created.’

⁴³ In fact, this last interrogative element exists also in Ripacurtian Catalan, as *com*. In this variety, *com* with this value behaves like the Spanish *cómo* with the same value. *Que cosa que* behaves similarly to the *com* (with a causal value, without *es que*) in terms of embeddability, so it differs in this sense from *com és que*. However, there is a semantic difference between sentences with *que cosa que* and those with

Ripacurtian Catalan is spoken in the north-west of Catalonia and the north-east of Aragon and Aragonese is spoken in the rest of the northern area of Aragon.⁴⁴ Here, data from Ripacurtian Catalan is going to be used. (49) exemplifies its use:

- (49) Que cosa que la Maria no hi ha anat?
what a.thing that the Mary not there_{locative} has gone?
 ‘How come Mary did not go?’

Do the presented analyses make the correct predictions for it? Firstly, one should take into account that sentences with *que cosa que* are almost unembeddable, as (50) shows, and that a topicalized constituent can be interpolated between *que cosa* and *que*, (51). However, it is also possible to find such a constituent after the conjunction *que*, which is the only possible situation for a focalized constituent, as (52) shows.⁴⁵ Secondly, it is important to consider that there are reasons to think that the origin of this element is an Aragonese or a Spanish exclamative phrase:⁴⁶ *¡qué cosa!* ‘what a(n extraordinary) thing!’ (observe that, even if an exclamative phrase does not require an answer, it is quite common to provide an “explanation” to someone who has expressed amazement, astonishment; this may be the basis for the proposed evolution).

- (50) a. *Va dir que cosa que hi havien anat.
said_{3Sing} what a.thing that there_{locative} had_{3Sing} gone
 ‘S/he said how come they had gone there.’
 b. *Va preguntar que cosa que hi havien anat.
asked_{3Sing} what a.thing that there_{locative} had_{3Pl} gone.
 ‘S/he asked how come they had gone there.’
- (51) a. Que cosa, els diaris, que els hi has donat?
what a.thing, the newspapers, that them to.him have_{2Sing} given?
 ‘How come, the newspapers, you gave him?’
 b. Que cosa que, els diaris, los hi has donat?
what a.thing that, the newspapers, them to.him have_{2Sing} given?
 ‘How come, the newspapers, you gave him?’
- (52) a. *Que cosa els diaris que li has donat?
what a.thing, the newspapers, that to.him have_{2Sing} given?
 ‘How come it was the newspapers what you gave him?’
 b. Que cosa que els diaris li has donat?
what a.thing that the newspapers to.him have_{2Sing} given?
 ‘How come it was the newspapers what you gave him?’

the relevant *com* (see footnote 47).

⁴⁴ It is a language in an extremely fragile situation from a social point of view. However, even if it has been mostly substituted by Spanish, it seems that this structure continues to be used in the local variety of this last language (Nagore Lain 2007).

⁴⁵ Topicalized constituents can also appear at the left of *que cosa que*, but focalized constituents cannot. This will not be a problem for the analysis that will be proposed (in (56))

⁴⁶ This origin was suggested by Maria del Mar Massanell (UAB, p.c.). Note that this means that *que cosa que* is, in Ripacurtian Catalan, a loan. Indeed, in this variety the equivalent exclamative phrase would be *quina cosa!*, as it is normal in Catalan. This suggested vestigial exclamative nature of *que cosa que* is coherent with the fact that it is impossible to combine it with a *hell*-element, like *carai*, a Catalan *hell*-element (**que carai (de) cosa que*, **que cosa carai que*). This is true for all exclamative elements, but atypical for an interrogative element.

In appearance, the syntactic analysis of *que cosa que* could perfectly parallel that of the Spanish element *cómo* (with a causal value and without *es que*).⁴⁷ But there is an important difference: *que cosa que* is not a unity but is composed of *que cosa* and *que*. This last element, apparently a conjunction ('that'), is reminiscent of that that introduces the embedded clause with *cómo es que*.

Of course, there does not seem to be a verb involved in *que cosa que*. However, there is an indication that this last structure involves the use of two CPs, not only one (so it would differ in this sense from *cómo* without *es que*): the fact that topicalized constituents can appear both before and after *que cosa que* and interpolated between *que cosa* and *que*, while focalized constituents are possible only after *que cosa que*. This suggests that the syntax of *que cosa que*, while not disallowing the presence of focalized constituents, is one that restricts their possibilities of ordering and, at the same time, allows that topicalized constituents are used quite freely.

In particular, if the Int projection is relevant for *que cosa que* (and it seems so, since it is possible to maintain the subject before the verb, with no inversion; see (49)), it should be possible that it coexists with a focalized constituent. And indeed, it is, but such a constituent must appear after this structure (as it happens with *cómo es que*; see (38)). Therefore, more complex restrictions are needed.

This limitation is particularly problematic for the analysis of the conjunction *que*, which is clearly separable from *que cosa*. One plausible option would be to postulate that it is at the head of FactiveP, *que cosa* being at the specifier of IntP. Indeed, considering the exclamative origin that can be attributed to *que cosa que* (see footnote 46), it is reasonable to defend that the conjunction *que* is in this case the same that appears in some Spanish and Catalan exclamative sentences following the exclamative phrase.

- (53) ¡Qué guapa que está María!
how beautiful that is Mary!
 'How pretty Mary is today!'

The conjunction *que* 'that' in (53) could not appear, but, crucially, it would be

⁴⁷ The meaning of *que cosa que* is not identical to that of *com* (the Catalan equivalent of the Spanish *cómo*, which, in Ripacurtian Catalan, has its same values/uses). In fact, it is different from *com* and from *com és que* (the Catalan equivalent of *cómo es que*, used in all varieties of this language).

Although this is not crucial for this paper, it can be tentatively defended that, with *com és que*, the reality of the proposition under interrogation is suddenly perceived as shocking by the speaker; with *que cosa que*, the proposition under interrogation is shocking to the extent to which it contrasts with some expectations that the speaker had about it. Finally, a sentence with *com*, with no *és que*, conveys a judgment paired with astonishment: the proposition under interrogation is presented as unthinkable, as something wrong. For example, in (ia) the speaker is surprised that the bread was bought in that bakery since s/he thinks that this was impossible (s/he thinks that the bakery had closed); in (ib) the speaker is surprised that the bread has this origin because s/he expects that it came from a different bakery, probably the usual one (i.e. there were expectations about this and the reality of the proposition is not shocking by itself); in (ic) the speaker conveys that there is a mistake. Admittedly, this is a very specific context; in other cases, the difference between *com és que* and *que cosa que* is minimal, while *com* usually remains more clearly distinguishable from the other two.

- (i) a. Com és que é d'esto forn, lo pa? No havie tancat?
how is that is from.this bakery, the bread? not had_{3Sing} closed?
 b. Que cosa que é d'esto forn, lo pa? #No havie tancat?
what a.thing that is from.this bakery, the bread? #not had_{3Sing} closed?
 c. Com é d'esto forn, lo pa? Mos enverinarem!
how is from.this bakery, the bread? ourselves will.poison_{1Pl}!

ungrammatical to use it after an interrogative phrase (in Catalan, the use of this conjunction in equivalent exclamative sentences is generally considered obligatory, but there is some variation). This conjunction is similar or equivalent to that that appears in “emphatic” constructions like (54), which is the reproduction of (30a):

- (54) ¡Evidentemente que María está enfadada!
of.course that Mary is upset!
 ‘Of course Mary is upset!’

Therefore, this conjunction appears with some elements that have an exclamative nature and, hence, it can be argued that it is at the head of a projection related with exclamative-ness. This is defended by González i Planas (2010) and it could be that this projection is, at least in some cases, FactiveP (see (30b)).

However, it is not easy to defend this analysis for the conjunction *que* in *que cosa que*: if it was situated at the head of FactiveP, it should be possible to find focalized constituents before *que cosa*, assuming that *que cosa* was situated at the specifier of FactiveP; in fact, focalizations are impossible with this ordering (see footnote 45). If one assumes that the conjunction *que* is at the head of FactiveP, but *que cosa* is not at its specifier, nothing really changes: if *que cosa* was at the specifier of FocP, the prediction would be that focalized constituents are impossible (i.e. there is competition for a single projection), but not only when interpolated or before *que cosa*, but in general, and this is not correct, (52b) (however, in this case interpolated topicalized constituents would be predicted, and this is correct, (51a)); if *que cosa* was at the specifier of IntP, interpolated focalized constituents should be possible, but they are not, (52a) (however, this makes the correct prediction for interpolated topicalized constituents, (51a)). The fact that the conjunction *que* was not at the head of FactiveP, but at that of FocP (which is also related with exclamative-ness and, in general, with *wh*-elements), would not change this picture.

Note that, although focalized constituents seem generally compatible with (at least some) exclamative phrases, they cannot appear immediately after the conjunction *que*, something that is possible with *que cosa que* (these exclamative phrases have in common with this last structure the fact that it is impossible that focalized constituents appear interpolated, that is, immediately before the conjunction *que*). Observe this in (55) with the focalized constituent *los libros* ‘the books’:

- (55) ¡Qué bien {*los libros} que {*los libros} le has dado {los libros}!
how well {the books} that {the books} to.him have_{2Sing} given {the books}!
 ‘How good it was the books what you gave him/her!’

This suggests that the syntactic structure involved in *que cosa que* is more complex than that of a regular exclamative sentence: while the nature of *que cosa* can help justify the limitations for focalized constituents, it seems necessary to postulate that *que cosa que* implies the use of two CPs, in parallel with what is more clearly found with *com és que*. This double structure is coherent with the fact that focalized constituents can appear with *que cosa que* if they remain in the lower CP, but they cannot appear before it and cannot be interpolated: they cannot be situated in the high CP.

This explanation can be translated into the analysis presented in (56). There is a high CP that corresponds to the exclamative value of *que cosa que*, in accordance with the vestigial exclamative character that can be attributed to it. This implies that this CP has an exclamative illocutionary force and the head of FactiveP bears the [iFac] feature

with an interro-exclamative force (see (38)).

Note that this is not the only case in which a double CP, without embedding, seems necessary: it seems also important for echoic sentences, as (57) and (58) show (they are in Ripacurtian Catalan). Leaving aside the peculiar *que* ‘that’ that can introduce this kind of sentences, it is important to observe that both (57b) and (58b) appear to involve two CPs, since they have an illocutionary force by themselves ((57b) is declarative and (58b) is interrogative) and they reproduce sentences that have different illocutionary forces (this is particularly clear in the case of (57b), since *si* ‘if’ is necessarily used, reflecting the interrogative nature of the quoted sentence). This double character implies the existence of two CPs (and it is not necessary to suppose that there are elided *verba dicendi*).⁴⁸ As a consequence, this is another case in which the use of two contiguous CPs seems relevant. (It is clear, however, that some particular mechanism must provide the echoic interpretation of (57b) and (58b), perhaps related with the Speech Act Phrase (Speas & Tenny 2003), and differentiate them from sentences with *que cosa que*.)

- (57) a. A to B: Llegisses lo diari?
 *read*_{2Sing} *the newspaper?*
 ‘Are you reading the newspaper?’
 b. C to B: (Que) *(si) llegisses lo diari.
 *that if read*_{2Sing} *the newspaper?*
 ‘(S/he has asked) if you are reading the newspaper.’
- (58) a. A: Llegís lo diari.
 reads the newspaper
 ‘S/he is reading the newspaper.’
 b. B: (Que) llegís lo diari?
 that reads the newspaper?
 ‘(Have you said) that s/he is reading the newspaper?’

Finally, it should be noted that the fact that *que cosa que* implies the use of two CPs seems coherent with the semantics of purely exclamative sentences with *qué cosa* in Spanish. Indeed, a sentence like *Qué cosa, que no se diera cuenta* (‘What a surprising thing (is) that she was not aware of this’) appears to include a predication: *qué cosa* ‘what a thing’ is said of (is attributed to) an entire clause (CP), *que no se diera cuenta*. The Catalan equivalent (*Quina cosa, que no se’n va adonar*) conveys this same meaning. It is thus not particularly surprising that the grammaticalized structure *que cosa que* involves the use of an extra CP. In fact, in accordance with this, the intonation of sentences with *que cosa que* includes a break between *que cosa* and *que* that parallels that existent in the strictly bi-clausal structure *com és que* (between *com és* and *que*; i.e. immediately before the beginning of the embedded CP).

8. Conclusion

A syntactic analysis for the Spanish interrogative element *cómo* with a causal value has been provided. By adopting a vision of the left periphery of the sentence corresponding to the cartographic perspective, it has been shown that it is possible to explain in a coherent manner the factive and the mirative properties associated with this value of *cómo* and its peculiar properties regarding the coexistence and the ordering with other constituents. In addition, it has been shown that sentences with this element are in fact exclamative sentences, even if they are endowed with an interrogative

⁴⁸ This has been proposed, but it is problematic; see Demonte & Fernández-Soriano (2014: 242).

component. Indeed, these sentences are very difficult to embed, and this contrasts with the relative easiness for embedding shown by sentences with *cómo es que*. Since sentences with *cómo es que* are also exclamative-like in semantic terms (i.e. mirativity is conveyed), this leads to postulate that there exists a distinct interro-exclamative illocutionary force: it is similar to the interrogative force in the sense that it can be “accommodated” by some *verba dicendi* (i.e. probably, it can be substituted), but it involves the generation of a mirative feature. Finally, it has been shown that this analysis is useful for explaining the properties of an ill-known interrogative element of Ripacurtian Catalan and Aragonese, which behaves similarly to the Spanish *cómo* with a causal value (without *es que*).

Bernat Castro
Centre de Lingüística Teòrica
Universitat Autònoma de Barcelona
Campus UAB. Edifici B. 08193 Bellaterra (Barcelona). SPAIN
bernatcastro7@gmail.com

References

- Aboh, E. O. (2010). “Information Structuring Begins with the Numeration”. *Iberia*, 2.1, pp. 12-42. Available at <http://www.siff.us.es/iberia/index.php/ij/article/view/26/24>
- Aikhenvald, A. Y. (2012). “The essence of mirativity”. *Linguistic Typology*, 16, pp. 435-485. <https://doi.org/10.1515/lity-2012-0017>
- Alcázar, A. (2017). “A Syntactic Analysis of Rhetorical Questions”. In Aaron Kaplan et al. (eds.). *Proceedings of the 34th West Coast Conference on Formal Linguistics*. Somerville, MA: Cascadilla Proceedings Project, pp. 32-41. Available at <http://www.lingref.com/cpp/wccfl/34/paper3294.pdf>
- Ambar, M. (2003). “Wh-asymmetries”. In A. M. Di Sciullo (ed.), *Asymmetry in grammar. Vol. 1: Syntax and semantics*. Amsterdam & Philadelphia: John Benjamins, pp. 209-249. <https://doi.org/10.1075/la.57.11amb>
- Bromberger, S. (1992). “Why-Questions”. In *On What We Know We Don't Know*. Chicago & London: The University of Chicago Press & Stanford: Center for the Study of Language and Information, pp. 75-100.
- Brucart, J. M. (1993). “Sobre la estructura de SCOMP en español”. En A. Viana (ed.), *Sintaxi. Teoria i perspectives*. Lleida: Pagès editors, pp. 59-102.
- Castroviejo, E. (2006). *Wh-exclamatives in Catalan*. PhD Thesis. Universitat de Barcelona. Available at <http://hdl.handle.net/10803/2090>
- Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: OUP.
- Collins, C. (1990). “Why and how come”. In L. L.-S. Cheng & H. Demirdache (eds.), *Papers on wh-movement*, MIT Working Papers in Linguistics 13. Cambridge, Mass.: MIT, pp. 31-45. Available at <https://ling.auf.net/lingbuzz/001689>
- Conroy, A. (2006). “The Semantics of ‘How Come’: A Look at How Factivity Does It All”. In N. Kazanina, U. Minai, P. Monahan & H. Taylor (eds.), *University of Maryland Working Papers in Linguistics 14*, College Park, MD: UMWPiL, pp. 1-24. Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.484.6334&rep=rep1&type=pdf>

- Cruschina, S. (2012). *Discourse-related features and functional projections*. New York: OUP. <https://doi.org/10.1093/acprof:oso/9780199759613.001.0001>
- DeLancey, S. (1997). “Mirativity: The grammatical marking of unexpected information”. *Linguistic Typology*, 1, pp. 33-52. <https://doi.org/10.1515/lity.1997.1.1.33>
- DeLancey, S. (2012). “Still mirative after all these years”. *Linguistic Typology*, 16, pp. 529-564. <https://doi.org/10.1515/lity-2012-0020>
- Demonte, V. & O. Fernández-Soriano (2014). “Evidentiality and illocutionary force: Spanish matrix *que* at the syntax-pragmatics interface”. In A. Dufter & A. O. de Toledo (eds.), *Left Sentence Peripheries in Spanish: Diachronic, Variationist and Comparative Perspectives*. Amsterdam: John Benjamins, pp. 217–252. <https://doi.org/10.1075/la.214.13dem>
- Fitzpatrick, J. (2005). “The whys and how comes of presupposition and NPI licensing in questions”. In J. Alderete, C.-h. Han & A. Kochetov (eds.), *WCCFL 24: Proceedings of the 24th West Coast Conference on Formal Linguistics*. Somerville, MA: Cascadilla Proceedings Project, pp. 138-145. Available at <http://www.lingref.com/cpp/wccfl/24/abstract1216.html>
- González i Planas, F. (2010). *Cartografía de la recomplementació en les llengües romàniques*. MA Thesis. Universitat de Girona. Available at [10.13140/RG.2.1.1860.5601](https://doi.org/10.13140/RG.2.1.1860.5601)
- Haegeman, L. (2004). “Topicalization, CLLD and the left periphery”. *ZAS Papers in Linguistics*, 35 (1), pp. 157-192.
- Kim, J.-B. & O. G. Kim (2011). “English ‘How Come’ Construction: A Double Life”. *Studies in Generative Grammar*, 21:4, pp. 587-607. <https://doi.org/10.15860/sigg.21.4.201112.587>
- Kiparsky, P. & C. Kiparsky (1970). “Fact”. In M. Bierwisch & K. Heidolph (eds.), *Progress in Linguistics*. The Hague: Mouton, pp. 143-173. <https://doi.org/10.1515/9783111350219.143>
- Mata, M. (2007). “Els adverbis d’acte de parla i el *modus* oracional”. In *Llengua & Literatura*, 18, pp. 285-315. Available at [10.2436/20.2502.01.8](https://doi.org/10.2436/20.2502.01.8)
- Munaro, N. & H.-G. Obenauer (1999). “On underspecified *wh*-elements in pseudo-interrogatives”. *University of Venice Working Papers in Linguistics*, 9:1-2, pp. 181-253.
- Nagore Laín, F. (2007). “A formula interrogatiba *¿qué cosa que...?* en aragonés: gramática e pragmalingüística”. *Alazet*, 19. Available at <http://revistas.iea.es/index.php/ALZ/article/view/287>
- Obenauer, H.-G. (2004). “Nonstandard ‘wh’-questions and alternative checkers in Paggotto”. In H. Lohnstein & S. Trissler (eds.), *Syntax and Semantics of the Left Periphery, Interface Explorations 9*, Berlin & New York: Mouton de Gruyter, pp. 343-384.
- Ochi, M. (2004). “‘How Come’ and other Adjunct ‘Wh’-phrases: a Cross-linguistic Perspective”. *Language and Linguistics*, 5:1, pp. 29-57. Available at http://www.ling.sinica.edu.tw/files/publication/j2004_1_03_1022.pdf
- Oguro, T. (2017). “The true nature of WH-the Hell Phrases”. *Florida Linguistics Papers*, 4:2, pp. 113-126. Available at <http://journals.fcla.edu/floridalinguisticspapers/index>
- Pesetsky, D. (1987). “*Wh*-in-Situ: Movement and Unselective Binding”. In E. Reuland & A. Ter Meulen (eds.), *The Representation of (In)definiteness*, Cambridge, Mass.: MIT Press, pp. 98-129.

- Plank, F. (2018). “Interrogative verb inflection: Why rare, though easily grammaticalised?” (presentation). Available at http://ling.uni-konstanz.de/pages/home/plank/fp_presentations.html [consulted on September 21, 2018]
- Plann, S. (1994). “Indirect Questions in Spanish”. *Linguistic Inquiry*, 13, pp. 297–312. Available at <http://www.jstor.org/stable/4178276>
- Radford, A. (2017). “On ‘how come’ questions in English”. Ms. Presentation at the University of Manchester on April 25.
- Real Academia Española. Data base (CREA) [on line]. *Corpus de referencia del español actual*. Available at <http://www.rae.es> [consulted on May 8, 2018]
- Rizzi, L. (1997). “The Fine Structure of the Left Periphery”. In L. Haegeman (ed.), *Elements of Grammar: A Handbook of Generative Syntax*. Dordrecht: Kluwer, pp. 281-337. https://doi.org/10.1007/978-94-011-5420-8_7
- Rizzi, L. (2001). “On the position ‘int(errogative)’ in the left periphery of the clause”. In G. Cinque & G. Salvi (eds.), *Current studies in Italian syntax: Essays offered to Lorenzo Renzi*, pp. 267-296.
- Rizzi, L. (2004). “Locality and Left Periphery”. In A. Belletti (ed.), *Structures and Beyond. The Cartography of Syntactic Structures*, vol.3. New York: OUP, pp. 223-251.
- Rizzi, L. & G. Bocci (2017). “Left Periphery of the Clause”. In M. Everaert & H. C. van Riemsdijk (eds.), *The Wiley Blackwell Companion to Syntax*. John Wiley & Sons. <https://doi.org/10.1002/9781118358733.wbsyncom104>
- Rodríguez Ramalle, T. M. (2008). “El valor de las marcas enunciativas en la configuración del discurso en el ámbito de las lenguas romances.” In A. Moreno Sandoval (ed.), *Actas del VIII Congreso de Lingüística General*. Madrid: Universidad Autónoma de Madrid, pp. 1714-1732. Available at <http://www.llf.uam.es/clg8/actas/ActasCLG8.pdf>
- Shlonsky, U. & G. Soare (2011). “Where’s why?”. *Linguistic Inquiry*, 42.4 (fall), pp. 651-691. https://doi.org/10.1162/LING_a_00064
- Speas, P. & C. Tenny (2003). “Configurational properties of point of view roles”. In A. M. Di Sciullo (ed.), *Asymmetry in Grammar*. Amsterdam: John Benjamins, pp. 315-344. <https://doi.org/10.1075/la.57.15spe>
- Szabolcsi, A. & F. Zwarts (1993). “Weak islands and an algebraic semantics of scope taking”. *Natural Language Semantics*, 1, pp. 235-284. <https://doi.org/10.1007/BF00263545>
- Tsai, W.-T. D. (2008). “Left periphery and ‘how’-‘why’ alternations”. *Journal of East Asian Linguistics*, 17, pp. 83-115. <https://doi.org/10.1007/s10831-008-9021-0>
- Zanuttini, R. & P. Portner (2003). “Exclamative clauses: At the syntax-semantics interface”. *Language*, 79:1, 39-81. Available at <https://www.jstor.org/stable/4489385> <https://doi.org/10.1353/lan.2003.0105>
- Zwicky, A. & A. Zwicky (1971). “How Come and What For”. In D. Elliot, M. Geis, A. Grosu, Barry Nobel, A. Zwicky & A. Zwicky (eds.), *Working Papers in Linguistics* 8, Ohio State University, pp. 173-185.