

# **On the overlapping discourse functions of Spanish 'cómo que' and French 'comment ça' interrogatives**

**(Running title: Functions of Spanish 'cómo que' and French 'comment ça')**

Abstract:

We present evidence for an overlap in the discourse functions of Spanish *cómo que XP* ‘how that<sub>complementizer</sub>’ and French *comment ça Ø/XP* ‘how that<sub>demonstrative</sub>’ interrogatives. We argue for three shared discourse functions: clarification requests, mirative questions, and expressions of disagreement. We show that these functions are cued by an interplay of morpho-syntactic and contextual factors. At the morpho-syntactic level, whether grammatical person shifts (is indirectly cited) compared to the previous turn and whether additional linguistic material (the “remnant”) is present after ‘how that’ were found to be important predictors of discourse function. At the contextual level, whether and how the speaker continues her turn after the interrogative is our most significant predictor. We quantify the degree to which these and other cues allow for a prediction of the discourse functions and find that the resulting model predicts more clarification request uses and fewer mirative and disagreement uses than empirically attested. This indicates that some cues for these two readings are missing from our model. We propose that prosody might be one of them.

**Keywords:** pragmatics, sluicing, stripping, clarification, mirativity, adversativity, prosody, non-canonical questions

**Funding:** Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – Projektnummer 491466077

## Contents

1. Introduction.....	1
2. Why compare French and Spanish HOW THAT interrogatives .....	3
2.1 Syntactic similarity .....	3
2.2 Parallel corpus evidence for functional similarity .....	9
3. Discourse functions.....	11
3.1. Mirative questions .....	14
3.2. Clarification requests.....	16
3.3. Disagreements .....	17
3.4. Conclusions on the three discourse functions .....	20
4. Corpus study .....	21
4.1. Materials and methods .....	22
4.2. Results .....	24
4.2.1. Descriptive statistics and inter-rater agreement for discourse functions.....	24
4.2.2. Inferential statistics and modelling of cues .....	27
4.3. Discussion and outlook .....	35
5. Conclusions.....	41
Acknowledgments.....	43
Funding Information .....	43
Author Contributions .....	43
Conflict of Interest .....	43
Data Availability Statement.....	43

<b>Reference List</b> .....	44
Appendix I: Spanish translations of <i>comment ça + remnant</i> .....	48
Appendix II: Spanish translations of <i>comment ça</i> without remnant .....	49

**Tables**

Table 1: Number of HOW THAT interrogatives according to text type and language.....	23
Table 2: Confusion matrix for initial, individual annotations by two authors.....	25
Table 3: Agreement measures for initial, individual annotations between authors .....	26
Table 4: Agreement measures for final annotations by authors and native speakers .....	27
Table 5: Factors with levels .....	28
Table 6: Count of discourse functions according to factors and levels of analysis .....	30
Table 7: Classification matrix for the final model .....	35

## 1. Introduction

Both French and Spanish use *cómo/comment* ‘how’ not only to ask about the manner/means of an event but also to ask about the reasons for the possibility of the event, in which case the question comes with a counterexpectational or mirative effect (Brunetti, Tovená, & Yoo, 2022; Fleury & Tovená, 2018; Rosemeyer, 2021). Both languages can also combine *cómo/comment* with a grammatical link in the form of either *que* ‘that<sub>complementizer</sub>’ or *ça* ‘that<sub>demonstrative</sub>’ followed by given linguistic material to request its clarification or comment on it, as in the constructed examples in (1) and (2). In the following, we will refer to *cómo que* and *comment ça* interrogatives as “HOW THAT” interrogatives<sup>1</sup> and to the following material as their “remnant”. When discussing sequences of turns between speakers, we will refer to the first part of an adjacency pair (Sacks, Schegloff, & Jefferson, 1974; Schegloff & Sacks, 1973) as the “provocation” (Fliessbach, 2023) and to the second part as the “response” (Farkas & Bruce, 2010). For instance, in (1), a) is the provocation and b) is the response. Remnants cite the provocation or only parts of it. We will refer to these parts as the “antecedent” of the remnant (see discussion on ex. (13)).

(1) a) A: J'ai quitté mon travail. (French)

‘I quit my job.’

b) B: Comment ça tu as quitté ton travail?

‘HOW THAT<sub>demonstrative</sub> you quit your job?’

(2) a) A: Dejé mi trabajo. (Spanish)

‘I quit my job.’

b) B: ¿Cómo que dejaste tu trabajo?

‘HOW THAT<sub>complementizer</sub> you quit your job?’

---

<sup>1</sup> Explicitly exploiting the fact that English *that* can be a demonstrative or a complementizer.

As illustrated above, the two constructions target previous utterances. They are similar in this sense despite combining HOW with two different parts of speech: a demonstrative pronoun and a complementizer. They also seem functionally similar, with evaluative and clarification request readings available for both structures. However, to the best of our knowledge, no empirical investigation has yet attempted to quantify the degree of functional similarity (or difference) between the two. The present article aims to characterize and empirically measure the degree to which a functional similarity can be attested in corpus data of different kinds. This entails a fine-grained description and annotation of both constructions' discourse functions.

Such annotations in turn also allow us to assess possible cues to these functions, which will be the second main aim of the paper. We do this by taking into account the function of each interrogative within its specific context of use. In this sense, we understand the “situated meaning” (Linell, 2009, p. 15) of an “interrogative token as a function of its contextual properties” (Rosemeyer, 2021, p. 128). We test for correlations between a number of contextual properties and specific discourse functions and build a model that predicts functions for each interrogative token. We then provide measures of (in)accuracy of these predictions to quantify the amount of information gained by the morpho-syntactic and contextual cues we investigate, but also the amount of information still missing.

Section 2 explains why we think that comparing the discourse functions of French and Spanish HOW THAT interrogatives can be fruitful for our understanding of both constructions. In Section 2.1, we reflect on their syntactic similarities, particularly the fact that both French *ça* and Spanish *que* show a syntactic behavior as part of a HOW THAT interrogative that sets them apart from their respective paradigm as demonstrative and complementizer, respectively. In Section 2.2, we present observations from a corpus of French/Spanish parallel subtitles, which indicate that *cómo que* and *comment ça* are their respective closest translations, possibly due to

an overlap in their discourse functions. The rest of the paper is devoted to investigating these discourse functions. Section 3 defines and illustrates the main discourse functions attributable to HOW THAT interrogatives in the two languages under investigation. In Section 4, we present the results of a corpus study based on the annotation of these discourse functions and the linguistic cues that facilitate disambiguation among them. Our results indicate a significant overlap between the two languages and further illustrate the importance of morpho-syntactic and contextual factors in cueing the different functions. Section 5 concludes with a summary of our observations and an outlook on the next necessary steps to fully understand how these functions are cued and understood in a discourse context, particularly focusing on the need for further studies on their prosody.

## 2. Why compare French and Spanish HOW THAT interrogatives

### 2.1 Syntactic similarity

Neither *comment ça* nor *cómo que* lives up to the expectations we could assume for a sequence of a wh-adverb followed by a demonstrative or a complementizer, respectively. If we follow Fagard et al. (2016) and Noonan (2009, p. 55), complementizers must take a clausal complement, a restriction that does not apply to Spanish *que* after *cómo*, as shown in (3b).<sup>2</sup> Neither are French HOW THAT interrogatives as syntactically flexible as other interrogatives since they do not allow for subject-verb inversion (4b), nor clefting (4c) or left-dislocation of *ça* (4d).<sup>3</sup> Similar insights have led Smirnova and Abeillé (2021, p. 240) to analyze *ça* as a particle.

---

<sup>2</sup> Note that Hudson (1999) challenges the idea that complementizers form a single word-class.

<sup>3</sup> Note that (4b) would be possible as a response to the provocation *As-tu quitté ton travail?* because the entire antecedent (provocation) can become the remnant.

(3) a) A: Deje mi trabajo. (Spanish)

‘I quit my job.’

b) B: ¿Cómo que trabajo? ¿Tienes empleo?

‘HOW THAT<sub>complementizer</sub> job? You have a job?’

(4) a) A: J'ai quitté mon travail. (French)

‘I quit my job.’

b) B': # Comment ça as-tu quitté ton travail?

HOW THAT have-you quit your job

c) B'': \* C'est comment ça que t'as quitté ton travail?

it is HOW THAT that you have quit your job

d) B''': \* Ça, comment t'as/tu l'as quitté ton travail?

THAT, HOW you have/you it have quit your job

HOW THAT interrogatives in the two languages differ in some respects. Whereas it is common that French *comment ça* occurs without a remnant (what Ross, 1969 calls a “sluice”, see (5)), Spanish *cómo que* never occurs without it, see (6). In this sense, Spanish HOW THAT interrogatives are always cases of *wh*-stripping.<sup>4</sup> This difference is expected from the fact that complementizers take a complement. In contrast, the neuter demonstrative *ça* (and its longer form, *cela*) differs from its gendered counterparts (*celui, celle, ceux, celles*) precisely by the fact that it can occur in isolation (Kaiser, 2020, p. 127; Mosegaard Hansen, 2016, p. 249; Riegel, Pellat, & Rioul, 2009 [1994], pp. 375–378).<sup>5</sup>

(5) a) A: J'ai quitté mon travail. (French)

‘I quit my job.’

---

<sup>4</sup> See the discussion of (10) and (11) for further explanation.

<sup>5</sup> Without the need to be modified by *-ci* ‘here’, *-là* ‘there’, or an attribute such as *que j'aime* ‘that I like’ or *d'hier* ‘yesterday’s’.

b) B: Comment ça?

‘HOW THAT<sub>demonstrative</sub>?’

(6) a) A: Deje mi trabajo. (Spanish)

‘I quit my job.’

b) B: \* ¿Cómo que?

‘HOW THAT<sub>complementizer</sub>?’

It is unclear whether HOW THAT sluices with a demonstrative instead of a complementizer are possible in Spanish. Native speaker judgments on the responses in (7) vary between unacceptable and marginally acceptable.

(7) a) A: Deje mi trabajo. (Spanish)

‘I quit my job.’

b) B: ?? ¿Cómo eso/esto?

‘HOW THAT<sub>demonstrative</sub>?’

c) B': ?? ¿Eso/Esto cómo?

‘THAT<sub>demonstrative</sub> HOW?’

As for HOW THAT interrogatives *with* a remnant (“wh-stripping”), an argument for the idea that Spanish HOW THAT<sub>complementizer</sub> and French HOW THAT<sub>demonstrative</sub> occupy similar functional niches despite their different THAT form is the fact that the direct translation of Spanish *que* (French *que*) cannot replace *ça* without a change in meaning. *Comment que* can be used as a non-standard variant of *comment* (Zumwald Küster, 2018), but it receives a manner reading, so it would not be acceptable in a context like (8a). Neither are the direct translations of French *ça* (Spanish *eso/esto*) standardly used in Spanish HOW THAT interrogatives, see (9b) and Section 2.2.

(8)

a) A: J'ai quitté mon travail. (non-standard French)

‘I quit my job.’



b) B: # Comment que tu as quitté ton travail?

‘HOW THAT<sub>complementizer</sub> you quit your job?’

(9)

a) A: Deje mi trabajo. (Spanish)

‘I quit my job.’

b) B: ?? ¿Cómo eso/esto dejaste tu trabajo?

‘HOW THAT<sub>demonstrative</sub> you quit your job?’

French *comment ça* has recently been discussed under the term “wh-stripping” (Smirnova & Abeillé, 2021). This term is best understood as a counterpart to sluicing. Both terms come from a tradition of Generative Grammar that takes sentences such as (10) and (11) to be elliptical. Sluicing, as in (10), is seen as a kind of ellipsis where everything except a wh-constituent is elided, whereas stripping, as in (11), is seen as a bare argument ellipsis that leaves one constituent behind as a remnant (Kim & Abeillé, 2019, p. 367).

(10) Il a réussi l'examen, mais je ne sais pas comment (~~il a réussi~~). (sluicing)  
‘He passed the exam, but I don’t know how (he passed).’

(11) Il a réussi, mais (~~il a~~) pas (~~réussi~~) l'examen. (stripping)  
‘He passed, but ~~he has~~ not ~~passed~~ the exam.’

Wh-stripping combines the two phenomena as it combines a wh-constituent and a focal remnant. For English, Kim and Abeillé (2019, p. 368) discuss examples of why-stripping, such as (12).

(12) a) A: Here is the secret ingredient – vinegar.  
b) B: Why vinegar?  
c) B': \*How/\*when/\*where vinegar?

They further note that non-sentential remnants are commonplace with why-stripping, a fact that also holds for HOW THAT-stripping, as in (13) and (14).

(13) a) A: J'ai quitté mon travail. (French)

'I quit my job.'

b) B: Comment ça travail? T'as un travail?

'HOW THAT<sub>demonstrative</sub> job? You have a job?'

(14) a) A: Dejé mi trabajo. (Spanish)

'I quit my job.'

b) B: ¿Cómo que trabajo? ¿Tienes empleo?

'HOW THAT<sub>complementizer</sub> job? You have a job?'

This leads them to the conclusion that “attested corpus data challenge any movement-and-deletion approaches” (Kim & Abeillé, 2019, p. 381), which in turn motivates them to adopt a “direct interpretation” approach à la Ginzburg and Sag (2000). Such an approach allows any constituent to be a fragment answer because there is no syntactic structure at the ellipsis site. They propose that any category can be projected into an utterance (S) when it functions as a focus-establishing constituent (Kim & Abeillé, 2019, p. 382). Smirnova and Abeillé (2021) extend the wh-stripping analysis to French constructions introduced by a wh-word + *ça* or *donc* (which they call question particles).

We think that a similar analysis holds for Spanish *cómo que*. (15) and (16) are examples where a “non-elliptical” version is either ungrammatical, see (15d) and (16c), or unacceptable because the manner interpretation of *cómo* is incongruent, see (15e) and (16d).

(15) a) A: Bueno, podemos probar... (Spanish, Film ‘Casting’)

'Well, we can try...'

b) B: No, no... Da igual... Gracias...

'No, no... It doesn't matter... Thanks...'

c) A: ¿Cómo que gracias? ¡Llevo tres horas esperando fuera para entrar y ahora un “no, da igual, gracias”?

‘HOW THAT thanks? I’ve spent three hours waiting outside, and now a “no, it doesn’t matter, thanks”?!’

d) A': \* ¿Cómo (es) que gracias?

‘HOW is it THAT thanks?’

e) A": # ¿Cómo (es) que (~~me das las~~) gracias? ¡Llevo tres horas esperando fuera para entrar y ahora un “no, da igual, gracias”?

‘HOW is it THAT you’re thanking me? I’ve spent three hours waiting outside, and now a “no, it doesn’t matter, thanks”?!’

(16) a) (Spanish, Film ‘Cuatro corazones con freno y marcha atrás’)

A: Pues... ¿Lo digo?

‘Well... should I say it?’

b)

B: ¿Cómo que si lo dice? ¿Cómo que si lo dice? Pero ¿usted cree que vamos a aguantar que nos oculte usted algo?

‘HOW THAT if you say it? HOW THAT if you say it? But do you think we will allow that you hide something from us?’

c) B': \* ¿Cómo (es) que si lo dice?

‘HOW is it THAT if you say it?’

d) B": # ¿Cómo (es) que (~~se pregunta~~) si lo dice? Pero ¿usted cree que vamos a aguantar que nos oculte usted algo?

‘HOW is it THAT you are wondering whether you should say it? But do you think we will allow that you hide something from us?’

Summing up, we argue that HOW THAT interrogatives share a range of peculiarities that set the demonstrative and the complementizer in them apart from their respective paradigms. While grammaticalization processes from demonstratives to complementizers are common in Indo-European languages (Roussou, 2020), HOW THAT interrogatives seem to be part of a constructionalization process (Rosemeyer, 2021) that blurs the lines between these categories even more. One way to motivate this exceptional status within the interrogative paradigms of

the two languages is by virtue of their marked discourse functions, which will be the primary concern of the rest of the paper.

## 2.2 Parallel corpus evidence for functional similarity

We have seen in (8) and (9) that direct literal translations (from French to Spanish or from Spanish to French) for HOW THAT interrogatives with remnants are not possible. We suspect that these lacunae in the respective paradigms are not coincidental; instead, they indicate that the same discourse functions are covered by the HOW THAT interrogative that is already present in the system.

As a pilot study before our corpus annotations, we wanted to test our intuition that the two constructions are their respective closest translations. We quantified the results of a regular expression search<sup>6</sup> on a subcorpus of 9 million (M) alignments of the OPUS open subtitles parallel corpus French-Spanish (Lison & Tiedemann, 2016).<sup>7</sup> This corpus was chosen because the low frequency of HOW THAT interrogatives requires very large datasets to achieve a sufficiently large number of observations and because the corpus closely approximates informal conversations (Levshina, 2017). We found 562 instances of *comment ça* + remnant. Their translations were then grouped according to the initial tokens they contained.<sup>8</sup> The more frequent translations are given in Appendix 1, showing that *comment ça* + remnant is most frequently translated as *cómo que* (n=51, followed by the clarification requests *qué quiere(s)*

---

<sup>6</sup> (C|c)omment ça [^se,s',va, \?, marche] This excluded the common constructions with *ça* as subject pronoun, such as *comment ça se fait*, *comment ça va*, *comment ça marche*, as well as sluices.

<sup>7</sup> An alignment is either one or two lines per language and roughly approximates a turn in dialogue. The total number of lines for the two languages is therefore a bit higher than 18M.

<sup>8</sup> We allowed for a three-token window for Spanish because we separated them by whitespaces and didn't want to filter out initial interrogation marks (¿) to see whether we were dealing with interrogatives.

[*decir*] (n=38) ‘what do you want to say’, *qué significa* (n=10) ‘what does it mean’, and *a qué [te refieres/se refiere]* (n=9) ‘what are you referring to’.<sup>9</sup> Summing over all cells with inflected forms of the modal verb *poder* (n=12) ‘can’, we also see that a sentence with a modal reading ranges among the frequent translations of *comment ça* + remnant.

The results of a second regular expression search, with identical window size and settings, but this time only matching *Comment ça?* sluices on the same 9M French-Spanish alignments subtitles corpus confirms the doubtfulness of the responses in (7), with not a single translation containing *eso/esto* among 3884 alignments. The more frequent results in Appendix II show that *Comment ça?* sluices are overwhelmingly translated as clarification requests, with 942 cases of *qué quieres [decir]* ‘what do you want to say’, 261 cases of *a qué [te refieres/se refiere]* ‘what are you referring to’, and only 129 *cómo que* ‘HOW THAT’ translations.

These observations, while indicative of possible discourse functions in and of themselves, are only approximations. They show that comparing the two HOW THAT interrogatives is particularly reasonable in cases with remnants. Still, they face the problem of polyfunctionality on the side of the respective translations, particularly for HOW THAT interrogatives translated again as HOW THAT interrogatives. For these cases, the *tertium comparationis* must be on the side of interpretation, which requires manual annotation.

Taken together, the syntactic similarities and the parallel data from the Spanish-French subtitle corpus both show that a more fine-grained comparison regarding the discourse functions of the two constructions can reasonably be pursued. The following sections, therefore, provide a detailed account of how we investigated their discourse functions.

---

<sup>9</sup> Square brackets here indicate that these continuations were checked manually and are not a result of the regex search.

### 3. Discourse functions

As mentioned in Section 2, HOW THAT interrogatives are syntactically marked: they are characterized by a particular element following the wh-word, either a demonstrative or a complementizer, whose behavior is not the one expected from a demonstrative or a complementizer, respectively. Therefore, the form of these interrogatives makes them good candidates to express non-canonical question acts (Farkas, 2022). Indeed, the literature on the discourse functions of *comment ça* and *cómo que* interrogatives, though not rich, points in this direction. Concerning French, recent work on *comment* interrogatives followed by a modal verb, as in (17), describes them as reason questions because the wh-word *comment* does not ask about the manner or the means of, but about the reasons for the event. However, they differ from *pourquoi* ‘why’ in that they also express surprise due to the unexpected possibility of the “prejacent” (in (17), the possibility to accept the offer, see Brunetti et al., 2022; Brunetti, Yoo, Tovená, & Albar, 2021; Fleury & Tovená, 2018; Tovená, 2022).<sup>10</sup>

(17) (French, Brunetti et al., 2021, p. 255)

Comment tu peux refuser une telle proposition?!

‘How can you refuse such an offer?!’

The non-canonical speech act realized by these questions is a request for explanations that may help the speaker to revise her expectations.<sup>11</sup> As noticed by Smirnova (2021) and Smirnova and Abeillé (2021), this interpretation is also available with interrogatives introduced by *comment ça*. In her corpus, Smirnova finds that most cases of *comment ça* have such a reading, which she paraphrases as “How is it possible that REMNANT?”. Smirnova also finds interrogatives

---

<sup>10</sup> *Pourquoi* interrogatives, too, can express surprise, but only if some prosodic or lexical cues are present. Furthermore, *pourquoi* interrogatives can have a goal reading, which is not available with *comment* interrogatives (see e.g. Tovená, 2023).

<sup>11</sup> From now on, we will refer by convention to the speaker as *she* and to the listener as *he*.

whose interpretation would rather be paraphrased as “What do you mean by REMNANT?” that ask for clarification, such as (18). We can see that the HOW THAT interrogative is followed by a reformulation of B’s question in (18d).

(18) (French, Smirnova, 2021, p. 52)

a) A : Surtout, je te le répète, cela n’intéresse personne

‘Above all, I repeat it, that does not interest anybody’

b) B : Et moi ?

‘And me?’

c) A : Comment ça ?

‘HOW THAT ?’

d) B : Je t’intéresse, moi ?

‘Do I interest you ?’

Lefevre (2009) observes yet another reading, namely one where *comment ça* questions the validity of its provocation, as in (19), where the truth of the sentence ‘We didn’t do anything (wrong)’ is questioned:

(19) (French, Lefevre, 2009, p. 82)

a) A: Mamie !... Madame !... On n'a rien fait !

‘Grandma!... Madam!... We didn’t do anything (wrong)!’

b) B: Comment ça, vous n'avez rien fait ? (...) et mon pouce alors ?

‘HOW THAT, you did not do anything? (...) and what about my thumb?’

c) Il agite sous votre nez le doigt en question empaqueté dans un gros pansement

‘He moves under your nose the finger in question, packed inside a big plaster’

Concerning Spanish, Rosemeyer (2021) argues that *cómo que* interrogatives may have an epistemic reading and can be paraphrased as “How is it possible that ...?” (cf. Smirnova’s paraphrase for French). Rosemeyer further argues that what the speaker finds unexpected can

correspond to the previous speech act, as in (20).

(20) (Spanish, C-ORAL ROM SPAIN, emedsp05)

a) A: iniciaron la la temporada como jugadores comunitarios?

‘Did they start the season as communitarian players?’

b) B: Sí, parece que sí;

‘Yes, it seems so’

c) A: **cómo que** parece que sí ; [ . . . ] usted no lo sabe?

‘HOW THAT it seems so ; [...] don’t you know that?’

The HOW THAT interrogative’s intended meaning is “How can you say *parece que sí?*”; it questions the very speech act of the provocation. Rosemeyer further argues that such “interactional challenges are (...) not information-seeking in the sense that they make an answer to the question relevant. Rather, they signal that the listener needs to justify her or his previous move.” (Rosemeyer, 2021, p. 132)

To sum up, the few studies we know of that discuss the discourse functions of HOW THAT questions in French and Spanish both identify a reason+mirative reading, which can also target the provocation’s speech act. Both interrogatives can be interactional challenges, which put the provocation into question. While a clarification request use has only been discussed for French in the literature, it also seems plausible for Spanish. In fact, in Section 2.2, we found that most of the non-literal translations of *comment ça* into Spanish pointed at a clarification request reading.

Starting from the discourse functions proposed in the literature and from our own observations of the data from the OPUS corpus, three readings were eventually retained for annotation, which



are called “Mirative questions”, “Clarification requests” (CR), and “Disagreements”. More details of these are given below, as well as the criteria used to identify them.

### 3.1. Mirative questions

As seen above, HOW THAT interrogatives, like other interrogatives introduced by ‘how’, have a reason reading plus an additional mirative interpretation due to the discrepancy between the speaker’s and the addressee’s expectations towards the possibility of some event. In (21) – an example extracted from a science fiction Spanish TV series – the character called Vargas is dead and finds himself in a sort of limbo. Notice that the HOW THAT interrogative is followed by a sentence uttered by the same speaker starting with ‘If that is so...’. This continuation shows that Vargas, though surprised at the Directora’s utterance (*usted debería estar vivo* ‘you should be alive’), is ready to revise his assumptions and accept the provocation.

(21) (Spanish, Film ‘Estoy vivo’)

a) DIRECTORA : Lo cierto es que usted debería estar vivo.

‘The truth is that you should be alive.’

b) VARGAS : Espere, espere... un momento por favor

‘Wait, wait... one moment please,’

c) ¿**Cómo que** debería estar vivo?

‘HOW THAT I should be alive?’

d) ¡Si es así exijo que inmediatamente me devuelvan!

‘If that is the case, I demand that you bring me back immediately!’

Unexpectedness can also arise from *not-at-issue* content. In (22), the remnant of the HOW THAT question targets the presupposition triggered by the adjunct clause in the provocation (*Comme il nous quitte...* ‘Since he leaves us...’).

(22) (French, Film ‘Le Petit Spirou’)

a) PONCHELOT : Madame Suzette, Monsieur Spirou me charge de vous faire passer ce message. Comme il nous quitte dans deux semaines, il tient à vous...

‘Madame Suzette, Monsieur Spirou asks me to pass you this message. Since he leaves us in two weeks, he cares about you...’

b) SUZETTE (elle le coupe) : **Comment ça**, il nous quitte dans deux semaines ?

‘Suzette (she cuts him short): HOW THAT, he leaves us in two weeks?’

Unexpectedness can finally also concern the addressee’s move. The statement b) in (23) violates the default assumption of *Addressee competence* in a), namely that Laurent knows when the book will be published.<sup>12</sup> After Laurent denies this assumption, Denis’ HOW THAT interrogative expresses its violation (‘How can you say that you don’t know?’). In d), Laurent provides one justification for the uncertainty of the publication date (he explains why he doesn’t know). Denis further replies by making Laurent understand that the justification is still insufficient for him to revise his assumptions.

(23)

(French, Film ‘L’Enquête’)

a) DENIS : Quand est-ce que vous le sortez mon bouquin, alors ?

‘When are you publishing my book, then?’

b) LAURENT (ÉDITEUR) (ennuyé) : Je sais pas.

‘I don’t know.’

c) DENIS : **Comment ça** tu sais pas ?

‘HOW THAT you don’t know?’

d) LAURENT (ÉDITEUR) : Orban a demandé une deuxième expertise juridique...

‘Orban has asked for a second legal expertise...’

e) DENIS : Quoi !? Mais on vient d’en faire une et j’ai fait plein de coupes !

‘What!?! But one has just been done and I’ve made many cuts!’

---

<sup>12</sup> See the default assumption accompanying question acts (Farkas, 2022, p. 297).

### 3.2. Clarification requests

Some HOW THAT interrogatives express the speaker's lack of complete understanding of the addressee's intended meaning when he uttered the provocation (or part of it). In (24), the obscure part is *algo* 'something'; the HOW THAT question is followed by various expressions that make the denotation of *algo* more explicit.

(24) (Spanish, Film 'Estoy vivo')

a) ENLACE: (...) El auténtico Marvin murió hace dos días. Algo invadió su cuerpo entonces.

'The real Marvin died two days ago. Something has invaded his body since then.'

b) MÁRQUEZ : Algo... ¿**Cómo qué** algo?

'Something... HOW THAT something?'

c) ENLACE: Un ente hostil, ya se lo he dicho. (...) Un espíritu. Un ser incorporeo. (...)

'A hostile body, I already told you that. (...) A spirit. An incorporeal being.'

In (25), Claude, a friend of Vincent's, reveals to Vincent that he is in a relationship with Vincent's mother. Vincent is not sure to understand Claude's statement. He asks for clarification of the intended meaning of the expression *être avec* 'to be with', which in this context indeed has the specific meaning of 'being in a relationship with'. The quotes indicate what part of the provocation is particularly unclear for Vincent. Claude then reformulates his previous statement so that it becomes clearer.

(25) (French, Film 'Le prénom')

a) CLAUDE : Je suis avec Françoise, Vincent.

'I'm with Françoise, Vincent.'

(An exchange follows where Vincent understands that *Françoise* is his mother.)

b) VINCENT : **Comment ça**, tu «es» avec maman?

'HOW THAT, you "are" with mum?'

c) CLAUDE : On est ensemble.

‘We are together.’

This example shows how the two readings – reason+mirativity and clarification request – are potentially related. Indeed, it is presumably Vincent’s incredulity at the possibility that Claude is in a relationship with his mother that makes Claude’s statement unintelligible to him. The interrogative, however, is still a clarification request since Claude’s reply explains what he meant by saying that he *is with* Françoise and not what the circumstances are that made the relationship possible, as a mirative question would require.

### 3.3. Disagreements

Both mirative questions and clarification requests have an information-seeking component in that they make an answer relevant (Rosemeyer, 2021) and require the addressee to provide for it (Caponigro & Sprouse, 2019). In other terms, they have a (more or less high) degree of “conditional relevance”, which is the degree to which the utterance relies upon a reaction by the listener (see Rosemeyer, 2021, p. 125 and references there): either the listener is asked to provide some justifications for the possibility of what he said previously, or he must reformulate what he said so that its meaning becomes clear(er). In the case of disagreement uses, on the contrary, there is no such expectation of a reaction from the addressee. When a mirative reading is intended, the speaker, though surprised, accepts the possibility of the proffered content and is ready to revise her expectations; in the case of a disagreement reading, the speaker does not accept it and therefore does not ask for any explanation: her goal is instead to convince the addressee that what he states is not true.

Consider (26). Esther is an actress who is waiting to do a casting call. She already has the script, but Carmen, the casting assistant who is supposed to give the script to the candidates, does not believe her. When uttering the HOW THAT interrogative in c), Carmen is not open to revising her expectations; her goal is to tell Esther that she is wrong and, using the utterance that follows the interrogative, to explain why. The interpretation of the interrogative, though similar to a

mirative reading, is therefore different, and in particular, the information-seeking component is absent. Note that Esther's reply is coherent with this interpretation: she insists that what she said is true (*de verdad* 'really'). Such a reply shows that she understands Carmen's HOW THAT interrogative to mean "What you said is not true", rather than as a question of the kind: "How is it possible that what you said is true?".

(26)

(Spanish, Film 'Casting')

a) En ese momento, llega CARMEN, la ayudante de casting, (...). Les da un par de papeles, uno para cada uno...

'At this moment, Carmen, the casting assistant, arrives (...). She gives them a couple of papers, one to each of them...'

b) ESTHER No, si yo ya tengo...

'No, I have one already...'

c) CARMEN ¿Cómo que ya tienes?

'HOW THAT you have one already?'

d) Mira, cariño, yo me quedo con todas las caras y la tuya no la he visto, así que no te rajés y coge la separata, anda, que hoy estoy hasta arriba.

'Look, darling, I remember all the faces, and I haven't seen yours, so don't worry and take the script, come on, today I'm swamped.'

e) ESTHER Pero que yo ya tengo, de verdad...

'But I have one already, really...'

In (27), Alain tells Mathieu what he has done to help him. In b), Mathieu politely replies that he didn't need to bother, so Alain's intention with c) is to convince Mathieu that helping him was indeed worth the effort.

(27)

(French, Film 'Un homme idéal')

a) ALAIN FURSAC : (...) J'ai appelé mon ami Cassignol, le préfet. Il m'a promis de faire le maximum.

'I called my friend Cassignol, the prefect. He promised me he'll do his best.'

b) MATHIEU : C'est gentil, mais c'était pas la peine...

'That's nice of you, but it was not worth it' (meaning: 'you didn't have to')

c) ALAIN FURSAC: Comment ça pas la peine ! Mais on tient à vous, Mathieu !

'HOW THAT not worth it! But we care about you, Mathieu!'

A rhetorical question has been analyzed as an indirect assertion corresponding to the negative answer to the question (Sadock, 1971). We may wonder whether HOW THAT interrogatives with a disagreement reading can also be considered rhetorical since they too make an indirect assertion (that the interlocutor's earlier statement is false). Yet, rhetorical questions have also been argued to imply that their answer is known by both speaker and addressee (Caponigro & Sprouse, 2019). On the contrary, the indirect assertion expressed by the HOW THAT interrogative with a disagreement reading is only known to the speaker, and indeed the interrogative with this reading is generally followed by an explanation of the reasons for the disagreement.

A special type of rhetorical questions that seems particularly close to the functions we discuss here are "challenging questions" (Koshik, 2003) or "rhetorical opposing questions" (Gruber, 2001), particularly those with preverbal *pourquoi* 'why' and *qu'est-ce que* 'what' (Dekhissi & Coveney, 2021). These can express the speaker's negative reaction towards the listener's words or actions via an implicit emphatic assertion (Dekhissi & Coveney, 2021, p. 129), and can also take on a mirative function. In fact, Celle and Pélissier (2022) propose that the mirative function is primary. We consider this debate further evidence that we should differentiate between types of interactional challenges depending on whether the hearer is challenged to change his stance/behavior or to explain an unexpected assertion.

HOW THAT interrogatives further differ from the aforementioned non-canonical questions in that they require a verbal target (the provocation) that can be quoted (as the remnant). Moreover, such a remnant does not need to express propositional content, so the speaker can challenge

non-propositional parts of the provocation. This seems infelicitous or even ungrammatical with other interrogative forms, as in (28).

- (28) a) \* Qu'est-ce que pas la peine ! Mais on tient à vous, Mathieu !  
b) ?? Pourquoi pas la peine ! Mais on tient à vous, Mathieu !

In conclusion, disagreements are cases in which the adversativity associated with mirative questions goes beyond a reluctant acceptance of proffered content and reaches the point where the speaker does not accept said content. In terms of Farkas and Bruce (2010), a disagreement use of a HOW THAT interrogative does not point backward to reconcile a newly accepted proposition with previously accepted ones (Fliessbach, under review) but rejects a proffered proposition and leads to a conversational crisis that can only be resolved by retraction of a discourse commitment by one of the interlocutors.

### **3.4. Conclusions on the three discourse functions**

In order to summarize the three discourse functions just described, we give the paraphrases with which each reading is associated, which helped the annotation procedure. Mirative questions correspond to questions asking about the possibility of the provocation (the possibility of its truth, or that of a part of it, or of the appropriateness of the speech act realized through it): “How is it possible that what you say is the case / that you say that?”. Clarification requests are questions about the speaker’s intended meaning when uttering the provocation: “What do you mean by saying that?” (Ginzburg, 2012). Finally, Disagreements negate the truth of the provocation: “What you say is not true”.

The three readings are not unrelated. With a disagreement reading, there is no acceptance of the provocation by the speaker. In contrast, with mirative questions, the speaker is open to accepting it, even though her expectations are violated. With clarification requests, the antecedent is unclear, so no acceptance or refusal is given yet; however, as we noted for (25),

the antecedent may be unclear precisely because it provides some information incompatible with the speaker's expectations. The speaker wants to make sure that she understands the provocation correctly before she may express her surprise at it or before she may challenge it. The three readings can be seen as occupying different points in an adversativity scale, ranging from CRs, which are moves that involve no adversative effect but still do not show acceptance of the addressee's move yet (since it is not fully understood), over miratives, which indicate a difficulty of the speaker to reconcile her expectations and the provocation, to disagreements, where the provocation is not accepted, and which often even contained explicit additional markers of adversativity such as negators, discourse particles, adversative connectives, expressive insubordinates (Schwenter, 2016; Trotzke & Villalba, 2021), among others.

#### **4. Corpus study**

Having explained the three discourse functions under investigation, we can now turn to our empirical observations based on corpus data. These serve two purposes: to ascertain the presence and frequency of the discourse functions described above for the two HOW THAT interrogative constructions, and to investigate the morpho-syntactic and contextual factors that correlate with each function. We start by describing the materials and methods used (4.1). The subsequent section (4.2) presents the results, starting with some descriptive statistics and tests on inter-rater agreement for our annotations of the discourse functions (4.2.1) before turning to inferential statistical results on the morpho-syntactic and contextual factors that might correlate with these functions and could serve as disambiguating cues (4.2.2). We end this section with a discussion of our results and an outlook on the next necessary steps in the investigation of HOW THAT interrogatives (4.3).



#### 4.1. Materials and methods

Annotating the discourse functions outlined in Section 3 requires data that are structured dialogically and are at least conceptually oral (Koch & Oesterreicher, 1985). They also need to allow for precise attribution of turns to speakers. While not strictly necessary, background information on the interlocutors and full access to their dialogue can help decide doubtful cases. The low frequency of HOW THAT interrogatives, even in dialogical corpora, furthermore requires a relatively large database. Their rare occurrence can be most easily seen in the number of examples found by previous studies. Rosemeyer combined the approx. 0.3M word corpus C-ORAL ROM SPAIN (Cresti & Moneglia, 2005) with the approx. 0.37M word corpus PR (Cortés-Torres, 2005) and found 15 cases of *cómo que* interrogatives. Smirnova and Abeillé (2021) found 235 cases of *comment ça* in the approximately 61M word corpus Frantext (1960-2010) (ATILF, 1998-2022).<sup>13</sup>

We decided to combine two kinds of data in creating our corpus, namely examples from film scripts and examples from corpora of sociolinguistic interviews. This was done to collect a large number of observations for both languages and to test whether different text genres would have a measurable impact on the frequency of the respective discourse functions. Research on language in film scripts has shown “that narrative and ‘vague’ elements and some discourse markers are underrepresented in film and TV dialogues in comparison with naturally occurring conversations” (Levshina, 2017, p. 313 and references there). Levshina (2017, pp. 327–328) also found that subtitles contain fewer hesitations, corrections, and clarification requests than natural conversations, whereas they contain more questions that react to the hearer’s actions.

---

<sup>13</sup> We recreated the corpus to check its approximate size.

For French, we included 97 film scripts that were accessible on the website of the association *Lecteurs anonymes*.<sup>14</sup> To this, we added sentences extracted from two corpora of sociolinguistic interviews: the ESLO corpus (Abouda & Skrovec, 2018; Eshkol-Taravella et al., 2011) and the CFPP2000 (Branca-Rosoff, Fleury, Lefevre, & Pires, 2012). For Spanish, we could search through 117 film scripts accessible on the *Aprendercine* and *Premio Goya* websites. To this, we added 70 examples from the COSER corpus of sociolinguistic interviews (Fernández-Ordóñez, 2005-2022). Table 1 shows the number of HOW THAT interrogatives that we extracted. The text extraction process by optical character recognition did not allow for exporting all text data in a format that would yield precise word counts. The film script subcorpora ranged between 2M and 3M words per language. The two ESLO corpora combined have approx. 1M words. The CFPP2000 has approx. 0.5M words. The COSER corpus has approx. 3.3M words.<sup>15</sup>

*Table 1: Number of HOW THAT interrogatives according to text type and language*

	French	Spanish	total
scripts	111	104	215
interviews	27	70	97
total	138	174	312

We always extracted the interrogatives with their surrounding context and with all additional information, such as speaker names and context descriptions. This information allowed us to

<sup>14</sup> <http://lecteursanonymes.org/scenario/>

<sup>15</sup> A reviewer rightfully pointed out that sociolinguistic interviews typically include pre-fabricated lists of topics or questions. Given their need for an antecedent, we consider it unlikely that the HOW THAT interrogatives from the interviews were prefabricated. Neither did they occur systematically with certain topics, as would be the case if they were part of a protocol.

understand the relation between the HOW THAT interrogatives and their discourse contexts, a process that took place in several steps. After an initial set of 20 examples per language, the two first authors discussed the annotation process and tried to make the criteria for the respective annotations explicit. This, in turn, refined our understanding of the annotations, allowing us to continue individually with the larger sets of examples. After half the data was annotated, a second iteration of the discussion was included. After the complete annotation, a final discussion of all examples focused on which properties of the construction and its surrounding context appeared to be related to each of the three readings and should therefore be annotated. The selected properties were added as independent variables to our statistical analysis (see Section 4.2.2).

## **4.2. Results**

We start the overview of our results with descriptive statistics and some measures of inter-rater agreement for the discourse functions we annotated (Section 4.2.1). We then proceed to present our inferential statistical analysis in Section 4.2.2.

### **4.2.1. Descriptive statistics and inter-rater agreement for discourse functions**

For the initial individual annotations by the authors, Table 2 shows the confusion matrix for the three discourse functions under investigation as annotated by the authors.<sup>16</sup> We see here that for both authors, mirative uses were the most frequent, followed by CRs, with disagreement uses the least frequent among the three. We also see that there was not a single example in which one author annotated CR and the other author annotated disagreement. There were, however, some diverging annotations in which one author annotated a mirative use, and the other chose

---

<sup>16</sup> Excluding cases that were deemed undecidable/NA (for example due to a lack of discourse context in the case of phone calls ) and some cases labeled as *other*, such as manner uses of *comment ça*.

either CR or disagreement. Foreshadowing the discussion in Section 4.3, we can say that this seemed to be due to the adversativity scale mentioned above. Sitting in the middle of the scale, miratives would be more prone to diverging interpretations than the two endpoints of the scale among each other.

*Table 2: Confusion matrix for initial, individual annotations by two authors*

	CR	disagreement	mirative	Sum
CR	87	0	14	101
disagreement	0	37	13	50
mirative	20	15	95	130
Sum	107	52	122	281

Based on Table 2, Table 3 shows the percentage agreement and Gwet’s AC1 for each of the individual discourse functions and all three combined functions. They were calculated using the irr package (Gamer, Lemon, Fellows, & Singh, 2019) and the irrCAC package (Gwet, 2019).<sup>17</sup> The agreement measures show that mirative uses of HOW THAT interrogatives were less consistently identified than CRs and disagreement uses. Depending on the benchmarking scale applied (Landis-Koch or Altman; Gwet, 2014, p. 180), the mirative agreement would be scored “moderate” (AC1>0.4), whereas all the other categories would be scored as “good” or “substantial” (AC1>0.6) and “very good” or “almost perfect” (AC1>0.8).

---

<sup>17</sup> We have chosen not to report Cohen’s Kappa. Indeed, in recent literature, Cohen’s Kappa has been shown to be less adequate than AC1 when there are differences in the frequencies of different categories (Wongpakaran, Wongpakaran, Wedding, & Gwet, 2013; Gwet, 2008; Zec, Soriani, Comoretto, & Baldi, 2017; among others). AC1 ranges from -1 to 1, with AC1<0.2 seen as “poor” and AC1>.02 as “fair” agreement (Gwet, 2014).

Table 3: Agreement measures for initial, individual annotations between authors

n=281	CR	mirative	disagreement	combined
% agreement	87.9	77.2	90	77.9
AC1 (Standard Error, Confidence Interval)	0.77 (SE: 0.038, CI: 0.7,0.85)	0.55 (SE: 0.05, CI: 0.45,0.65)	0.86 (SE: 0.028, CI: 0.8,0.91)	0.68 (SE: 0.036, CI: 0.61,0.75)

The stepwise process in which the annotation proceeded and the categories for annotation were developed came with the disadvantage that each annotator had to come up with individual ad-hoc solutions for dealing with problematic cases and would apply these solutions repeatedly before a unified solution would be agreed upon. Among the problematic cases ranged the frequent *Cómo que no?* ‘HOW THAT no/not?’, a construction which seems to have grammaticalized beyond the point where it requires a negative antecedent in the preceding discourse and can be used as an equivalent to ‘sure/surely’.

To add another level of control in light of such problems, two native speakers of French and Spanish, respectively, annotated a subset of 138 examples.<sup>18</sup> It should be mentioned that some annotations were judged far more difficult than others, indicating that examples can range from clear-cut to highly ambiguous (at least without access to audio recordings, see Section 5). Table 4 presents measures for inter-rater agreement between the agreed annotations by the authors and the native speakers’ annotations. We see that mirative uses are again the main point of divergence.

<sup>18</sup> They annotated a subset of the examples because the authors provided them with training examples that would allow the native speakers to familiarize themselves with the process of annotating discourse functions.

Table 4: Agreement measures for final annotations by authors and native speakers

n=138	CR	mirative	disagreement	combined
% agreement	81.2	73.2	88.4	71
AC1	0.64 (SE: 0.066, CI: 0.51,0.77)	0.47 (SE: 0.076, CI: 0.32,0.62)	0.84 (SE: 0.041, CI: 0.76,0.92)	0.58 (SE: 0.056, CI: 0.47,0.69)

Even though the inter-rater agreement was not optimal, our annotation process seemed sufficiently reliable to use the results to investigate the independent variables that could correlate with specific discourse functions.

#### 4.2.2. Inferential statistics and modelling of cues

During the annotation process, particularly during the harmonization discussions for the shared annotations, a range of possible criteria for selecting between discourse functions emerged. Yet even after completing the annotation process, no clear intuition regarding the importance of these different factors was accessible to either of the annotators. To get a more objective measure of their relevance, we decided to code for the factors in Table 5 and test them. As visible in the leftmost column, we distinguished three levels of analysis: a) global meta-data about the corpora under investigation, b) features internal to the HOW THAT construction itself, and c) construction-external features.

Table 5: Factors with levels

	Variable	reference level	level 2	level 3
corpus meta-data	CORPUSTYPE	interview	script	
	LANGUAGE	Spanish	French	
construction-internal features	PERSON SHIFT	absent	present	
	REMNANT	absent	present	
	PUNCTUATION	question mark alone (QM)	other (O)	
construction-external features	HESITATION	absent	present	
	ADVERSATIVE MARKERS (AM)	absent	present	
	TURN	absent	non-information	information
	CONTINUATION (TC)	(abs.)	seeking (NIS)	seeking (IS)
			continuation	continuation

CORPUSTYPE distinguished between examples from film scripts and interviews, and LANGUAGE coded French and Spanish. REMNANT was coded as absent for sluices and present for cases of stripping. PUNCTUATION was coded QM if a question mark was used to end the interrogative, and O (other) if anything other than a question mark ended the interrogative.<sup>19</sup> The motivation behind this labelling was that any deviation from the norm of using a question mark after an interrogative sentence seemed indicative of a non-canonical use. PERSON SHIFT was marked present when there was a change in person morphology/pronoun

<sup>19</sup> We counted as O 8 instances of !, 15 instances of ?!, 2 instances of !?, one instance of ?!! and of ?!?, each, 4 periods, 2 commas, and some combinations with ... and blank spaces.

between the remnant and the sentence it cites (indirect citation), as between *je* and *tu* in (29). It was marked absent if the grammatical person was maintained (direct citation), as in (30).

(29) a) A : Je ne veux pas la voir. (French, Film ‘Julia’)

‘I don’t want to see her.’

b) B : Comment ça, tu veux pas la voir ?

‘HOW THAT you don’t want to see her?’

(30) a) A : Bien, enfin... Je crois. (French, Film ‘Comme les autres’)

‘Well, umm... I think.’

b) B : Comment ça “Je crois”?

‘HOW THAT “I think”?’

HESITATION was coded present for cases in which speakers aborted and restarted their utterance or for hesitation markers such as French *euh*. ADVERSATIVE MARKERS were coded not only when they were part of the HOW THAT construction itself but also when immediately following it. For French, only *mais* ‘but’ was present in the data. For Spanish, not only *pero* ‘but’ was found, but also in subordinate *si* following the HOW THAT interrogative (Schwenter, 2016) and a single case of the negation particle *no* before *cómo que no*.<sup>20</sup> Finally, TURN CONTINUATION described whether the speaker continued the turn in which the HOW THAT interrogative occurs and whether a subsequent utterance was information-seeking (a

---

<sup>20</sup> Example (i) is in fact one of two instances where an interlocutor answers *cómo que no* with a turn containing *cómo que no*. In each of these, the first received question marks, the second didn’t.

(i) A: Y sin luz. (from COSER-1921)

‘And with no light’

B: Y sin luz, con un candilico, bueno, eso de sin luz no lo has conocido y yo tampoco.

‘And with no light, with a little candle; well, no light, you did not experience that and me neither’

A: ¿Cómo que no?

‘HOW THAT no?’

B: No, **cómo que no**, [PROPER NAME]. Si no lo conocí yo, no lo has podido tú conocer.

‘No, HOW THAT no, [PROPER NAME]. If I did not know that, you could not know that either.



genuine question). This excluded assertions but also imperatives, which request an action rather than information. Table 6 presents crosstabulations for the three discourse functions according to the independent variables, grouped by their respective level of analysis.

Table 6: Count of discourse functions according to factors and levels of analysis

	corpus meta-data				construction-internal						construction-external					
	language		corpustype		personshift		remnant		punctuation		hesitation		adv. markers		turn cont.	
	ES	FR	conv.	script	abs.	pres.	abs.	pres.	O	QM	abs.	pres.	abs.	pres.	abs.	NISIS
CR	43	58	33	68	92	9	40	61	5	96	96	5	100	1	88	310
MIR	62	66	25	103	86	33	20	108	27	101	126	2	113	15	51	4227
DISAG	42	10	21	31	35	17	0	52	12	40	52	0	44	8	8	37 5
Sum	147	134	79	202	213	59	60	221	44	237	274	7	257	24	147	8242
Total	281		281		272		281		281		281		281		271	

We start by looking at each factor individually using chi-squared tests of independence and the respective measure of association. After these bivariate analyses, we include them in a multivariate model to ascertain the relative load of the factors on the overall variability (presented below). The first group of factors concerns the corpus meta-data: Our bivariate results for LANGUAGE were  $\chi^2(2, N = 281) = 21.49$ ,  $p = <.0001$ , with Cramér's  $V = 0.277$  (just below medium effect size according to Cohen, 1988 [2013], p. 225). The main chi-square contributor was the higher-than-expected<sup>21</sup> count of disagreement uses in the Spanish data compared to the French data (adjusted standardized residual/ASR = 4.55). Our bivariate results for CORPUSTYPE were  $\chi^2(2, N = 281) = 9.58$ ,  $p = 0.008$ , with Cramér's  $V = 0.185$  (a relatively small effect size). The lower-than-expected count of mirative uses in the conversations from sociolinguistic interviews was the main chi-square contributor (ASR = -2.93).

<sup>21</sup> Expected relative to the marginal frequencies.

The second group of factors concerns the construction-internal aspects: Our bivariate results for PERSONSHIFT were  $\chi^2(2, N = 272) = 15.97, p = .0003$ , with Cramér's  $V = 0.242$  (also a relatively small effect size). The lower-than-expected count of CR uses with a shift in grammatical person was the main chi-square contributor (ASR = -3.93). Our bivariate results for REMNANT were  $\chi^2(2, N = 281) = 36.65, p < .0001$ , with Cramér's  $V = 0.361$  (a medium effect size). The higher-than-expected count of CR uses without a remnant was the most substantial chi-square contributor (ASR = 5.6). The lower-than-expected count of disagreement uses without a remnant also contributed significantly (ASR = 4.16). Our bivariate results for PUNCTUATION were  $\chi^2(2, N = 281) = 13.8, p = .001$ , with Cramér's  $V = 0.221$  (a small effect size). The most substantial chi-square contributors were the lower-than-expected count of CR with other marks (ASR = -3.7) and the higher-than-expected count of mirative uses with other marks (ASR = 2.29).

The third group of factors concerns the construction-external cues to discourse functions: A Fisher's exact test for HESITATION did not show a significant effect. In contrast, a Fisher's exact test for ADVERSATIVE MARKER did show a significant effect ( $p < .001$ ), which can be mainly attributed to their almost categorical absence in CR uses. Finally, our bivariate results for information seeking (IS), non-information seeking (NIS), or absent TURN CONTINUATION were  $\chi^2(4, N = 271) = 100.85, p < .00001$ , with Cramér's  $V = 0.43$  (a medium effect size and the largest effect we found). Four cells contributed significantly: i) fewer than expected CR uses with NIS continuations (ASR = -7.54,  $p < .0001$ ); ii) more than expected CR uses with a direct change of turn (ASR = 8.38,  $p < .0001$ ); iii) more than expected disagreement uses with a NIS continuation (ASR = 7.46,  $p < .0001$ ), and iv) fewer than expected disagreement uses with a direct change of turn (ASR = -6.01,  $p < .0001$ ).

Given the number of significant results, we decided to develop a statistical model that would allow us to consider these factors not only in isolation, but also as part of a more complex

interplay of cues. Our goal was also to achieve a measure of the amount of information we had gained (relative to chance or relative to a maximally naïve classifier, as detailed below). We proceeded according to the three different levels of analysis: the level of the corpus, the construction-internal or morpho-syntactic level, and the construction-external or contextual level of the entire turn. These levels of analysis guided our model-building process in that we built up our multinomial logistic regression models from left to right (in Table 6, which is top to bottom in Table 5), starting with the meta-data, then adding only construction-internal variables, then construction-external variables. We hypothesized that these levels could well correspond to aspects of knowledge and to the temporal dynamics that speakers experience when interpreting interrogative sentences: before hearing the interrogative, they are aware of the language and discourse genre of the current communicative setting, then they parse the grammatical person and possible remnant of the interrogative together with possible adversative markers and hesitations, before finally incorporating the discourse functional contribution of a possible turn continuation in their interpretation of the interrogative. We therefore tested the individual contributions of the features at three stages: first on the level of the meta-data, then construction-internal, then external. This stepwise process allowed us to check the amount of discourse functional information present at each stage and compare it with the amount of information added by considering the next broader level of analysis.

We followed a forward-fitting procedure involving comparisons between models of different complexity, which required the absence of any NAs (Field, Miles, & Field, 2012, pp. 878–896). This left us with  $n=264$  observations.<sup>22</sup> We started by specifying a multinomial logistic regression model using the `multinom()` function from the `nnet` package (Venables & Ripley,

---

<sup>22</sup> Mainly excluding examples from phone calls where PERSONSHIFT could not be coded due to the absence of information on the previous turn by the interlocutor, and examples from interviews where overlaps did not allow for the annotation of TURN CONTINUATION.

2002) with only intercepts. We compared it to one with LANGUAGE and CORPUSTYPE as factors, finding that they significantly improved the model ( $p < .0001$ ). We then added PERSONSHIFT, REMNANT, and PUNCTUATION, which again improved the model ( $p < .0001$ ). We then added all possible interactions between the factors, which did not improve the model.

We performed a 2-tailed z-test on the resulting coefficients following UCLA Statistical Consulting Group (2014). In line with the bivariate results for LANGUAGE, *comment ça* interrogatives were significantly less likely to be used to express disagreement than *cómo que*. Regarding CORPUSTYPE, we found that interrogatives from sociolinguistic interviews (as opposed to film scripts) were significantly more likely to be considered CRs (Coef.= 0.943,  $z = 2.683$ ,  $p = 0.007$ ) and disagreement uses (Coef.= 1.074,  $z = 2.706$ ,  $p = 0.007$ ). *Vice versa*, this means that film scripts were associated with mirative uses. We again found that, relative to cases with REMNANTS, those without remnants were significantly more likely to be considered CRs (Coef.= 1.11,  $z = 2.542$ ,  $p = 0.011$ ). Moreover, we found that HOW THAT interrogatives with PERSONSHIFTS were less likely to be considered CRs (Coef= -0.924,  $z = -2.101$ ,  $p = 0.036$ ). Finally, we found that HOW THAT interrogatives with punctuation deviating from the norm of ending an interrogative with a question mark (O) were less likely to be considered CRs (Coef= -1.23,  $z = -2.276$ ,  $p = 0.023$ ).

Summing up, we found that the HOW THAT construction considered in isolation provides some cues about its discourse function. Nevertheless, the misclassification error of the model is relatively high at 0.447, meaning that this initial model's accuracy is only 55.3%. This might seem a satisfactory first improvement if we compared it to a fair three-sided dice as a baseline model (33.3%). However, a model that would always predict the most frequent level (mirative)

would achieve an accuracy of almost 43%, or only 12.3% less.<sup>23</sup> The inclusion of further cues therefore appears necessary.

At the construction-external level, including HESITATION did not significantly improve the model, whereas ADVERSATIVE MARKERS did. There were, again, no interactions between the factors included in the model. The presence of an adversative marker decreased the likelihood of the adjacent HOW THAT interrogative to be a CR (Coef= -2.232,  $z = -2.093$ ,  $p = 0.036$ ) but did not affect the relative likelihood between mirative and disagreement uses. A low improvement in accuracy to 57% is consistent with the fact that this effect is only marginally significant.

Adding the final variable TURN CONTINUATION again improved the model ( $p < .0001$ ). Likelihood ratio tests on each factor revealed that after the inclusion of TURN CONTINUATION, LANGUAGE, ADVERSATIVE MARKER and PERSONSHIFT become insignificant predictors. This is due to them having a medium degree of association with TURN CONTINUATION.<sup>24</sup> We refitted the final model without them. Relative to the absence of a TURN CONTINUATION, the presence of a non-information-seeking turn continuation decreased the likelihood of the preceding HOW THAT interrogative to be a CR (Coef= -2.96,  $z = -4.649$ ,  $p < 0.0001$ ) and increased the likelihood of it being a case of disagreement (Coef= 1.488,  $z = 3.208$ ,  $p = 0.001$ ). The presence of an information-seeking continuation decreased the likelihood of the preceding HOW THAT interrogative to be a CR (Coef= -1.517,  $z = -3.44$ ,  $p =$

---

<sup>23</sup> Note, however, that such a *zero rule* model that would predict 264 mirative uses would deviate quite strongly from our final model, which predicts 141 CRs. This indicates that whatever cues we are missing are those responsible for non-CR uses.

<sup>24</sup> Cramér's  $V$  of 0.21 for PERSONSHIFT, 0.39 for ADVERSATIVE MARKERS, and 0.21 for LANGUAGE.

0.001) but did not affect the relative likelihood between mirative and disagreement uses. The improvement in accuracy to 63.64% is consistent with the significant effect.

Table 7 shows the classification matrix for the final, best-performing model, with correct classifications shaded in grey. For CRs, the final model has more recall ( $89/101=88.11\%$ ) than precision ( $89/141=63.1\%$ ). For mirative uses, recall ( $57/113=50.4\%$ ) is lower than precision ( $57/89=64\%$ ), and for disagreement recall ( $22/50=44\%$ ) is much lower than precision ( $22/34=64.7\%$ ). All in all, we see that our levels of analysis are only sufficient to account for a subset of the non-CR uses of HOW THAT interrogatives. In our outlook, we propose that prosody is an essential factor missing from our model.

Table 7: Classification matrix for the final model

		TRUE			
		mirative	CR	disag.	Sum
PREDICTED	mirative	57	10	22	89
	CR	46	89	6	141
	disag.	10	2	22	34
	Sum	113	101	50	264

### 4.3. Discussion and outlook

Regarding the factors that contribute to the discourse functions as annotated here, we can distinguish some overall results from results pertaining to a specific level of analysis. Concerning overall results, we see that the corpus observations in Section 2 pointed in the right direction regarding a discourse functional overlap between Spanish and French HOW THAT interrogatives. All three functions can be found for both languages, and the differences in the frequencies per LANGUAGE were not large enough to remain a significant predictor of the probability of the discourse functions after turn continuation was considered. Without taking turn-level information into account, *cómo que* interrogatives are more likely to be used to

express disagreement than *comment ça* interrogatives. But their discourse function can be predicted more reliably from the kind of (non)-continuation of the turn in which they occur than from their identity as either *cómo que* or *comment ça*.<sup>25</sup>

As for French cases of *comment ça* without remnants (sluices), we found that they are more restricted in that their functions were either a CR or a mirative evaluation of the preceding turn, but never an indication of disagreement. The higher frequency of miratives in movie scripts may result from the writer's goal to entertain via plot twists that defy some characters' expectations. Film scripts could be similar to subtitles in that their language "is more emotional and dynamic [...] than that of normally occurring conversations" while being otherwise "not fundamentally different from other registers" (Levshina, 2017, p. 311). As for the sociolinguistic interviews, they are not designed to involve the discussion of controversial topics, so it is harder to explain why disagreement uses should be more frequent. As the disagreement uses are more frequent in Spanish, one partial explanation may come from the frequent use of *¿Cómo que no?* constructions in the COSER interviews, which in our data always react to an overt previous *no* and always have a disagreement function.<sup>26</sup> Another way to interpret this result is that authors of film scripts take HOW THAT interrogatives to be less adversatively and more miratively used than in actual dialogue. In any case, the previous observation that dramatized dialogues typically overrepresent non-questioning uses of interrogatives (e.g., Rosemeyer, 2019) mainly holds for the mirative use in our data, whereas the disagreement use seems underrepresented in film scripts.

---

<sup>25</sup> We thank an anonymous reviewer for stressing the intricacies of interpreting a non-significant predictor.

<sup>26</sup> Note that the questions that were asked by the interviewers in the COSER corpus were not designed to lead to controversial topics and their content was comparable (though not exactly the same) to the questions asked in the French sociolinguistic interviews.

Among the specific results concerning the construction level, we found that when the grammatical person in the remnant was not adjusted to the speaker's deixis ("person shift"), the function was significantly more likely to be a CR. This result conforms to the CR function: the speaker tries to understand the interrogative's intended meaning, and her attention is driven to the addressee's linguistic choices (lexical, syntactic, etc.) in formulating his utterance. While we found some indicative signs that CR readings might be more prone to show hesitation phenomena and less prone to be accompanied by adversative markers, only the latter showed a marginally significant effect. On the other hand, TURN CONTINUATION proved to be a strong predictor at the turn level of analysis. This is plausible because continuing a turn after uttering an interrogative reduces its conditional relevance (the degree to which it relies upon a reaction by the listener). CRs are usually followed by a change of turn, where the addressee answers the interrogative by clarifying what he meant, for instance, by reformulating the provocation or part of it. Miratives can be followed by another question or by a non-information-seeking utterance, which shows that the speaker does not always expect an immediate answer after uttering the interrogative. Disagreements are rarely followed by a change of turn and are distinguishable from miratives in that the turn continuation is more often an utterance that does not ask for information. Indeed, given that miratives accept the proffered content and evaluate it as unexpected, it seems reasonable that the speaker may seek information that would solve the mismatch between such content and her expectations. Disagreements, on the contrary, take a diverging stance that may require an explanation about the falsity of the proffered content, and this can be done using a non-information-seeking continuation. Finally, while we were not able to take a more fine-grained look at different punctuation phenomena, such as sequences of two or three exclamation and question marks, we



did find that deviations from the norm of ending an interrogative sentence with a question mark correlated with mirative uses of HOW THAT.<sup>27</sup>

Regarding the accuracy of our models, we found that the surface phenomena we investigated only allowed us to reach a predictive accuracy of 63.64%, meaning that there are still important factors to be accounted for. At the discourse level, a more fine-grained classification of the addressee's response to the turn containing the HOW THAT interrogative might improve the accuracy of our model. We have already seen that the addressee's response to a CR often indicates that the addressee is reformulating what the speaker found unclear. Disagreements, too, seem identifiable by the type of addressee's response, when present. Recall, for instance, ex. (26). Both Carmen's continuation after uttering the HOW THAT interrogative *and* Esther's response are crucial to understand a disagreement function, because it is clear that each speaker is trying to convince the other of the truth of her own statement. Analogously, in the conversation in (31) below, Marina responds to the HOW THAT interrogative with *vale* 'ok'. This answer clearly shows that Marina is treating the interrogative as if it was a discourse commitment to which she can agree ('You are my daughter').

- (31) a) WANDA: Hola. ¿Comiste? (Spanish, Film 'Una mujer fantástica')  
'Hi. Did you eat?'
- b) MARINA: Wanda, córtala con lo de la comida, por favor.  
'Wanda, cut it with the food, please.'
- c) WANDA: Marina.  
'Marina.'
- d) MARINA: No soy tu hija.  
'I'm not your daughter.'
- e) WANDA: ¿Cómo que no erís mi hija, pendeja?

---

<sup>27</sup> We thank an anonymous reviewer for suggesting a closer look at this feature.

‘HOW THAT you’re not my daughter, stupid?’

f) MARINA: Vale. Soy tu hija entonces.

‘OK. I’m your daughter then.’

Furthermore, at the discourse level, an annotation of the discourse (or rhetorical) relations holding either between the HOW THAT interrogative and the preceding utterance and between the interrogative and the utterance immediately following it might improve the predictability of the three uses.<sup>28</sup> Indeed, we expect that, depending on the use of the interrogative, recurring discourse relations will be found between the interrogative and the surrounding utterances. In the present study, we preferred not to pursue an analysis at the level of discourse relations since we decided to only focus on explicit linguistic properties and unambiguous linguistic markings. In contrast, the annotation of discourse relations is often ambiguous and subject to some degree of subjectivity. Yet, such an analysis may reveal interesting aspects of the three readings of HOW THAT interrogatives, and it remains the goal for future dedicated research.

If we now focus on the construction level, prosody is a factor that was not included during the annotation process but is undoubtedly worth considering. According to Delais-Roussarie et al. (2015, p. 89), the nuclear contour occurring at the end of French *wh*-questions is generally a fall (L\*L%). Echo questions, which are “used when the speaker has not understood what her interlocutor has said” (Delais-Roussarie et al., 2015, p. 85) or “when the speaker wants to demonstrate that she or he is surprised by what was just said, or that she or he cannot believe it.” (Delais-Roussarie et al., 2015, p. 86), show different nuclear configurations, namely a rising–falling contour (L+H\* L%) for requests for clarification and a rising contour for surprise questions (H\* H%). They also mention an initial rise on the *wh*-constituent as a feature of interrogatives that are not merely information-seeking. However, comparing our observations

---

<sup>28</sup> For a classification proposal discussing the discourse relation between interrogatives and their adjacent utterances, see Kehler & Rohde (2016).

with the proposals in Delais-Roussarie et al. (2015) is complicated by the fact that the notion of echo-question as used there covers all three discourse functions we discussed for HOW THAT interrogatives. Similarly, the empirical literature on the prosody of Spanish interrogatives does not make clear predictions for *cómo que* interrogatives. Escandell-Vidal (2012, p. 640) states that “echo interrogatives are not a uniform class from an illocutionary perspective, nor are they homogeneous from the point of view of grammar”. Hualde and Prieto (2015) propose a rising–falling (circumflex) contour for surprise and clarification echo-questions, with a higher and steeper rise in the surprise condition.

In an attempt to gain some first insights, we performed a pilot recording of 10 dialogues per language from the script corpus with the surrounding dialogue with one French and two Spanish native speakers. Our Spanish informants always produced L\* L% nuclear configurations, with variability in the scaling of a consistent prenuclear rise to an H target that variably aligns either with the right edge of *cómo* or with the vowel in *que*. The initial rise can be considered similar to the one described by Face (2005) as an important cue for polar interrogative contours, yet with the difference of ending without a rise (L\* L%). The strategy of the French informant is different. Instead of a rise from low as on *cómo*, the realizations on *comment* all start on an initial high target and fall to low on the second syllable. Moreover, our French informant shows differing nuclear configurations. Disagreement uses of *comment ça* interrogatives are realized with an L% boundary tone, whereas mirative and CR uses show mid-high boundary tones. One further possible distinction between mirative and CR uses can be found in phrasing: in mirativity uses, we found no phrasing between *comment ça* and the remnant, while in clarification requests, phrasing was marked by the presence of a pause, as if the remnant was considered a citation. A future study, including a representative sample of speakers, should test these first impressions.

## 5. Conclusions

In this paper, we have argued that HOW THAT-interrogatives in Spanish (*cómo que*) and French (*comment ça*), despite the syntactic differences induced by *ça* ‘THAT<sub>demonstrative</sub>’ and *que* ‘THAT<sub>complementizer</sub>’, share three functions: they are used as either clarification requests, mirative questions, or expressions of disagreement. The analysis of parallel corpus data has given us a first hint that our proposal for an overlap in discourse functions between *cómo que* and *comment ça* was on the right track. The subsequent annotation of the discourse functions in a corpus made of film scripts and sociolinguistic interviews, as well as the annotation of several possible linguistic criteria for the detection of each function, has fed a statistical analysis that has confirmed both the validity of our classification into the three functions and their attribution to both constructions.

Given the two text genres in our corpus, we were able to test their influence on the frequency of each of the three uses and found that film scripts were more likely to use HOW THAT interrogatives as mirative questions, whereas sociolinguistic interviews had a higher likelihood of containing clarification request and disagreement uses. Apart from this variable, we tested the relative importance of seven linguistic factors for the attribution of the three functions: a) whether the HOW THAT form was French or Spanish, b) whether grammatical person changed between provocation and response, c) whether HOW THAT was followed by a remnant, d) what kind of punctuation demarcated the end of the interrogative, whether the interrogative was accompanied by e) hesitation or f) adversative markers, and finally g) if and how the interrogative was followed by a turn continuation.

Chi-squared tests for independence showed significant effects for all factors but hesitations. Spanish *cómo que* was used more frequently to mark disagreement than its French counterpart. A shift in grammatical person from the previous turn disfavoured a clarification request use, as did the presence of an adversative marker. The absence of a remnant after HOW THAT strongly

correlated with clarification request uses prevalent in the French data. The presence of punctuation other than a single interrogative mark positively correlated with mirative uses and negatively correlated with clarification request uses. Adversative markers were almost categorically absent in clarification requests. Whether and how the speaker continued with her turn after the HOW THAT interrogative has proven to be a significant predictor and has helped us distinguish between mirative questions and disagreements.

To ascertain the amount of information we have gained by taking the aforementioned factors into account, we created a model that reached a relatively modest accuracy of 63.64%, which is close to twice the level of chance (33.3%) but only slightly more than 20% above a model that would always predict the most frequent discourse function (mirative). We interpreted this as an indication that a more fine-grained analysis of the surrounding discourse is needed and will be the object of future research, such as a more precise account of the addressee's reactions or the annotation of the discourse relations holding between the interrogative and its adjacent utterances. We particularly emphasized the need to further investigate the prosodic differences between the three functions, and provided some starting hypotheses for doing so.

## **Acknowledgments**

We want to thank Patricia Graziani Lozada and Julie Mellia for their important contributions to our data reliability assessment process. We also thank two anonymous reviewers for their helpful criticism and suggestions. Any shortcomings of our article remain, of course, our own.

## **Funding Information**

This study was funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—Projektnummer 491466077. This work is also partially supported by a public grant overseen by the IdEx Université Paris Cité (ANR-18-IDEX-0001) as part of the Labex Empirical Foundations of Linguistics – EFL.

## **Author Contributions**

All authors have accepted responsibility for the entire content of this manuscript and approved its submission.

## **Conflict of Interest**

Authors state no conflict of interest.

## **Data Availability Statement**

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

## Reference List

- Abouda, L., & Skrovec, M. (2018). Pour une micro-diachronie de l'oral : le corpus ESLO-MD. *SHS Web of Conferences*, 46(Congrès Mondial de Linguistique Française - CMLF 2018).
- ATILF (1998-2022). *Base textuelle Frantext (En ligne)*, from ATILF-CNRS & Université de Lorraine: <https://www.frantext.fr/>.
- Branca-Rosoff, S., Fleury, S., Lefeuvre, F., & Pires, M. (2012). *Discours sur la ville. Présentation du Corpus de Français Parlé Parisien des années 2000 (CFPP2000)*, from Université Sorbonne Nouvelle Paris 3: <http://cfpp2000.univ-paris3.fr/CFPP2000.pdf>.
- Brunetti, L., Tovenà, L. M., & Yoo, H. (2022). French questions alternating between a reason and a manner interpretation. *Linguistics Vanguard*, 8(s2), 227–237.
- Brunetti, L., Yoo, H., Tovenà, L., & Albar, R. (2021). French reason-comment ('how') questions: A view from prosody. In A. Trotzke & X. Villalba (Eds.), *Expressive Meaning Across Linguistic Levels and Frameworks*. Oxford: Oxford University Press.
- Caponigro, I., & Sprouse, J. (2019). Rhetorical questions as questions, 121–133.
- Celle, A., & Péliissier, M. (2022). Surprise questions in spoken French. *Linguistics Vanguard*, 8(s2), 287–302.
- Cohen, J. (1988 [2013]). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed. eBook). New York (Hoboken): Routledge (Taylor and Francis).
- Cortés-Torres, M. E. (2005). *La perífrasis estar + -ndo en el español puertorriqueño: variación dialectal o contacto lingüístico?: University of New Mexico Dissertation*.
- Cresti, E., & Moneglia, M. (2005). *C-ORAL-ROM: Integrated reference corpora for spoken Romance languages*. Amsterdam: John Benjamins.
- Dekhissi, L., & Coveney, A. (2021). Le contexte linguistique des questions rhétoriques conflictuelles et la variation entre *pourquoi* et *qu'est-ce que*. In P. Larrivé & A. Guryev (Eds.), *Langue française: Vol. 212. Variantes formelles de l'interrogation* (pp. 123–137). Paris: Armand Colin.
- Delais-Roussarie, E., Post, B., Avanzi, M., Buthke, C., Di Cristo, A., Feldhausen, I., et al. (2015). Intonational phonology of French: Developing a ToBI system for French. In Sónia Frota & Pilar Prieto (Eds.), *Intonation in Romance* (pp. 63–100). Oxford: Oxford University Press.
- Escandell-Vidal, V. (2012). Speech Acts. In J. I. Hualde, A. Olarrea, & E. O'Rourke (Eds.), *The handbook of Hispanic linguistics* (pp. 629–651). Chichester, West Sussex, Malden, MA: Wiley-Blackwell.
- Eshkol-Taravella, I., Baude, O., Maurel, D., Hriba, L., Dugua, C., & Tellier, I. (2011). Un grand corpus oral « disponible » : le corpus d'Orléans 1 1968-2012. *TAL*, 52(3), 17–46, from <https://halshs.archives-ouvertes.fr/halshs-01163053>.
- Face, T. L. (2005). F0 Peak Height and the Perception of Sentence Type in Castilian Spanish. *Revista internacional de lingüística iberoamericana : RILI*, 3(2), 49–65.
- Fagard, B., Pietrandrea, P., & Glikman, J. (2016). Syntactic and semantic aspects of Romance complementizers. In K. Boye & P. Kehayov (Eds.), *Complementizer Semantics in European Languages* (pp. 75–130). Berlin, Boston: de Gruyter.
- Farkas, D. F. (2022). Non-Intrusive Questions as a Special Type of Non-Canonical Questions. *Journal of Semantics*, 39(2), 295–337.
- Farkas, D. F., & Bruce, K. B. (2010). On Reacting to Assertions and Polar Questions. *Journal of Semantics*, 27(1), 81–118.

- Fernández-Ordóñez, I. (2005-2022). *Corpus Oral y Sonoro del Español Rural*. Retrieved February 01, 2022, from <http://www.corpusrural.es>.
- Field, A. P., Miles, J., & Field, Z. (2012). *Discovering statistics using R*. London, Thousand Oaks: Sage.
- Fleury, D., & Tovená, L. (2018). Reason questions with comment are expressions of an attributional search. In *Proceedings of the 22nd Workshop on the Semantics and Pragmatics of Dialogue - Full Papers*. Aix-en-Provence, France: SEMDIAL.
- Fliessbach, J. (under review). Mirativity, obviousness, and reversal as instances of contrast on different levels of meaning: Evidence from Spanish. In J. Brysbaert & K. Lahousse (Eds.), *Trends in Linguistics. Studies and Monographs. On the place of contrast in information structure: definition, types, encoding and annotation*. Berlin, Boston: de Gruyter.
- Fliessbach, J. (2023). *The intonation of expectations: On marked declaratives, exclamatives, and discourse particles in Castilian Spanish*. *Open Romance Linguistics: Vol. 3*. Berlin: Language Science Press.
- Gamer, M., Lemon, J., Fellows, I., & Singh, P. (2019). *irr: Various Coefficients of Interrater Reliability and Agreement*. Retrieved December 12, 2020, from <https://CRAN.R-project.org/package=irr>.
- Ginzburg, J. (2012). *The interactive stance*. Oxford: Oxford University Press.
- Ginzburg, J., & Sag, I. A. (2000). *Interrogative investigations: The form, meaning, and use of English interrogatives*. *CSLI lecture notes: Vol. 123*. Stanford, Calif.: CSLI Publications.
- Gruber, H. (2001). Questions and strategic orientation in verbal conflict sequences. *Journal of Pragmatics*, 33(12), 1815–1857.
- Gwet, K. L. (2008). Computing inter-rater reliability and its variance in the presence of high agreement. *The British journal of mathematical and statistical psychology*, 61(1), 29–48.
- Gwet, K. L. (2014). *Handbook of inter-rater reliability: The definitive guide to measuring the extent of agreement among raters* (Fourth edition). Gaithersburg, MD: Advanced Analytics, LLC.
- Gwet, K. L. (2019). *irrCAC: Computing Chance-Corrected Agreement Coefficients (CAC)*, from <https://CRAN.R-project.org/package=irrCAC>.
- Hualde, J. I., & Prieto, P. (2015). Intonational variation in Spanish. European and American varieties. In S. Frota & P. Prieto (Eds.), *Intonation in Romance* (pp. 350–391). Oxford: Oxford University Press.
- Hudson, R. (1999). Grammar Without Functional Categories. In R. Borsley (Ed.), *Syntax and semantics: Vol. 32. The Nature and Function of Syntactic Categories* (pp. 7–35). San Diego, London: Academic Press.
- Kaiser, G. A. (2020). *Syntax des Französischen: Einführung und Vertiefung. Grundlagen der Romanistik*. Berlin: Erich Schmidt Verlag.
- Kehler, A., & Rohde, H. (2016). Evaluating an Expectation-Driven Question-Under-Discussion Model of Discourse Interpretation. *Discourse Processes*, 54(3), 219–238.
- Kim, J.-B., & Abeillé, A. (2019). Why-stripping in English: A corpus-based perspective. *Linguistic Research*, 36(3), 365–387.
- Koch, P., & Oesterreicher, W. (1985). Sprache der Nähe - Sprache der Distanz: Mündlichkeit und Schriftlichkeit im Spannungsfeld von Sprachtheorie und Sprachgeschichte. *Romanistisches Jahrbuch*, 36, 15–43.
- Koshik, I. (2003). Wh-questions used as challenges. *Discourse Studies*, 5(1), 51–77.
- Lefevre, F. (2009). Catégorisation de comment subordonnant. *Travaux de linguistique*, 58(1), 63–88.



- Levshina, N. (2017). Online film subtitles as a corpus: an n-gram approach. *Corpora*, 12(3), 311–338.
- Linell, P. (2009). *Rethinking language, mind, and world dialogically: Interactional and contextual theories of human sense-making*. Advances in cultural psychology. Charlotte, Conn.: Information Age.
- Lison, P., & Tiedemann, J. (2016). OpenSubtitles2016: Extracting Large Parallel Corpora from Movie and TV Subtitles. In *LREC'16* (pp. 923–929). ELRA.
- Mosegaard Hansen, M.-B. (2016). *The structure of modern standard French: A student grammar*. Oxford: Oxford University Press.
- Noonan, M. (2009). Complementation. In T. Shopen (Ed.), *Language Typology and Syntactic Description. Volume II: Complex Constructions* (pp. 52–150). Cambridge: Cambridge University Press.
- Riegel, M., Pellat, J.-C., & Rioul, R. (2009 [1994]). *Grammaire méthodique du français* (4th ed.). *Quadrige*. Paris: Presses Univ. de France.
- Rosemeyer, M. (2019). Brazilian Portuguese *in-situ wh*-interrogatives between rhetoric and change. *Glossa: a journal of general linguistics*, 4(1), 1–29.
- Rosemeyer, M. (2021). Two Types of Constructionalization Processes in Spanish and Portuguese Clefted *wh*-interrogatives. *Studies in Hispanic and Lusophone Linguistics*, 14(1), 117–160.
- Ross, J. R. [. (1969). Guess who? In R. I. Binnick, A. Davison, G. M. Green, & J. L. Morgan (Eds.), *Papers from the 5th Regional Meeting of the Chicago Linguistic Society* (pp. 252–286). Chicago: CLS.
- Roussou, A. (2020). Some (new) thoughts on grammaticalization: Complementizers. In A. Bárány, T. Biberauer, J. Douglas, & S. Vikner (Eds.), *Open Generative Syntax: Vol. 9. Syntactic architecture and its consequences I. Syntax inside the grammar* (pp. 91–111). Berlin: Language Science Press.
- Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50(4), 696–735.
- Sadock, J. M. (1971). Queclaratives. In *Seventh regional meeting of the Chicago Linguistic Society* (pp. 223–232). Chicago: Chicago Linguistic Society.
- Schegloff, E. A., & Sacks, H. (1973). Opening up Closings. *Semiotica*, 8(4), 289–327.
- Schwenter, S. A. (2016). Meaning and interaction in Spanish independent *si*-clauses. *Language Sciences*, 58, 22–34.
- Smirnova, A. (2021). *Les questions en ça et donc: études empiriques*. Master Thesis, Université Paris Cité, Paris.
- Smirnova, A., & Abeillé, A. (2021). Question particles *ça* and *donc* in French: A corpus study. *Linguistic Research*, 38(2), 239–269.
- Tovena, L. M. (2022). A comparative corpus study on a case of non-canonical question. *Linguistics Vanguard*, 8(s2), 209–217.
- Tovena, L. M. (2023). On asking about the reason for an effect, and some of its consequences for the analysis of *wh*-interrogatives. In Ł. Jędrzejowski & C. Umbach (Eds.), *Non-interrogative subordinate wh-clauses* (pp. 381–409). Oxford: Oxford University Press.
- Trotzke, A., & Villalba, X. (2021). Expressive insubordination: A cross-linguistic study on that-exclamatives. In A. Trotzke & X. Villalba (Eds.), *Expressive Meaning Across Linguistic Levels and Frameworks* (pp. 108–120). Oxford: Oxford University Press.
- UCLA Statistical Consulting Group (2014). *Multinomial Logistic Regression: R Data Analysis Examples*, from <https://stats.oarc.ucla.edu/r/dae/multinomial-logistic-regression/>.

- Venables, W. N., & Ripley, B. D. (2002). *Modern Applied Statistics with S. Statistics and computing*. New York: Springer.
- Wongpakaran, N., Wongpakaran, T., Wedding, D., & Gwet, K. L. (2013). A comparison of Cohen's Kappa and Gwet's AC1 when calculating inter-rater reliability coefficients: a study conducted with personality disorder samples. *BMC medical research methodology*, *13*(61).
- Zec, S., Soriani, N., Comoretto, R., & Baldi, I. (2017). High Agreement and High Prevalence: The Paradox of Cohen's Kappa. *The open nursing journal*, *11*, 211–218.
- Zumwald Küster, G. (2018). *Est-ce que et ses concurrents*. In M.-J. Béguelin, A. Coveney, & A. Guryev (Eds.), *Sciences pour la communication: Vol. 124. L'interrogative en français* (pp. 95–118). Bern: Peter Lang.

## Appendix I: Spanish translations of *comment ça + remnant*

Translations of <i>comment ça + remnant</i> (initial 3 token <sup>29</sup> window) <sup>30</sup>	Frequency in 9M alignments <sup>31</sup>
¿ cómo que <sup>a</sup>	51
¿ qué quieres <sup>b</sup>	27
¿ qué quiere <sup>b</sup>	11
¿ qué significa	10
¿ a qué	9
¿ cómo puede <sup>c</sup>	8
¿ cómo se	5
¿ cómo funciona	5
¿ de qué	4
¿ cómo ?	4
¿ cómo va	4
¿ qué tal	3
¿ qué ?	3
¿ por qué	2
¿ qué es	2
¿ y cómo	2
¿ cómo pudo <sup>c</sup>	2
¿ cómo qué <sup>a</sup>	2
¿ qué se	2
¿ en qué	2
¿ cómo dice	2
¿ cómo "	2
¿ cómo es	2
¿ cómo podría <sup>c</sup>	2

<sup>29</sup> Separated by whitespace character. Indices for forms counted as pertaining to the same lemma/construction.

<sup>30</sup> Punctuation was not removed to check for signs of intended interrogative or quotative prosody.

<sup>31</sup> Cut-off at n=2, meaning all translations that occurred only once are omitted.

## Appendix II: Spanish translations of *comment ça* without remnant

Translations of <i>comment ça</i> without remnant (initial 3 token <sup>32</sup> window, cutoff at n=8) <sup>33</sup>	Frequency in 9M alignments
¿ qué quieres <sup>a</sup>	633
¿ a qué <sup>b</sup>	251
¿ qué quiere <sup>a</sup>	250
¿ cómo ?	242
¿ por qué	177
¿ cómo que	129
¿ de qué	125
¿ cómo es	104
¿ qué ?	92
¿ qué dices	72
¿ en qué	49
¿ qué significa	43
¿ y eso	33
¿ qué es	33
¿ cómo dice	22
¿ qué pasa	22
¿ cómo lo	21
que quieres decir <sup>a</sup>	18
¿ cómo dices	17
¿ que quieres <sup>a</sup>	16
¿ qué dice	15
¿ cómo así	15
qué quieres decir <sup>a</sup>	15
¿ qué estás	15
¿ y qué	13
¿ el qué	12
¿ cómo puede	11
¿ a que <sup>b</sup>	10
¿ que quiere <sup>a</sup>	10
¿ qué le	10
¿ qué está	10
pero , ¿	9

<sup>32</sup> Separated by whitespace character. Indices for forms counted as pertaining to the same lemma/construction.

<sup>33</sup> Punctuation was not removed to check for signs of intended interrogative or quotative prosody.